

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Main report and annexes

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Map of the Project Area



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

Map compiled by IFAD | 11-06-2019

Abbreviations and Acronyms

ACSA	Agency for Consultations and Studies in Agriculture
AF	Adaptation Fund
AIPA	Agency for Intervention and Payments in Agriculture
ASAP	Adaptation for Smallholder Agriculture Programme
AWPB	Annual work plan and budget
CA	conservation agriculture
CASCA	Central Association of SCAs
CC	climate change
CIS	Commonwealth of Independent States
CLD	Credit Line Directorate
COSOP	Country Strategic Opportunities Programme
CPE	Country Programme Evaluation
CPIU	Consolidated Programme Implementation Unit
CPE	Country Programme Evaluation
CUSCA	Central Union of SCAs
DCFTA	Deep and Comprehensive Free Trade Agreement
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
EU	European Union
GoM	Government of Moldova
IFAD	International Fund for Agricultural Development
IPSC	IFAD Programme Steering Committee
IRECRP	Inclusive Rural Economic and Climate Resilience Programme
IRR	internal rate of return
LVI	Livelihood Vulnerability Index
M&E	monitoring and evaluation
MARDE	Ministry of Agriculture Regional Development & Environment
MCGF	Moldova Credit Guarantee Fund
MFOs	microfinance Organizations
MoF	Ministry of Finance
MSEs	Micro and small enterprises
NBM	National Bank of Moldova
NBS	National Bureau of Statistics
NCFM	National Commission for Financial Markets
NDSA	National Dispute Settlement Agency
NEET	not in employment, education or training
NGOs	non-governmental organizations
NPV	net present value
ODIMM	Organization for Development of SMEs
O&M	operations & maintenance

PAR	portfolio at risk
PCR	project completion report
PFI s	Partner Finance Institutions
PIM	Project Implementation Manual
PPA	Public Procurement Agency
PPL	Public Procurement Law
RIMS	Results and Impact Management System
SADI	Small Area Deprivation Index
SCAs	saving and credit associations
SECAP	Environmental and Climate Assessment Procedures
TRTP	Talent Retention for Rural Transformation Project
VAT	value-added tax
WHO	World Health Organization

Executive Summary

Overall Context: The Republic of Moldova is a small, landlocked country that shares borders with Ukraine to the north, east and south, and Romania to the west. Geopolitically, it has historical ties to the Commonwealth of Independent States (CIS), in particular the Russian Federation, in terms of trade and migration. However, currently EU accession is the country's key foreign policy goal, with far-reaching ramifications for domestic policies and practices in terms of alignment with EU requirements. Moldova is a lower middle-income country. Agriculture is a central pillar of the Moldovan national economy and the main source of livelihood in rural areas. Smallholder farmers (farms of less than three hectares) make up 95 percent of all farms and account for 71 percent of total agricultural output, thus forming an extremely important part of the agricultural sector. Shortcomings in Moldova's investment climate have limited the profitability of businesses, and the prospects of attracting new foreign investment and exports. The lack of employment opportunities in rural areas has led to the emigration of almost one third of the working age population, depriving rural areas of a key productive force.

Project Goal: The overall goal of the Talent Retention for Rural Transformation (TRTP) Project is a reduction in poverty and outmigration from rural areas through the enhancement of smallholder resilience to climate change. TRTP provides an opportunity to refocus IFAD investments on the smallholders in Moldova and build synergies with on-going Government and donor projects. The project draws on lessons from previous IFAD evaluations that stress the need to target the smallholder farmer and focus on value addition. The development objective of the project is to enable the rural poor (especially youth, women and smallholders) to increase their productive capacity, resilience to economic, environmental and climate-related risks and access to markets. The project will catalyze increased economic activity in the rural areas by targeting young entrepreneurs, women and smallholders with potential for income and employment generation, utilizing a diversity of interventions, including the provision of climate-resilient infrastructure and technologies, improved access to finance, mentoring, value chain strengthening and market integration. Special attention will be paid to develop off-farm employment opportunities for the youth in areas with growth potential such as food processing, artisanal products, hospitality development, including agro-tourism and other services.

Target Group: The primary target group of TRTP is commercially-orientated small-holder farmers and youth entrepreneurs cultivating up to 10 hectares. The project will ensure that women farmers are especially included in project activities. Small-holder women and men farmers face challenges in modernizing and commercializing their farming enterprise. Their constraints include challenges in increasing productivity due to limited access to finance, agricultural expertise, high quality inputs and productive infrastructure as well as increasingly harsh climatic conditions for which they have to be prepared. Their profitability is affected by lack of post-harvest facilities, quantities and quality of outputs and barriers to accessing export markets. TRTP will also focus on youth entrepreneurs, women and men from rural areas facing challenges in accessing finances and business development support to establish and expand their on and off-farm businesses. In addition, the project will engage with a range of actors such as agribusinesses, exporters, input suppliers, processors of agricultural goods, farmers with larger landholdings where they can function as aggregators, innovators and catalysts providing pathways for small-holder farmers to access national and international markets.

Project Components: The Project would have two complementary components that would include (i) Component 1: Resilient Economic Transformation; (ii) Component 2: Entrepreneurship Finance. The components are designed to work in a complementary manner. The first component will have two sub-components; 1.1: Climate Resilient Infrastructure and 1.2 Agribusiness Development. This component is aimed at enhancing resilient economic transformation in the rural areas and will provide the entry point for addressing constraints related to infrastructure, agribusiness and marketing. The types of infrastructure that will be eligible under the CRI subcomponent will include public infrastructure such as economic/productive irrigation infrastructure and village feeder roads (connecting the village with production areas and farms) including small bridges and ancillary structures. Investments in **irrigation infrastructure** will focus on micro and small irrigation schemes. AF funds will be used to strengthen capacity for on-farm water management in a manner which is adaptive to climate change.

Component 2. Entrepreneurship Finance will also consist of two complementary subcomponents: 2.1. Affordable credit for youth and women; and 2.2. Rural finance sector development. **Affordable credit for youth and women** will be focused on addressing the two main bottlenecks affecting access to credit for the rural youth and women – the cost of capital and lack of collateral to access loans. The project will provide mentoring support for young entrepreneurs and women to assist the target group in the formation of **investment and working capital**. IFAD will also provide a **credit line for Saving and Credit Associations (SCA)** to on-lend to microenterprises in rural areas. **The project will also support rural finance sector development.** This sub-component is designed to build capacity and strengthen some of the initiatives of the previous IFAD projects and will further strengthen the SCA sector and the regulatory and supervisory capacity of the National Commission for Financial Markets (NCFM). Specifically, IFAD will provide funds to cover the initial funding gap for the establishment of an **SCA Stabilization Fund** and an SCA Deposit Insurance Fund. The capacity to provide security for the small depositors in rural areas will build their confidence in the SCA sector and the financial system as a whole, thus contributing to the stability of the sector.

Project Costs and Financing: Total project cost is estimated at USD 50.51 million. IFAD will finance USD 20.7 million (41.1% of the total cost) through a loan. Grant resources valued at USD 6 million will be provided by the Adaptation Fund (AF). The Government of the Republic of Moldova (GoM) will provide USD 3.8 million (7.6% of total project costs). Contributions from GoM will mainly finance taxes and duties. The TRTP project beneficiaries would also benefit from the subsidies from the Agency for Interventions and Payments in Agriculture (AIPA) and Public Finance Institutions (PFIs). The PFIs are expected to provide credit worth USD 15.2 million (30.2% of total project cost) to young entrepreneurs to finance agriculture investments. Project beneficiaries are expected to provide both in-kind and in-cash contributions of about USD 3.4 million (6.8% of project total cost). Funds allocated to the Project Management Unit are estimated to be around USD 2.5 million, equal to 5% of the total project costs.

Outcomes and Economic Analysis: The key outcomes expected from the project would include (i) increase in access to water and improved water efficient technologies to face a changing climate; (ii) improved physical access to markets, processing and

storage facilities; (iii) increase in market oriented production; (iv) increased rural producer organizations engaged in formal partnerships or contracts with private entities; (v) increase in rural producers organizations reporting an increase in sales; (vi) increase in persons especially youth reporting using financial services (vii) increase in new jobs created. The project is assessed to be economically viable. TRTP will benefit approximately 11,723 households or 33,997 people. The Net Present Value (NPV) discounted at 11%, is MDL 636 million (USD 36.3 million) producing an EIRR of 22% for the base case scenario.

Environment and Social category: The Project is considered to be Category “B” The Project is not expected to have any significant adverse environmental or social implications. The road and irrigation schemes are small-scale and there are not expected to be any environmental risks associated with them. In any case, the design and construction specifications will strictly follow the Moldovan national laws. Through a participatory approach, the project will ensure that appropriate and innovative water saving measures will be identified and adopted by climate vulnerable smallholders. The project is aligned to the National Environmental Strategy and will comply with national environmental standards. IFAD's requirements under the SECAP will be properly assessed and incorporated in an Environmental and Social Management Plan.

Project Management: The overall responsibility for the management and implementation of TRTP will be exercised by the existing IFAD Programme Steering Committee (IPSC), established by a GoM decree to manage all IFAD financed projects in the country. Day-to-day management and implementation of the project will be exercised by the existing CPIU. However, given that the CPIU is already charged with implementing two on-going IFAD projects, the CPIU capacity will be strengthened to implement the proposed project.

1. Context

A. National context and rationale for IFAD involvement

a. National Context

1. The Republic of Moldova is a small, landlocked country that shares borders with Ukraine to the north, east and south, and Romania to the west. Geopolitically, it has historical ties to the Commonwealth of Independent States (CIS), in particular the Russian Federation, in terms of trade and migration. However, currently EU accession and strengthening relations with Romania is the country's key foreign policy goal, with far-reaching ramifications for domestic policies and practices in terms of alignment with EU requirements. A milestone has been the entry into a Deep and Comprehensive Free Trade Area (DCFTA) agreement with the EU which offers improved access to European markets but exposes Moldovan producers to greater domestic competition as the DCFTA sets up a free-trade area between the EU and Moldova and allows for the removal of import duties for most goods traded between the EU and Moldova. The agreement was signed in June 2014 and has been in full effect since July 2016. Currently, the European Union is Moldova's biggest trade partner. Around 66% of its exports are sent to the EU, followed by Russia (10%) and Belarus (6%).^[1]
2. Moldova is a lower middle-income country with a gross domestic product (GDP) per capita (PPP) of USD 2,290 in 2018. It ranks 112 out of 189 in the global Human Development Index (HDI).^[2] Moldova is one of the poorest countries in the European neighborhood region, but has also been one of the fastest growing. However, the country has made progress in reducing poverty. The absolute national poverty rate fell from its peak of 73% in 1999 to 9.6% in 2015, and the extreme poverty rate declined from 59.7% to 0.2% in the same period. However large gaps remain between urban and rural areas. In 2018 growth reached 4.8% benefitting from strong domestic demand. The share of agricultural in the Gross Domestic Product was estimated to be 12 percent in 2017, with 17.88 percent being contributed by industry and 55.36 percent by the service sector.^[3] Together with agriculture, the processing industry represents more than 17 percent of the Gross Domestic Product and approximately 45 percent of total exports.^[4]
3. Agriculture is a central pillar of the Moldovan national economy and the main source of livelihood in rural areas. Important crops are winter and spring grains, including wheat, barley and maize, as well as potatoes and other vegetables and horticultural crops. Agro-food exports account for a significant part of total exports. The most export-oriented products are wine and spirits, as well as fruit and vegetables, both fresh and processed. These two categories alone account for more than 38 percent of exports.^[5] Approximately 75 percent of the population live in rural areas and depend on agriculture and related activities for their livelihoods. Individual farmers on household plots of 10 hectares or less produce about 60 percent of the country's agricultural output. Moldova has traditionally followed a remittance-led growth model, which has been instrumental in reducing poverty in the country. Currently around one third of the population works abroad, and remittances accounted for 25 per cent of Gross Domestic Product (GDP) in 2018. However, labour migration has left the country with an aging population. Agricultural modernization and the development of small and medium enterprises (SMEs) have created more jobs for rural workers.^[6]
4. Shortcomings in Moldova's investment climate have limited the profitability of businesses, and the prospects of attracting new foreign investment and exports. There are many problems that need to be addressed including; costly over-regulation, poor property rights, expropriation of businesses, and the creation of monopolies for export and distribution of agro-based products by licensing and regulation as a result of which farmers get depressed farm gate prices. While the Government has made a good start in removing these policy failures that trap Moldova in a cycle of migration and jobless growth, much remains to be done.^[7] Moldova needs to enhance agro-based exports and raise their value by exporting to higher value markets, and develop service exports in order to provide job opportunities for underemployed tertiary graduates.^[8] There is need to assist Moldova in putting in place a supportive framework and investment opportunities to assist its entrepreneurial young men and

women. The lack of employment opportunities in rural areas has led to the emigration of almost one third of the working age population, depriving rural areas of a key productive force.

5. The National Development Strategy (NDS) (2012-2020) is designed to promote sustainable development and contribute to poverty reduction. The strategy includes ensuring better governance in sustainable development, through the integration and strengthening of environmental protection aspects in all socio-economic development areas of the country. The National Strategy on Agriculture and Rural Development (NSARD) 2014-2020 focuses on ensuring that the agri-food sector contributes to the sustainable achievement of the national economic and social development goals. It also aims to raise the competitiveness of the sector through comprehensive restructuring and modernization and to improve living and working conditions in rural areas. The National Strategy on Adaptation to Climate Change (NSACC-2014) aims to ensure that the social and economic development of the Republic of Moldova becomes resilient to the future impacts of climate change. The Government has formulated a National Employment Strategy (2017–2021) with the objective to increase the level of formal employment based on economic competitiveness, skills and appropriate qualifications, under conditions of sustainable and inclusive development. An analysis of the specific challenges the country faces are elaborated in the Social Environment and Climate Assessment (SECAP) Review Note in Annex 5.

b. Special aspects relating to IFAD's corporate mainstreaming priorities

6. **Gender Aspects:** In the past decade, Moldova has made considerable progress in socio-economic and welfare development, attributed to a reduction in poverty and promotion of inclusive growth. However, there are some segments of the population who still face significant disadvantages, including smallholders, women and youth. Women still face discrimination and inequality in social, economic and political spheres and their representation in Moldovan politics and decision-making remains below international benchmarks. Women in Moldova face specific education and labour market barriers due to persistent patriarchal attitudes that limit their educational choices and employment options. Women also face discriminatory practices. These include significant wage disparities, segregation into lower-paying occupations, unequal sharing of work and family responsibilities and limited access to childcare. Agriculture is an important employment sector for women in rural areas, where other jobs are not sufficiently developed. Women work more in low value-added agricultural production sub sectors, operate on a smaller scale, and more likely to work as family workers. Women entrepreneurs face barriers getting access to bank loans and to state-funded business and entrepreneurship development programmes.^[9] However, the Government and donors have initiated several initiatives targeted at women such as the Ministry of Economy's initiative to help women in business and the special initiatives for women to access AIPA resources. The EU-funded Business Academy for Women (BAW) assists women to start and manage their own businesses. The project implemented by the Organisation for Development of the SME Sector (ODIMM) has contributed to the formation of a community of entrepreneurs and the creation of a National Network of Women Mentors.
7. **Youth:** Young people continue to face multiple and interconnected challenges. The Youth Multi-dimensional Deprivation Indicator (Y-MDI)^[10] clearly shows that there are systematic gaps. Migration significantly affects Moldova's economy and demographics. In 2014, 24.6% of youth aged 15-29 lived abroad with a growing number leaving for economic reasons. Poverty, lack of decent employment opportunities, and low salaries were the main push factors for youth migration.^[11] While young people in Moldova enjoy high access to education, the quality of education is a challenge. Close to one-third of young people in Moldova are not in employment, education or training (NEET). Access to well-paid jobs and high skill employment is especially low as shown by increasing unemployment rates among youth with tertiary education.^[12] In recent years, the employment rate of young people (15–29 years) has fluctuated between 28.4% and about 31–33.3%. The youth unemployment rate is about twice as high as in the total economically active population.^[13] The share of young people among entrepreneurs remains relatively small i.e. 2.4% were aged up to 24 years and 20.3% were aged 25-34 years.^[14] Young men and women try and engage in agro-based enterprise development in rural areas of very diverse nature. The principal problem that the youth face is lack of access to systematic mentoring coaching and business plan development to identify feasible options, lack of access to capital and lack of collateral to access institutional credit, lack of technical knowledge, information and access to markets.
8. **Nutrition:** The **Country's food security and energy requirements are largely met** Moldova's average level of per capita daily food energy consumption has been above the WHO recommended levels. In 2013, 8 per cent of Moldovan households could be classified as having high food expenses (HFE), thus being vulnerable to food insecurity. This reflects a steady downward trend since 2006, when the HFE prevalence was 17 per cent. The concern is more on the calorie intake, with roughly 20 per cent of households consuming less than recommended value (World Bank, 2015). In terms of nutrition, the country is in transition; undernutrition is decreasing but over-nutrition is on the increase. Currently, the country's food security and energy requirements are largely met. Between 2005 and 2012 the national rate of children under the age of five who were stunted dropped from 8.4 to 4.4 per cent, the rate of children who were underweight dropped from 4.3 to 3.2 per cent, and the rate of wasted children from 3.9 to 1.4 per cent. Most importantly, the rates of children with growth deficiencies have dropped among all income level groups. The Republic of Moldova has recently registered improvements across all categories of malnutrition and exhibits low overall malnutrition levels.^[15]
9. **Climate & Environmental Aspects:** Food security is recurrently affected by weather conditions. Drought, floods and other extreme events such as heavy rain, hail, wind and frost occur regularly and have a significant impact on rural livelihoods and the economy as a whole. Projections for the future, estimate that the frequency and duration of hot days with temperatures above 30°C simulated by the HIRHAM4 model^[16] will increase. In addition, probability of heavy rainfall and damage from hail storms will increase and the frequency of wet days in summer is projected to decrease, but the intensity of extreme events is projected to increase. These changes in heavy rainfall events have implications for crop damage. The National Hydro-meteorological Centre concluded that, based on records from 1834-2000, the probability of catastrophic droughts (less than 50% of mean rainfall) has increased significantly, from one event every nine years to almost one event every two years.

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10. The economy is particularly vulnerable because of the limited capacity of its social and productive structures, and its heavy dependency on climate-sensitive sectors such as agriculture. Farmers are not properly prepared for the changes that are presented in the climate models. Past drought events have had a severe impact on agriculture in Moldova with the event of 2006/7 seeing yields of major crops like wheat, maize, and sunflowers being reduced by up to 50–75 percent. Droughts vary in duration from a few days to several months, however in the years (1990, 1992, 2003) the events have extended throughout the active growing season (April - September) causing particular negative agricultural impacts. The economy of Moldova already bears significant costs from climate extremes and foregoes potential benefits and these real and opportunity costs will continue to grow with a future changing climate. Potential savings from better protection against current harmful climate impacts are estimated to be substantial, amounting to more than USD 100 million per annum in total. These are mostly due to damages caused by flooding and a variety of weather impacts on agriculture, as well as the cost of climate-related health impacts (extreme heat mortality and food-borne disease). The present total cost of inaction on climate adaptation is estimated at around USD 600 million, equivalent to 6.5% of GDP. This value is expected to more than double in real terms by 2050 to around USD 1.3 billion.[\[17\]](#) The forecast is that there will be substantial water shortages for the Prut and Nistru River basins in the future leading to insufficient water available to irrigate crops.[\[18\]](#) The agricultural sector would need to improve adaptive techniques such as mainstreaming Conservation Agriculture and introducing climate smart water efficient technologies.
11. Smallholder farmers (farms of less than three hectares) make up 95 percent of all farms and account for 71 percent of total agricultural output, thus forming an extremely important part of the agricultural sector.[\[19\]](#) These farms are seen as a pool for a viable, commercially oriented family farm sector that still has to be developed in the country. The majority of farms are engaged in semi-subsistence farming - a core component of the rural livelihood strategies in Moldova - and this is likely to persist in the medium and longer term if no assistance is provided to them. Small farms engage in more diverse production activities, but only a small share of their products go to markets, and market integration opportunities are limited. Different from large commercial farms which specialize in commodities, small farms produce a large range of vegetables, fruits, nuts, grapes, dairy products, livestock, and wine. To make agricultural commercialization more attractive and effective for poverty reduction, the small segment of commercially oriented smallholder farms should be enabled to grow and modernize. This requires building capacities for sustainable and productive agricultural practices; addressing the market failures in access to finance; support the penetration into higher value product markets; encourage farmers to organize to strengthen their bargaining position and getting better access to input and output markets.[\[20\]](#)
12. In compliance with the IFAD11 commitments on gender, youth, climate and nutrition and the project deals with each of these issues very specifically. TRTP has been designed to leverage the inter-linkages between rural development, the economic empowerment of women, youth and smallholder farmers. TRTP, in strong compliance with IFAD's commitments, focuses on smallholder farmers, women and youth. It uses the full range of targeting measures to reach its target group. Women's participation in project activities is forty percent and cuts across components highlighting their visibility as farmers and entrepreneurs and expanding their access to assets, credit, agricultural knowledge and decision-making. TRTP fulfils IFAD's criteria for a youth-sensitive project with youth constituting 40% percent of all beneficiaries. The matching grants under the rural finance are exclusively for young women and men to help them access productive resource and working capital for their on and off-farm enterprises. The matching grant provides young people with access to credit from banks, mitigating the collateral requirements and high rates of interest. It also provides them with access to government grant programs where they may lack resources to provide the beneficiary contribution. The support for developing business proposals and mentorship for business development supports the development of entrepreneurial skills. Youth are fifty percent of the beneficiaries of climate smart technologies and training; scholarships for technical expertise in conservation agriculture are reserved for youth and their involvement in research grants as researchers is mandatory. Quotas have been put in place to ensure the access of youth to grants, training and participation in conferences. Please see Annex 8: PIM
13. TRTP is expected to have a positive impact on nutrition through facilitating access to increased incomes from agricultural production and small businesses. As there are no significant nutrition challenges in Moldova, the nutrition related interventions under TRTP are limited. However some elements of IFAD's nutrition strategy are incorporated as TRTP supports increased incomes of women and men smallholder farmers and rural entrepreneurs and women's empowerment. The project will also help to put in place appropriate standards for food safety in producer groups under the agribusiness development component. In line with the IFAD strategy of engagement with the private sector, TRTP will engage with private sector actors to facilitate smallholders to commercialize, access post-harvest facilities and markets. [\[21\]](#)
14. TRTP is fully aligned with IFAD's Climate Change Strategy, which aims to maximize the impact on rural poverty in a changing climate through: (i) access to productive infrastructure; (ii) the availability of incentives, funding and training for smallholder farmers to shift to climate-resilient water efficient systems; and (iii) building in-country capacity for climate resilient and conservation agriculture through scholarships, research, consultations and dissemination of key lessons with a strong focus on smallholder farmers.
15. In keeping with IFAD's Rural Finance Policy, TRTP will contribute to improving the enabling regulatory conditions for Savings and Credit Associations (SCA) in rural areas. These institutions reach rural clients with credit and savings services. TRTP will help to strengthen and stabilize the SCA sector by making a pioneering contribution by providing the National Commission for Financial Markets (NCFM) with funding to cover the initial funding gap for a Stabilization Fund (a centralised short-term liquidity facility for SCAs) and the SCA Deposit Insurance Fund (aimed at protecting the customer deposits at SCAs in a similar way that banks' deposits are protected).
- 16.

c. Rationale for IFAD involvement

17. IFAD has been working closely with the MARDE to assist it with some of its strategic priorities in the agriculture sector and from whom the Government is willing to borrow. The agriculture and rural sector face several key challenges that the project can assist in addressing. While the Government has made a focus on youth, women and smallholders a key priority in its agriculture and rural development strategy and has opened up several avenues for them, these groups are unable to fully capitalize on the opportunity due to the need for complementary investments, which they are unable to finance through their own resources or access institutional credit. There is lack of physical and productive infrastructure in rural areas that can help them add value to their produce or access markets. Many of the target groups also need mentoring support to enable them to systematically remove the constraints they are likely to face in starting up new businesses or growing their existing enterprises. Smallholder farmers are unwilling or unable to work in cooperative modes and unaware of business models that they can adopt to aggregate their production and move up the value chain and access markets. The project can introduce innovations and interventions that can help each of these groups with tailored strategies that can remove the constraints that they face.
18. The TRTP has an opportunity to refocus IFAD investments on the smallholders in Moldova and build synergies with on-going Government and donor projects. The project draws on lessons from previous IFAD evaluations that stress the need to target the smallholder farmer and focus on value addition. The project provides an opportunity to undertake both these recommendations and initiate some innovative arrangements for public private sector partnerships. This will be done through forging partnerships between producer groups and market drivers and providing them investment support as an equity contribution by the project on behalf of the smallholder producers. The project seeks to deliver on the shared government and IFAD ambition of transforming agriculture into a dynamic engine of broader rural development which can generate employment and prove that farming and agribusiness can be an attractive career option. IFAD has a comparative advantage in focusing on the smallholder farmer and implementing some of the lessons learned from its previous and current projects in the country with reference to targeting, identifying infrastructure investments, conservation agriculture, access to affordable finance and inclusion of women and youth through an approach that recognizes their key constraints which is built into the current design.
19. The TRTP project would promote resilient livelihoods in rural areas by supporting climate-smart agriculture, economic diversification and value addition for high value crops, talent retention and access to rural finance. IFAD has the opportunity to integrate the grant resources made available from the Adaptation Fund (AF) to provide a range of climate resilient investments in rural areas that will enable smallholder farmers to effectively mitigate the risks of climate change and deal with growing water scarcity and adopt conservation agriculture and efficient water use practices so critical for the sustainability of the agriculture sector in Moldova. The funds from the AF will help to further strengthen the enabling environment to support conservation agriculture and build the capacity of the academic institutions to teach conservation agriculture techniques, training master trainers for the purpose and undertake a stock-take of the extent to which conservation agriculture is practiced in the country. This is an area in which IFAD has built considerable expertise and AF funds will help to consolidate and highlight the lessons from the experience for policy advocacy and reform. Annex 5 SECAP identifies some of these issues in greater detail.
20. There is a large unmet need for the development of complementary rural infrastructure in rural Moldova that also addresses the adaptation deficit, particularly with regards to climate-proofing access roads and small-scale irrigation distribution systems against future harsher hydrological conditions. Many access roads in rural areas are in a poor state of disrepair and inhibit access to markets and drive up the costs for rural households. Primarias or the village councils lack the budgets to make investments in key infrastructure. The project will combine its resources with those of local government institutions willing to make initial contributions and maintain these investments over the life of the project. Without IFAD assistance, the cost of business-enabling small-scale infrastructure would be high for most villages and small enterprises.
21. There is lack of market infrastructure such as collection and sorting centres, cold storages and processing facilities in rural areas. Individually farmers do not have the produce to justify these investments and there are few successful models for collective enterprise management and growth. The Project will make innovative arrangements to establish processing facilities with equity contribution on behalf of its target group with professional management that will enable smallholders to aggregate and add value to their produce. The project will help smallholders work backwards from the market to identify opportunities for working with smallholder producer groups, associations and cooperatives and enable them to partner with private sector entities. Without IFAD investment, the farmers would be unable to add value to their produce or adapt to the market requirements and unable to benefit from enhanced incomes from farming and remain at low levels of production and incomes. Increased efficiency of the farming sector would also encourage the youth to undertake farming and ease the outflow of young men and women from rural areas.
22. The project will assist youth and women capitalise on the funds made available by the Government through the Agency for Intervention and Payments in Agriculture (AIPA) by helping them develop feasible proposals. While the Agency has recently introduced new measures to provide advance payments to young farmers and women, many of the applicants are unable to provide their share of the contribution because they lack the capital resources or the collateral to access formal financial institutions. The project will make arrangements to provide the youth entrepreneurs and women assistance in accessing commercial credit to establish agriculture enterprises using ODIMM funds for collateral support. In addition, the project will make available grant resources to youth entrepreneurs with limited ability to borrow to initiate their own enterprises or grow their existing enterprises in both the on-farm and non-farm sectors. IFAD has, in the past been very effective in leveraging the grant resources provided by some of its partners. The project will also provide financial resources to SCAs for on-lending to its members and to support the National Commission for Financial Markets to grow and stabilise the SCA sector. Without project support the lending to the agriculture and rural sector would be limited further constraining rural growth.

B. Lessons learned

23. **Targeting Approach:** Key lessons from previous IFAD experience in the country show that IFAD needs to sharpen its targeting approach with a clear focus and criterion to target smallholders, women and youth. The projects cannot rely exclusively on self-targeting if they want to reach intended beneficiaries. IFAD is also learning from its evaluation of its projects that reliance solely on providing support to the larger farmers and counting on the 'trickle down' effect to reach poor farmers or employment creation for poor people without specific strategies and proper tracking and monitoring is not an effective approach. The current design has therefore included very specific strategies to target the smallholders, youth and women by taking affirmative action, fixing criteria for selection and a strong strategy for outreach and resource allocation for specific target groups. The targeting will be supported by an awareness raising campaign to ensure free, prior and informed consent of rural communities through discussions on the project components, objectives, activities, application procedures and eligibility criteria. A more in-depth mobilization approach will be adopted for some of the rayons and primarias in the country. The selection criteria for these primarias will be (i) location in areas defined as most vulnerable in terms of climate vulnerability and poverty (refer to map developed for TRTP overlaying SADI with climate vulnerability in Targeting section of PIM) and (ii) no previous investment in infrastructure from IFAD projects in the last 8 years. A team will be sent to hold meetings with small-holder farmers and local government to provide detailed information on the investment opportunity, explore and address barriers to application and ensure informed consent.
24. **Approach to training and capacity building:** The most vulnerable sections of the population such as smallholders, women and youth require a set of complementary investments and long-term mentoring and coaching to enable them to systematically address their production and marketing constraints and business development needs. Short-term and one-off training programmes are not adequate and generally ineffective. Therefore the approach of projects will need to be modified to provide opportunities for technical assistance for tailored coaching and mentoring, business plan development, accessing the range of funds and subsidies made available by on-going government programmes, and addressing constraints as they arise.
25. **Clear specification of ownership rights and professional management arrangements with a comprehensive package of support for the smallholder:** Focus on agro-processing and agribusiness requires putting in place innovative arrangements that ensure that the ownership rights and management responsibilities of collective enterprises are clearly established and there are strong links to markets. Successful interventions require that the model that is established recognizes that collective and cooperative enterprises have failed in Moldova because of lack of clear specification of individual rights and responsibilities, lack of professional management and inadequate access to logistical and agro-processing infrastructure and lack of linkages to markets. Projects need to address these aspects and enable small holders to aggregate and add value to their products, provide the necessary technical, financial and organizational support that is required along the value chain in partnership with private sector entities with strong links to markets.
26. **Crafting a strategy for Youth inclusion:** Interventions targeted at the inclusion of youth require a carefully crafted approach that recognizes that at this stage of their life-cycle the youth are likely to have limited funds to invest and lack of assets to offer as collateral to access formal sources of funds. An effective strategy for youth is using matching grants as a catalyst for financial inclusion and enhancing the formal sector's risk appetite for lending to them for enterprise development. Projects can enhance the inclusion of youth and increase their incomes on a sustainable basis by providing a package of business support, credit and matching grants to promote youth entrepreneurship, income and employment generation that will integrate them into high value markets.
27. **Incorporating the Lessons on Conservation Agriculture:** Several of IFAD projects have invested in conservation agriculture in Moldova and the project will build on the lessons from this experience. The first of these lessons is that CA is an option that is appropriate for both small and large farmers and should target farm holdings of all sizes. The second lesson is that given that the benefits from conservation agriculture are more evident in the medium-term or at times of climate stress it is important to disseminate these benefits which may not always be immediately evident in the short-term. The third lesson is that proper dissemination of conservation agriculture requires systematic training and demonstration which should be handled by an academic training institution. The fourth lesson is that conservation agriculture requires investments which can be capital intensive and need access to upfront funds to which the smallholder may not have access and thus needs financial arrangements designed to suit the specific needs of smallholders. The TRTP project incorporates these key lessons in its design.
28. **Programmatic approach to building the long-term sustainability of the financial sector that serves the poor:** IFAD's traditional approach to rural finance has been to provide lines of credit to commercial banks. Where these have helped to address the liquidity for long-term funds it has helped to direct more funds to the agriculture sector. IFAD now needs to consider strategies for the long-term growth and sustainability of institutions which provide easy access to funds in rural areas. While IFAD has been trying to deepen its strategies for the financial sector by providing resources for establishing a credit guarantee fund and strengthening the capacity of the NCFM for supervision and monitoring of Savings and Credit Associations (SCAs) and enhancing the performance of the financial apex institutions, this has been difficult to negotiate and is a time consuming exercise which is likely to require a much longer-time frame than is available in the time-frame of a single project. Thus a more programmatic approach to investments in the development of the financial sector is advised. This approach is likely to pay dividends by developing the effectiveness and sustainability of the sector over time.

2. Project Description

C. Project objectives, geographic area of intervention and target groups

29. The overall goal of the Talent Retention for Rural Transformation (TRTP) Project is to stimulate broad-based rural economic growth and reduce poverty through complementary investments. The development objective of the project is to enable the rural poor (especially youth, women and smallholders) to increase their productive capacity, resilience to economic, environmental and climate-related risks and their access to markets. The project will catalyze increased economic activity in the rural areas by targeting young entrepreneurs, women and small-holders with potential for income and employment generation, utilizing a diversity of interventions, including the provision of climate-resilient infrastructure and technologies, improved access to finance, mentoring, value chain strengthening and market integration. Special attention will be paid to develop off-farm employment opportunities for the youth in areas with growth potential such as food processing, artisanal products, hospitality development, including agro-tourism and other services.
30. The primary target group of TRTP is commercially-orientated small-holder farmers and youth entrepreneurs cultivating up to 10 hectares. The project will ensure that women farmers are especially included in project activities. Small-holder women and men farmers face challenges in modernizing and commercializing their farming enterprise. Their constraints include challenges in increasing productivity due to limited access to finance, agricultural expertise, high quality inputs and productive infrastructure as well as increasingly harsh climatic conditions for which they have to be prepared. Their profitability is affected by lack of post-harvest facilities, quantities and quality of outputs and barriers to accessing export markets. TRTP will also focus on youth entrepreneurs, women and men from rural areas facing challenges in accessing finances and business development support to establish and expand their on and off-farm businesses. In addition, the project will engage with a range of actors such as agribusinesses, exporters, input suppliers, processors of agricultural goods, farmers with larger landholdings where they can function as aggregators, innovators and catalysts providing pathways for small-holder farmers to access national and international markets. In all project activities, there will be a strong focus on youth and women. Forty percent of the beneficiaries will be women and forty percent will be youth. The number of beneficiaries for each sub-component is disaggregated by gender and age and given in Table 5 below in the section on TRTP Beneficiaries. More details on the specific target group for each component is given in the PIM.
31. **Social Inclusion strategy of TRTP**
32. The social inclusion strategy of TRTP aims to empower vulnerable women, youth and men smallholder farmers and youth entrepreneurs by expanding their economic opportunities, access to credit, technical knowledge in agriculture, assets and productive infrastructure. It is expected that a minimum of 40 per cent of all project beneficiaries will be women, and 40 per cent will be youth. As the project is national in scope, the geographical targeting does not limit project interventions to a specific geographic area but prioritizes interventions in the more climate vulnerable and deprived areas throughout the country based on SADI (Small Area Deprivation Index) and data on climate vulnerability from the 4th National Communication of the Republic of Moldova on Climate Change (see maps in Annex 5).
33. The project will have the following targeting measures in place: sensitization of implementers and policy makers to the strategic interests and needs of smallholder farmers, women and youth; direct targeting through quotas to ensure participation in project-related activities for women, youth and smallholders; self-selection through the size of grants and choice of project activities; appropriate mobilization and operational measures to address specific constraints faced by women, youth and poorer smallholder farmers; geographical targeting through selection criteria which prioritize youth, women and small-holder farmers and entrepreneurs from climate vulnerable and poorer areas of Moldova; and empowerment of beneficiaries through business plan development, mentoring, producer associations and young entrepreneur networks. The M&E system will collect gender and age disaggregated area and monitor investments in high poverty and climate vulnerability rayons and primarias. The maps of the Small Area Deprivation Index (2014) for primarias and the climate vulnerability map will function as an important tool for targeting and tracking targeting (see Annex 8). Project management will be supported through including responsibility for implementing targeting methodologies and achieving targets in the TOR of managers and specialists in the CPIU. The targeting strategy will be discussed in the start-up workshop and supervision missions will include a poverty and social inclusion expert.

D. Components/outcomes and activities

34. The Project would have two complementary components that would include (i) Component 1: Resilient Economic Transformation; (ii) Component 2: Entrepreneurship Finance. The components are designed to work in a complementary manner with each other and build on the synergy and complementarity with on-going IFAD projects for cumulative impact. While previous and on-going IFAD projects provided lines of credit to PFIs, TRTP is designed to strengthen the regulatory and institutional development of SCAs. The current project is also designed to enhance the coordination and support provided to the small-holder through a range of Government programmes such as AIPA, ODIMM and commercial banks which were not working in synergy. Similarly, while IRECR/RRP focus on delivering equipment and training for Conservation Agriculture, TRTP will focus on developing the capacity of academic institutions to disseminate CA techniques and strengthen Government policy in the area. Allocations under the Project Management Component would provide arrangement for effective management and coordination of project activities ensuring that technical support and mentoring is provided in a timely manner and that procurement, financial management, monitoring, supervision are efficiently organized. Annex 8 gives details on implementation arrangements.
35. The key outcomes expected from the project are: (i) Enhanced resilience and increased employment opportunities through investments in rural infrastructure, facilitation of access to market and strengthening of farmer organizations and (ii) Increased access to rural finance for youth and increased sustainability of rural finance institutions, such as SCAs, through transformative changes in the sector. The first outcome accounts for increased access to water, market/processing facilities

and improved water efficient technologies as well as the higher number of rural producer organizations engaged in formal partnerships or contracts with private entities. The second outcome reports on the number of people - especially youth - using financial services as well as on the increased sustainability and efficiency of the banking sector. Both outcomes would also report on the increase in new jobs created thanks to the project. The overall impact of these outcomes is expected to be increase in rural transformation and reduction in rural poverty.

36. **Component 1: Resilient Economic Transformation.** This component will have two sub-components; 1.1: Climate Resilient Infrastructure and 1.2 Agribusiness Development. This component is aimed at enhancing resilient economic transformation in the rural areas and will provide the entry point for addressing constraints related to infrastructure, agribusiness and marketing. Particular attention will be devoted to the promotion of climate-resilient technologies and building the capacity of government institutions for enhancing awareness and technical knowledge about conservation agriculture and strengthening government capacity for economic and market analysis regarding the agribusiness sector for smallholder farmers.

37. **Sub-Component 1.1 Enhancing Climate Resilience**

• **Climate Resilient Infrastructure (CRI):**

38. The IFAD and Adaptation Fund resources will be combined for investments worth USD 7.5 million (USD 5.5 million from IFAD loan and USD 2 million from the AF grant). The types of infrastructure that will be eligible under the CRI subcomponent will include public infrastructure such as economic/productive irrigation infrastructure and village feeder roads (connecting the village with production areas and farms) including small bridges and ancillary structures. The subcomponent is designed to support investments in productive rural infrastructure enhancing resilient rural economic transformation by removing infrastructure bottlenecks and consolidation of competitive smallholder farmers (with holdings of up to 10 ha) and village-based agribusiness; and fostering the adoption of climate smart technologies. The outputs expected from the project will be (i) around 20 micro or small scale irrigation schemes constructed/rehabilitated for total command area of about 2,800 ha; and (ii) some 15 village feeder roads improved and climate-proofed with a total length of about 30 km.
39. Overall, the subcomponent will scale up the activities undertaken in previous IFAD-supported projects both on rural infrastructure and on climate change adaptation and will introduce relevant innovations with envisaged potential for scaling up by farmers. For irrigation activities, the project will encourage the use of solar pumps and maximize the use of green technology options wherever appropriate. Cumulative impact assessment will be considered as an integral part of the feasibility studies for all infrastructure. The design of the subcomponent has been built on experiences gained and lessons learned, leading to refinements regarding irrigation investment to maximize potential opportunities and impact of investments in water efficient technologies. In addition, the country experience has led to the identification of adjusted targeting criteria for each type of investment to ensure that the intended target group participate and benefit from the project. Thirty percent of the beneficiaries of the irrigation schemes will be smallholder farmers with up to 10 ha of land. A minimum of 50 smallholder farmers will benefit from each scheme of rural roads. The decision-making procedure to be followed for the award of competitive grants is guided by a scoring system which prioritizes smallholder farmers from the poorest and most climate vulnerable areas of the country, the principles of transparency, demand-driven allocation, efficiency, cost sharing and cumulative impact. Competitive award of grants will be based on a set of specific criteria that will ensure that TRTP resources reach the intended target groups and have high impact. The grants provided by the project will be limited to USD 200,000 per qualified proposal excluding beneficiary contribution and VAT. Request for funding from the CRI subcomponent may come from a variety of sources. Applicants may be small farmers' interest groups, Water Users Associations (WUA), formal village level agribusinesses and village councils (*Primaria*).
40. Investments in **irrigation infrastructure** will focus on micro and small irrigation schemes. The systems financed under the CRI will be typically at the tertiary level linked either to independent small schemes with existing sources (pumping stations on rivers and natural reservoirs), or to larger functional secondary pipelines and supply systems such as the recently completed rehabilitation of Centralized Irrigation Systems under the MCA operated by the state agency "Appele Moldova". Investment in micro and small irrigation could include pumping station or water harvesting ponds lined with polypropylene protective geotextile with a storage capacity up to 15,000 cubic metres, tertiary canal and pipeline distribution network providing the necessary conditions for supplementary or full irrigation of orchards and the uptake of water saving irrigation practices (e.g. drip irrigation, micro sprinklers or subsurface drip irrigation) in farm areas up to 200 ha. The CRI will explicitly not support the development of irrigation facilities for field crops and will mainly concentrate in geographic locations prone to climate risk.^[22]
41. Investment in **rural roads** improvements will be directed to rural feeder roads and ancillary structures that complement and strengthen project investments by assuring adequate access to production areas and facilitating marketing of smallholder farmers produce. Eligible investments will include also road ancillaries such as small bridges, drainage facilities and erosion protection works to ensure climate resilience and proofing of the rehabilitated roads. Typically, these will be 4-6 m wide road sections with an average of 2.0 km length with hard or stabilized gravel surfaces.
42. The subcomponent will be implemented throughout rural areas of Moldova. However, priority will be given to proposals from geographic locations more prone to climate risk and to target areas showing a relative higher concentration of poverty, based on the Small Areas Deprivation Index (SADI) indicators.^[23] A focus on smallholder farmers has been ensured through disqualifying any schemes that do not benefit the specified number of smallholder farmers for irrigation schemes and roads. The M&E section of the CPIU has been provided technical assistance in developing a map that will plot the latest information on some key indicators on the map and also track the GIS coordinates of all investments.
43. The implementation arrangement for the CRI subcomponent is derived from the established procedures and management arrangements that have been fine-tuned and proven effective since 2007 with the CPIU retaining a key role in the investment

selection process, quality control assurance and monitoring of results, while services including information campaign, feasibility studies and supervision of civil works and specialized consultancies will be outsourced to qualified service providers. In addition to works, activities funded in the framework of CRI will include annual information campaigns, feasibility studies for pre-qualified proposals and supervision of works. The CPIU will ensure that all service providers follow sound labour management practices which adhere to principles of non-discrimination, equal opportunity and follow health and safety procedures, etc. with emphasis on fair treatment of all project workers in a manner consistent with ILO principles and national law.

44. **1.1.2 On-farm Climate Adaptive Water Management**

45. Around USD 2.2 million from the Adaptation Fund grant will be used to build smallholder farmer's resilience to climate change by fostering the adoption of climate smart, water saving technologies and building smallholder awareness and capacity in climate adaptive agricultural practices. These grants will be exclusively for smallholder farmers with up to 10 ha land (owned and cultivated). The scoring criteria for evaluating these grants prioritizes the smallholders from the poorest and most climate vulnerable areas of the country with smaller landholdings. Special measures have been taken to include women, youth and smallholder farmers. In recognition of the fact that women and young persons can be actively managing farms without being registered as owners of the peasant farm, women and young persons managing farms will be eligible if they are administrators or even members of a peasant farm. In addition, applicants will not be required to submit financial statements of the previous years. Farmers who are not registered as peasant farmers can apply if they provide evidence of having initiated the registration process at the point of application. The option of opening a transitional commercial bank account will be available for farmers who do not have the resources to invest in the equipment up-front and be reimbursed later. The bank's fee for the transitional commercial bank account will be borne by the project.
46. This will be implemented through a service provider responsible for developing demo plots, ToT programmes and provide extension support services. The project will incorporate the lessons learned and upscale a FAO pilot on the use of on-farm water efficient technologies. The pilot had successfully demonstrated that farmers who received the irrigation equipment best suited to their needs, saw immediate improvements in crop yield and quality. In addition, there was a reduction in production costs due to increased water, energy and labour efficiency, and also ensuring improved water distribution uniformity. Based on this experience, farmers will be assisted in installing water efficient technologies; they will also be trained and supported in the use of climate adaptive techniques that inter alia help improve soil water storage, control erosion, improve soil structure, and boost nutrient management. It is expected that depending on demand between 400 and 800 households would benefit from on-farm irrigation and training and around 4600 from climate adaptive techniques. Based on the FAO lessons learned the project will train and provide demand driven advisory services in irrigation systems, regimes and water quality; simple entry accounting and fiscal reporting; and in expenditures and revenues of improved irrigation systems. Annex 8: The PIM describes implementation details.
47. As explained in the SECAP in more detail, CA is a green and environmentally sustainable form of agriculture. It promotes minimal disturbance of the soil, the balanced application of chemical inputs, and careful management of residues and wastes. CA reduces land and water pollution and soil erosion, reduces long-term dependency on external inputs, enhances environmental management, improves water quality and water use efficiency as well as the reduction of GHG emissions. It allows for increasing soil productivity while requiring less labour than traditional methods. The AF resources will support MARDE in the development of the new National Programme for Conservation Agriculture (NPCA). In doing so the Adaptation Fund component will address an important need identified by MARDE to help in understanding the types of conservation farming practices adopted in the country and to enhance capacity through assisting with the development of a national curriculum for Conservation Agriculture. The project will assist with the development of a national survey of CA in Moldova to provide a national overview of the adoption of CA in the country and a white paper on CA recommendations and the development of a framework for a CA curriculum. The mainstreaming of CA into the higher educational system will be further supported with the translating of textbooks and research papers into the local language.
48. Funds will also be provided to support CA research in an agricultural research institute by procuring CA equipment, research grants, capacity building in soil lab analyses and establishing demonstration plots. In the development of the national curricula for Conservation Agriculture there will be a focus, to the extent possible, on conservation practices that can be adopted by smallholder farmers. The research institute will also build youth capacity with a gender-balanced involvement of young university students to support the work of the researchers in CA. The project will allocate resources to support the training of professionals in CA who in future be able to provide professional services in CA in Moldova especially to smallholders. At least one of the research grants will focus on the implications of conservation agriculture for smallholder farmers and explore international best practice. Each research will be required to address the gender dimension of the subject.
49. Knowledge management is one of the key elements of the Adaptation Fund. Consequently, the project will have a considerable knowledge management programme. The project will dedicate around USD 50,000 to ensure that project results are being adequately recorded and the findings disseminated. This will also include gathering lessons learned and positive experiences from smallholder farmers through videos clips and short accompanying educational programmes related to the core areas of water scarcity, climate change, the benefits of drip irrigation and other simple and accessible adaptive techniques. The knowledge management programme will also ensure that adequate studies are being conducted to quantitatively measure the improvements in crop quality and yield. These scientific studies will be published and also converted into knowledge products that will be easily understood by the general public and broadcast on TV, radio, social media and in print. This has already initiated a process of policy dialogue with the government on the best strategy for strengthening the capacity for CA in the country.

50. **Sub-Component 1.2 Agribusiness Development**

51. **1.2.1 Strengthening Value Chains for Producer Groups**

52. **1.2.1 Strengthening Value Chain for Producer Groups:** This sub-component will be focused on enhancing the potential for agri-processing and agribusiness in rural areas aimed at individual smallholder farmers willing to undertake agro-processing and agribusiness development through producer groups, farmer associations or cooperatives. It is expected that this component will benefit 10 or 12 producer groups (PG) with around 1000 beneficiaries of whom 400 are expected to be investments that directly target women and 300 young farmers or entrepreneurs. A minimum of 70 percent of the members of these producer groups will be farmers cultivating land up to 10 ha (owned and cultivated). The active participation of smallholder farmers, YE and women in these groups is expected to generate ideas and increase their opportunities for employment and enterprise development.
53. An Agribusiness Specialist will be hired by the CPIU to help coordinate the implementation of this sub-component. The project will be implemented by a service provider who could be a consulting firm or an NGO which has the requisite skills to disseminate the information regarding the various types of support provided under the component and provide the technical support which is required from time to time. The selected agency will be hired as soon as possible after project effectiveness. A draft of the terms of reference for the service provider is included in the PIM. The service provider will begin by holding regional meetings to identify the value chains with the potential for value addition and smallholder engagement. These are likely to include high value horticulture crops, herbs and medicinal plants, ornamentals as well as dairy products, etc. The smallholders with production potential may already be organized into producer groups or may need assistance in organization. Capacity building support is budgeted in the project for those who may require assistance.
54. The selected agency will hold diagnostic surveys at the village or Rayon level to identify opportunities for agribusiness development by groups. Concurrently the service provider will identify private sector entities and market drivers engaged in the trade of the selected value chains in the domestic or export market. The project will host meetings between the producers and market drivers to assess the potential for collaboration. The potential beneficiaries will be provided opportunities to engage with multi-stakeholder forums which include representatives from all main actors of the selected value chains such as producers, intermediary agents, traders, processors, input suppliers, transporters, and retailers. These meetings will help to identify the opportunities and constraints that hinder partnership and guide the way forward. The project will work closely with the Producer Groups and private sector entities to develop proper feasibilities and business plans for collaboration. The CPIU will ensure that all service providers follow sound labour management practices.
55. The project will also put in place innovative arrangements for investments in collection and grading centres, warehouses, cold storages and agro-processing facilities, refrigeration trucks, branding, marketing and providing equipment and materials, etc. The project investments in the market infrastructure and processing facilities will represent an investment on behalf of the smallholder farmers who are members of the producer group, association or cooperative. The private sector partner who collaborates with the farmer group will also get part of the share of the equity for providing the professional management of the enterprise and marketing. This arrangement will address some of the key constraints, which is lack of capital to invest in the facilities, poor capacity in professional management, weak links with markets and inability to arrange the logistics and aggregate production. The consulting firm hired to manage this sub-component will provide oversight and supervision of the arrangements and secure any additional technical and management expertise required. The participating smallholders will in addition to getting a more secure market for their produce and a higher price also benefit from the dividends that are distributed annually to shareholders. The service provider will mentor and coach the PGs until the private sector partners and PGs demonstrate that the arrangement is effective and sustainable. Please see Annex 8: The PIM which provides implementation arrangements, TORs and job descriptions of key staff.

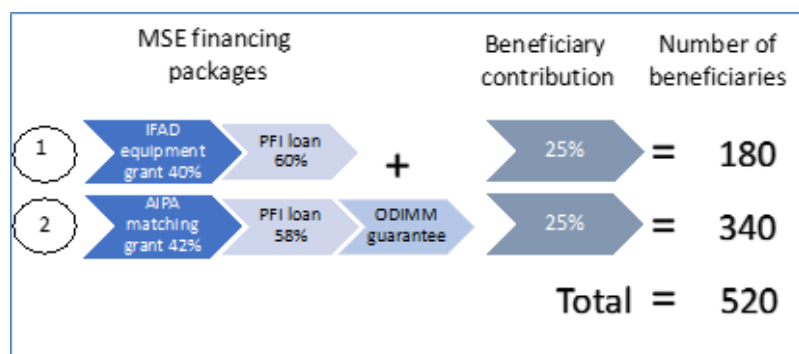
56. **1.2.2 Strengthening MARDE Technical Capacity**

57. The project will strengthen the capacity of MARDE by providing it technical specialists for economic and market analysis. These specialists will be kept informed of the experience of the project in undertaking some of the innovative arrangements in organizing the market facilitation meetings, partnership with private sector entities and the experience of PGs in the equity partnerships. This will help to identify any policy implications and modify and refine policy as required. The project will also organize opportunities for learning and experience sharing for MARDE staff and PGs. The CPIU capacity to deal with this component will be strengthened through the recruitment of an Agribusiness Specialist who will interact closely with the Ministry and share some of the lessons from the project experience and its implications on policy.
58. **Component 2. Entrepreneurship Finance** will consist of two complementary subcomponents: 2.1. Affordable credit for youth and women; and 2.2. Rural finance sector development. The main purpose of the component is to demonstrate that agriculture can be an attractive business and livelihood opportunity for young farmers and contain the out-migration trends in rural Moldova. The country is part of the IFAD Youth Action Plan and the Rural Youth Advisory Council.
59. **Subcomponent 2.1. Affordable credit for youth and women** will be focused on addressing the two main bottlenecks affecting access to credit for the rural youth and women – the cost of capital and lack of collateral to access loans. The project will provide mentoring support for young entrepreneurs and women to assist the target group in the formation of **investment and working capital proposals for around 520 beneficiaries**. Ninety percent of the grant-loan packages are reserved for microenterprises (see Table 2: Definitions of Micro, Small & Medium Enterprises). Small enterprises will only be eligible for this package if they can prove that the investment will serve smallholder farmers, women and/or youth through providing employment, purchase of commodities or access to markets. IFAD-funding would provide grants of up to 40% of the investment costs, matched with loans from the project. This intervention will address the cost of capital issue as beneficiaries will benefit from equipment grants – which will reduce the need in credit funds. It will further address the issue of the lack of or insufficient collateral as the equipment value can be counted towards the collateral for the bank loan. According to the World Bank,^[24] entrepreneurship grants (especially those provided in-kind) have been showing greater impact relative to credit, in

particular on those entrepreneurs who start with fewer assets – which is often the case with young entrepreneurs. Average loan amounts will be up to USD 50,000 and will be used for productive investment in equipment and working capital in both on-farm and off-farm activities.

60. The project would facilitate young entrepreneurs and women with developing proper proposals for subsidies from AIPA, the eligible activities of which will include the processing and safe disposal of wastewater generated from processing activities. Given that AIPA only provides upfront subsidies that are equivalent to 42%^[25] of the total investment costs, these will need to be matched with bank credit for those who do not have their own sources of funds and with ODIMM loan guarantee in cases where the applicant does not have sufficient collateral. ODIMM guarantees will help to further address the issue of insufficient collateral among the young entrepreneurs. The project will sign an MOU with AIPA and ODIMM to help these Government programmes become more effective. In the process the project will also identify some of the existing bottlenecks that the beneficiaries face in accessing these facilities and assist in refining them, where possible. The two agencies have indicated their agreement to working with the project.

61. Figure 1: MSE Financing Packages



62. Additionally, IFAD will provide a USD 2 million **credit line for Saving and Credit Associations (SCA)** to on-lend to microenterprises in rural areas. SCAs are a key source of finance for smallholders, women and youth in rural areas. IFAD would like to build and upscale on its successful and innovative pilot initiative that created an alternative window for SCAs which has been highly successful. The SCA "Grimancauti" which was supported by an earlier IFAD project was able to capture over 21.4% of all ME clients within about 1.5 years of the pilot.^[26] with excellent portfolio quality and effective interest rates to beneficiaries that are 39% lower than those offered by other SCAs funded under the previous IFAD projects through the Rural Finance Corporation (RFC) (13.25% instead of 18.4%). The line of credit is expected to be provided to 2 to 4 SCAs which will be selected based on key performance criteria. The interest rate on the credit line to these eligible SCAs will be established by the government and will be several percentage points lower as compared to the rate currently offered by RFC. This, in turn, will reduce the interest rates on the loans to the ultimate beneficiaries. Please see PIM for implementation arrangements and details. The PIM at Annex 8 provides details of the implementation arrangements.
63. **Subcomponent 2.2. Rural finance sector development:** This sub-component is designed to build capacity and strengthen some of the initiatives of the previous IFAD projects and will further strengthen the SCA sector and the regulatory and supervisory capacity of the National Commission for Financial Markets (NCFM). IFAD has in the past undertaken studies on potential growth paths for the sector and provided technical support through the Irish League of Credit Unions. The World Bank is providing technical support for putting in place the regulation for a SCA Stabilization Fund and a Deposit Insurance Fund. IFAD will provide investment finance of USD 2.69 million for sector support for SCAs once the regulation is in place.
64. Specifically, IFAD will provide a USD 1 million loan to cover the initial funding gap for the establishment of a **SCA Stabilization Fund**. The Stabilization Fund, managed by NCFM as the SCA sector regulator,^[27] will serve as the central short-term liquidity facility for the whole SCA sector. Loans issued to SCAs from this fund will be used to satisfy SCAs' short-term liquidity needs (as opposed to supporting their core business of lending). These liquidity needs may include (but not limited to): bill or tax payment, maintaining required reserves, operational expense payment, loan repayment etc. The concept of the Stabilization Fund is similar to central banks' liquidity facilities available to banks in many countries. The purpose of these facilities is to ensure stability in the financial sector by preventing failures of financial institutions due to liquidity shortages.
65. It is expected that every year, the SCAs will contribute about USD 100,000 to the Fund. The funding for the Stabilization Fund will be provided by the government as a credit to NCFM for a period of 10 years, in two equal tranches, at an interest rate to be determined by the government. The Stabilization Fund will be used by NCFM to fund about 10 SCAs, that are in need of short-term liquidity, every year; with around 500 members per SCA, on average.^[28] The Stabilization Fund will indirectly benefit about 25,350 SCA members over the course of 5 years. This Fund will help grow the SCA sector and provide a key source of liquidity to SCAs and enable them to meet the financial needs of rural areas.
66. IFAD will assist the SCA sector to adopt international best practices of financial consumer protection by providing it US\$ 0.85 million to establish an SCA Deposit Insurance Fund aimed by providing it US\$ 0.85 million to establish an **SCA Deposit Insurance Fund** aimed at insuring the deposits at SCAs, similar to the banks' deposit insurance system. These funds will be placed with the government and will only be used to cover any outstanding SCA depositor claims in case of SCA bankruptcy. For reference, in the past 3 years (2016-2018), the amount of unmet claims was about MDL 1.3 m (approx. USD 76,500) due to the bankruptcy of one SCA. The capacity to provide security for the small depositors in rural areas will build their

confidence in the SCA sector and the financial system as a whole, thus contributing to the stability of the sector.

67. The SCA Deposit Insurance Fund will be established only after the SCA Stabilization Fund is in place and the government has sufficient assurance of the increased stability of the SCA sector. The establishment of the Stabilization Fund and the Guarantee Fund should be in line with the Moldovan laws and regulations and in close coordination and agreement with the Ministry of Finance. Similar to the SCA Stabilization Fund, there is a clear exit strategy: all deposit-taking SCAs will be contributing to the formation of the SCA Deposit Insurance Fund. It is expected that it will be fully funded by SCAs over the course of 7 years. Thus, the amount of the government guarantee for insuring the SCA deposits will be reduced by 1/7 of the full amount (approx. USD 121,500) each year. The functioning of the SCA Deposit Insurance Fund will be modelled after the bank deposit insurance scheme: deposits up to MDL 50,000 (approx. USD 2,940) will be fully covered. Based on 2018 NCFM data, this will ensure 100% coverage for 89% of all SCA deposits. About 7,300 current depositors of SCAs will directly benefit through protection of their deposits.
68. Under this Subcomponent, the project will also provide the following **technical assistance** (USD 0.84 m) to several sector institutions and provide mentoring support to the SMEs:
- *SCA capacity building.* This will include the development of a software for SCA reporting and accounting, calculation and disclosure of effective interest rates on SCA loans to customers; and a software module for SCA reporting to the credit bureau. Additionally, the project will support the creation of the Central Association of SCAs and the provision of necessary trainings to SCAs (e.g. accounting, reporting, financial analysis, loan analysis, delinquency management, human resources management, legal issues, use of software etc.). This technical assistance will benefit the entire SCA sector (about 267 SCAs as of 2018).
 - *NCFM capacity building.* The project will further strengthen the capacity of NCFM to regulate and supervise the SCA sector. Specifically, the project will support the development of the deposit insurance monitoring system necessary to launch and run the SCA Deposit Insurance Fund; the development of the necessary regulations supporting the implementation of the amendments to the SCA law; and a study visit abroad.
 - *MSE mentoring support.* This will include the support in forming the investment/working capital packages mentioned above, first through an information and awareness campaign and then through hiring service providers to mobilize and select beneficiaries, assess their needs in training and mentoring support, and finally provide the necessary support. About 50% of the financing package beneficiaries are expected to request mentoring support for a comprehensive range of skills, planning and mentoring while for others a more targeted and tailored approach will be designed based on their specific needs.

E. Theory of Change

69. The underlying theory of change (TOC) of the TRTP project is that IFAD can help alleviate poverty reduction and drive the transformation of the rural economy by supporting smallholder farmers, young entrepreneurs and women in becoming more resilient and competitive through a range of complementary investments. A graphic illustration of the TOC is given in Annex 2. Some of the underlying problems and their root causes in Moldova include the high rate of outmigration of rural youth due to low level of wages and lack of productive employment and enterprise development opportunities. There is lack of physical and productive infrastructure in rural areas that further limits the potential for undertaking productive economic activities. Smallholder farmers have to deal with poor infrastructure in rural areas and are faced with deteriorating irrigation system and uncertain weather conditions that make agriculture production uncertain and add to the risk of farming and lead to low level of input use and poor quality of production. Small holder farmers suffer from a range of constraints that include limited capacity to invest in water efficient technologies, improved agriculture inputs, lack of access to markets due to inability to organize, low quality of produce and limited access to market infrastructure. Young entrepreneurs, smallholder farmers and women lack access to productive assets, are unable to access institutional credit due to lack of collateral, high interest rates and lack of technical capacity to make proper business decisions. Government policies have generally favoured large-scale corporate farms and even though several opportunities have opened up for the youth and women they are unable to fully capitalize upon them. Annex 2 gives the graphic illustration of the Theory of Change.
70. IFAD's previous experience in the country has clearly shown that investments in demand driven physical infrastructure and water efficient technologies can help enhance productivity and build resilience to climate change and extreme weather events for smallholder farmers. Organizing producer groups and associations in innovative arrangements with clear specification of ownership rights, equity investments and professional management will encourage farmers to participate in collective agribusiness enterprises and access markets that are otherwise not accessible to them. Working with strategies that facilitate smallholders contacts with market drivers can provide mutually beneficial partnerships for a range of market players along the value chain.
71. Experience in the country has also shown that youth and women can also be engaged in enterprise development through the provision of support in proper business planning, mentoring and coaching through a skilled facilitator who can guide them throughout the process in accessing business skills and finance to enhance their productivity and incomes. Combination of matching grants will make commercial funds more attractive for youth entrepreneurs and women and enabling them to use credit guarantee funds will enable them to access commercial finance. While the Government subsidizes a range of investments in the agriculture sector through the Agency for Intervention and Payments in Agriculture (AIPA), the youth and women are unable to utilize these because of lack of initial capital. The project can make arrangements with commercial banks and the Organization for Small and Medium Enterprises Sector Development (ODIMM) to open up the use of commercial finance by these vulnerable groups by enabling them to get access to collateral arrangements and interest rate rebates. A line of credit to SCAs will also enhance access to women and the productive poor in rural areas who have limited access to commercial banks. Provision of a stabilization Fund and a Deposit Insurance Fund would assist in the long-term growth and sustainability of the SCA sector thereby increasing access to finance in rural areas over the long-term.

F. Alignment, ownership and partnerships

72. The project is strongly aligned to several of the SDGs and overall Government of Moldova priorities. The project is designed to address SDG 1 regarding poverty alleviation and is in particular focused on reducing poverty in rural areas which is reported to be five times higher than urban poverty in the country. With financing from the Adaptation Fund, the project has a sharp focusing on enhancing resilience of rural households to climate change and extreme weather events such as droughts and water scarcity which could impact agriculture production and food security (SDG 2). The project is designed to strengthen opportunities for productive employment for women in keeping with SDG 5 and enhance labour productivity (SDG 8) given that labour productivity is low in agriculture with low wages which have led to the migration of youth. In keeping with SDG 9, the project is designed to enhance access to physical infrastructure and supporting rural enterprises. The project also focuses on SDG 13 given that the country faces climate risks which has in the past negatively impacted its GDP and subsistence oriented farms and rural households particularly vulnerable to climatic risks. The project will seek to deliver on the shared government and IFAD ambition of transforming agriculture into a dynamic engine of rural development and growth to generate employment and make farming and agribusiness an attractive and lucrative career option for the youth.
73. The project is aligned with key IFAD11 commitments and corporate priorities especially focus on youth, women and building climate resilience. The project is also aligned with key government priorities and strategies and has harmonized its approach to enable its target group to capitalize on opportunities for financing and support available from AIPA and ODIMM. The later has a mission to boost the national economy and competitiveness by supporting the SME sector development in the country. The Project will sign an MOU with both AIPA and ODIMM to formalize its modus operandi. The project will work closely with FAO and has already used its value chain analysis on plums, berries, aromatic and medicinal plants^[29] and its strategic recommendations on the agri-food sector and will work closely with FAO during implementation.^[30] The project will work closely with UNDP which is also expected to secure a grant from the Adaptation Fund. IFAD and UNDP will coordinate their efforts and identify any policy reform implications that emerge from their work in the water sector and use of water efficient technologies. The World Bank is providing technical support to the NCFM for developing the regulation for the Stabilization and Deposit Insurance Fund which the current project will finance. The European Union does not have any plans for new investments in the country in the foreseeable future. However, the CPIU will keep track of any opportunities that present themselves for collaboration through on-going investments or plans in the future.

G. Costs, benefits and financing

a. Project costs

74. This section describes the assumptions underlying the derivation of costs, estimated costs and financing plan for the project. Annex 3 provides detailed cost estimates.

- Total project costs are based on April 2019 prices.
- The TRTP project will be financed over a six-year period starting from beginning 2020.
- The base rate of domestic inflation has been set at 4 percent throughout project duration while international inflation is estimated at 1.5 percent during the first year of implementation and increases to 2.1 percent at project end.
- The exchange rate was fixed at 1USD = 17.5 MDL as per average market forex rate during 2018/2019.
- Both price and physical contingencies are taken into account in the costing of project. In particular, the category "works" present a 7 percent physical contingency in light of the higher degree of uncertainty normally affecting infrastructure interventions.
- Taxes and duties have been considered for each cost item.
- The value added tax (VAT) in Moldova reached 20% and is levied on all imported and locally procured goods and services.

75. Table 1: Project cost by expenditure account and components ('000)

Moldova Talent Retention for Rural Transformation Project (TRTP) Expenditure Accounts by Components - Totals including Contingencies (US\$ '000)	Resilient Economic Transformation				Inclusive Entrepreneurship			Project management	Total
	Resilient Climate		Agribusiness Development		Finance		Rural finance sector development		
	Climate resilient infrastructure	Adaptive Water management	Value chains for Producers Groups	Strengthening MARDE Technical Capacity	Affordable credit for youth and women				
I. Investment Costs									
A. Consultancies, Studies, Technical Assistance, Workshops etc	-	1,048	846	96	-	882	497	3,379	
B. Credit	-	-	-	-	17,773	1,850	-	19,623	
C. Equipment, Material, Goods and Services	-	-	4,887	-	2,000	-	97	6,984	
D. Grant	-	2,213	-	-	4,620	-	-	6,833	
E. Works	11,500	-	-	-	-	-	-	11,500	
Total Investment Costs	11,500	3,261	5,733	96	24,393	2,742	594	48,319	
II. Recurrent Costs									
A. Salaries & Allowances	-	-	-	-	-	-	1,210	1,210	
B. Operating Costs	238	-	-	-	-	-	702	940	
Total Recurrent Costs	238	-	-	-	-	-	1,912	2,200	
Total PROJECT COST \$	11,738	3,261	5,733	96	24,393	2,742	2,506	50,518	
Taxes	2,358	-	977	-	400	-	109	3,844	
Foreign Exchange	4,677	94	82	3	1,000	-	274	6,131	

a including trainings

76. Table 2: Project cost by expenditure category and financier ('000 USD)

(US\$ '000)																
	The Government		IFAD Loan		Beneficiaries		PFIs		AF		AIPA		Total		Local (Excl. Taxes)	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	For. Exch.	Duties & Taxes
I. Investment Costs																
A. Consultancies, Studies, Technical Assistance, Workshops (a)	0	-	2,311	68.4	-	-	-	-	1,088	31.6	-	-	3,379	6.7	180	3,199
B. Credit	-	-	3,860	19.7	503	2.6	15,260	77.8	-	-	-	-	19,623	38.8	-	19,623
C. Equipment, Material, Goods and Services	1,397	20.0	5,267	75.4	320	4.6	-	-	-	-	-	-	6,984	13.8	1,049	4,539
D. Grant	-	-	2,000	29.3	945	13.8	-	-	2,213	32.4	1,675	24.5	6,833	13.5	-	6,833
E. Works	2,300	20.0	5,969	51.9	1,455	12.7	-	-	1,776	15.4	-	-	11,500	22.8	4,533	4,667
Total Investment Costs	3,697	7.7	19,407	40.2	3,223	6.7	15,260	31.6	5,057	10.5	1,675	3.3	48,319	96.6	5,762	38,860
II. Recurrent Costs																
A. Salaries & Allowances	-	-	963	61.2	-	-	-	-	228	16.8	-	-	1,210	2.4	-	1,210
B. Operating Costs	148	14.9	360	36.4	230	23.3	-	-	252	25.5	-	-	989	2.0	369	473
Total Recurrent Costs	148	6.7	1,342	61.0	230	10.5	-	-	480	21.8	-	-	2,200	4.4	369	1,683
Total PROJECT COST \$	3,844	7.6	20,750	41.1	3,453	6.8	15,260	30.2	5,537	11.0	1,675	3.3	50,518	100.0	6,131	40,543

including trainings

77. Table 3: Project cost by component and by year ('000 USD)

Totals Including Contingencies (US\$ '000)							
	2020	2021	2022	2023	2024	2025	Total
A. Resilient Economic Transformation							
1. Enhancing Climate Resilience							
a. Climate resilient infrastructure		65	2,237	3,467	3,561	1,741	717
b. On-Farm Adaptive Water Management		-	582	975	980	583	140
Subtotal		65	2,819	4,442	4,541	2,324	857
2. Agribusiness Development							
a. Strengthening Value chains for Producers Groups		584	1,145	1,642	1,151	1,155	56
b. Strengthening MARDE Technical Capacity		12	29	25	26	4	-
Subtotal		596	1,173	1,667	1,177	1,160	56
Subtotal		661	3,993	6,109	5,718	3,484	913
B. Inclusive Entrepreneurship Finance							
1. Affordable credit for youth and women		-	4,879	4,879	4,879	4,879	24,393
2. Rural finance sector development		510	1,670	135	176	125	127
Subtotal		510	6,548	5,013	5,054	5,003	5,008
C. Project Management		514	166	195	419	582	629
Total PROJECT COST \$		1,686	10,707	11,317	11,191	9,069	6,548

b. Project financing/co-financing strategy and plan

78. Total project cost (investment cost and incremental recurrent cost, including physical and price contingencies) is estimated at USD 50.51 million, 20.7 million (41.1% of the total cost) of which will be financed by IFAD through a loan. Grant resources of the Adaptation Fund (AF) for about USD 6 million (11% of total project cost) will be allocated mainly to component 1 with a financing of about USD 5 million (10% of total project costs) while the remainder USD 0.5 million will be absorbed in component 3. The Government of the Republic of Moldova (GoM) would provide USD 3.8 million (7.6% of total project costs). Contributions from GoM will mainly finance taxes and duties. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan/Grant, any future changes in the rates and/or structures of taxes and duties would have to be met by the Government. The estimate of taxes and duties was based on the rates prevailing at the time of project design.

79. The TRTP project beneficiaries would also benefit from the subsidies from the Agency for Interventions and Payments in Agriculture (AIPA) and Public Finance Institutions (PFIs). Beneficiaries are expected to obtain around USD 1.6 million (3.3% of total project cost) from AIPA, to finance part of the intervention under component 2. The PFIs are expected to provide credit worth USD 15.2 million (30.2% of total project cost) to young entrepreneurs as part of component 2. Project beneficiaries are expected to provide both in-kind and in-cash contributions of about USD 3.4 million (6.8% of project total cost) co-financing investments and socio-environmental infrastructure and innovations under both components. Funds allocated to the Project Management Unit are estimated to be around USD 2.5 million, equal to 5% of the total project costs. Detailed cost tables and estimates are provided in Annex 3.

Table 4: project cost by component and financier ('000 USD)

Moldova Talent Retention for Rural Transformation Project (TRTP) Components by Financiers														
(US\$ '000)														
	The Government		IFAD Loan		Beneficiaries		PFIs		AF		AIPA		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
A. Resilient Economic Transformation														
1. Enhancing Climate Resilience														
a. Climate resilient infrastructure	2,358	20.0	5,989	50.6	1,685	14.3	-	-	1,775	15.1	-	-	11,788	23.3
b. On-Farm Adaptive Water Management	-	-	-	-	-	-	-	-	3,281	100.0	-	-	3,281	6.6
Subtotal	2,358	15.7	5,989	39.7	1,685	11.2	-	-	5,057	33.5	-	-	15,049	29.8
2. Agribusiness Development														
a. Strengthening Value chains for Producers Groups	977	17.0	4,755	83.0	-	-	-	-	-	-	-	-	5,733	11.3
b. Strengthening MAROE Technical Capacity	-	-	96	100.0	-	-	-	-	-	-	-	-	96	0.2
Subtotal	977	16.6	4,852	83.2	-	-	-	-	-	-	-	-	5,829	11.5
Subtotal	3,335	16.0	10,820	51.8	1,685	8.1	-	-	5,057	24.1	-	-	20,878	41.3
B. Inclusive Entrepreneurship Finance														
1. Affordable credit for youth and women	400	1.6	5,290	21.7	1,768	7.2	15,250	62.6	-	-	1,675	6.9	24,363	48.3
2. Rural finance sector development	-	-	2,742	100.0	-	-	-	-	-	-	-	-	2,742	5.4
Subtotal	400	1.5	8,032	29.6	1,768	6.5	15,250	56.2	-	-	1,675	6.2	27,135	53.7
C. Project Management	109	4.4	1,897	75.7	-	-	-	-	500	19.9	-	-	2,506	5.0
Total PROJECT COST \$	3,844	7.6	20,750	41.1	3,453	6.8	15,250	30.2	5,537	11.0	1,675	3.3	50,818	100.0

80. Moldova is eligible for borrowing from IFAD at "blend" financing terms for projects approved by the IFAD Executive Board in 2019. The Ministry of Finance (MoF) has expressed its interest to borrow in SDR currency. The applicable loan term will be specified in the Financing Agreement and shall be: fixed interest rate of 1,25% and service charge of 0,75% on the principal amount outstanding (disbursed and not yet repaid) and a loan maturity period of 25 years including a grace period of 5 years starting from the date of approval from the Executive Board. Interest rate and service charge will be fixed throughout the duration of the loan. Repayments of interests, service charge and principal shall be semi-annually in USD. Principal is repaid at 5% amortization from years 6 to 25.

c. Disbursement

81. The funds for the project will be disbursed into two separate designated accounts denominated in USD and opened through the State treasury of the Borrower/Recipient at the National Bank of Moldova for the IFAD loan and the AF grant respectively. The designated accounts shall be operated under Imprest arrangements. The authorised allocation to the loan designated account shall indicatively be a maximum USD 3,3 million through three separate initial advances of which one up to USD 1 million specific to support the creation of the NCFM Stabilization Fund and a second up to USD 0,8 million for the NCFM Insurance Deposit Fund. The initial authorized allocation to the grant designated account shall be USD 0,5 million.
82. The advances from the IFAD Loan DA, through the CPIU Loan Project Account, to the NCFM for initiating the creation of the Stabilization Fund and the Insurance Deposit Fund will be deposited in separate accounts opened in local currency (MLD) by the NCFM at the NBM. After initial support, the NCFM Funds are meant to become self-sustainable in the long term based on specific fees charged to SCAs. As the two Funds build up, the advanced amounts from the IFAD loan, after their utilization for the intended purpose of bringing stability in the non-banking financial sector, will be revolved back to the MoF through its Credit Line Directorate (CLD). As a first indication, the deposit for the SCA Stabilization Fund may be in two equal tranches in which case the Loan DA will be advanced accordingly. Whereas, for the SCA Deposit Insurance Fund there may not necessarily be the need to initially deposit on a NCFM dedicated account as resources will be transferred only in case of defaults and withdrawn as needed through the Loan Designated Account (on which a minimum initial advance may be disposed).
83. The CPIU shall also open through the MOF-State Treasury separate project accounts in local currency (MDL) at the NBM:
- two project accounts to receive resources for eligible expenditures from the loan and the grant designated accounts respectively;
 - one project account to provide counterpart government funding to cover duties, taxes and other services for project implementation,
 - one project account to receive contributions from the beneficiaries
84. Withdrawal of the financing shall follow three disbursement methods: advance withdrawal, reimbursement and direct payment. Withdrawal requests will be processed through the ICP-IFAD Client Portal by the Project CPIU. Concerning the use of the Statement of Expenditure (SOE) facility, relevant to the supporting documentation required to justify expenditure against withdrawn amounts, there will be no threshold for withdrawal applications under Advance Withdrawal and Reimbursement methods as aligned to on-going projects. Disbursement arrangements will be detailed in the Letter to the Borrower/Recipient in accordance with the Fund's General Conditions, the Financing Agreement and the IFAD's Loan Disbursement Handbook.
85. Funds from the IFAD loan and the AF grant will not be used to pay duties and taxes. Government funding, cash and/or in-kind (i.e. tax exemptions) will be incorporated into the AWPB and the actual contribution accounted/registered in the CPIU accounting software. Contribution from the beneficiaries, cash and/or in-kind, will be incorporated into the AWPB and the corresponding value accounted/registered in the CPIU accounting software. Cash contributions shall be deposited in the beneficiary contributions Project Account and/or in-kind contributions shall be evaluated at the fair market value, in

accordance with the eligibility criteria detailed in the PIM and in accordance to IFAD^[31] recommendations on in-kind contributions

d. Summary of benefits and economic analysis

86. It is expected that the project will reach 11,723 households or around 34,000 people in rural Moldova. Annex 4 provides the detailed financial and economic analysis. There is expected to be some double counting in this number given that the project is designed to ensure complementarity between some of the components and assist youth and women to benefit from several project interventions. The table below provides an estimation of the number of households expected to benefit from each of the project components and the proportion of youth and women under each.

87. Table 5: Estimated Number of Beneficiaries

Component	Unit	No	HHs	Women	Youth	People
1 Resilient Economic Transformation						
1.1 Climate Resilient Infrastructure						
Roads	Kms	30	2,250	1,125	338	
Irrigation	schemes	20	1,200	600	360	
Water Efficient Technologies	participants	885	885	398	443	
On-farm Climate Resilient Water Management Capacity Building	participants	4600	4,600	1610	2300	
1.1 Subtotal		5485	8,935	3,733	3,441	25,912
1.2 Agribusiness Development						
Value Chain Diagnostic Surveys	Surveys	22	330	99	132	
Producer Groups Associations	Associations	10	400	120	160	
Participation in Market Facilitation Meetings	Meetings	24	528	158	211	
Business Mentoring support	Plans	110	110	44	44	
Agro-processing Grants	Grants	10	600	210	240	
1.2. Subtotal			1,968	631	787	5,707

2. Entrepreneurship finance						
2.1 Affordable credit for youth and women						
IFAD matching grant + PFI credit	# borrowers	180	180	72	108	
AIPA matching grant + ODIMM collateral + PFI credit	# borrowers	340	340	136	204	
ME loans through SCAs	# borrowers	300	300	120	150	
2.1 Subtotal		820	820	328	462	2,378
2.2 Rural Finance Sector Development						
SCA Stabilization Fund	# SCA members ^a		25,350	12,675	5,070	
SCA Deposit Insurance fund	# SCA depositors ^a		7,300	3,650	1,460	
2.2 Subtotal			32,650^a	16,325	6,530	
		Total (-2.2)	11,723	4,693	4,690	33,997
		(%)		40%	40%	

88. a; This is not added to the totals for the project as it is a long term benefit for the SCA sector as a whole.

89. Benefits to the TRTP target group would accrue from: (i) enhanced climate resilience and reduced climate risks from increased water availability for productive use and conservation agriculture techniques; (ii) diversification of productive activities and sources of income thanks to access to finance; (iii) increased food availability for rural poor, (iv) increased value-added of agricultural outputs; (v) reduced transportation costs and enhanced processing efficiency through innovative technology and improved infrastructure; (vi) improved quality of processed products, thus attracting higher prices at local market; (vii) increased employment either for hired or family labour, for both on-farm and off-farm activities; and (viii) tax revenues as a result of increased volume of taxable production.

90. It is expected that the project will provide 2,250 households with improved village level feeder roads including about 30 village level agribusinesses. In addition, some 1,200 households will be provided with reliable irrigation water supply system including some 25 village level agribusinesses. In addition, people will benefit from improved access to water irrigation technologies and conservation agriculture practices. The project will provide around 2000 households opportunities to aggregate their produce and add value for improved access to markets. Around 800 households will have improved access to financial services.

91. Financial analysis. A number of indicative economic activities to be supported by project were identified during the project design mission. The following 12 illustrative models are used in the EFA: (i) Apple orchard; (ii) Apricot orchard; (iii) Cherry orchard; (iv) Plum orchard; (v) Table grape production (mechanized); (vi) Table grape production (irrigated); (vii) Tomato production in greenhouse; (viii) Potato production; (ix) Garlic production; (x) Onion Production; (xi) Dried fruit processing unit and; (xii) Grape and apple processing unit. These models were used as building blocks for the economic evaluation. All the technical assumptions within the models have been elaborated jointly with the team members on the basis of field surveys, national statistics, international and national expert consultation and technical studies. Summary results from the financial

models are presented in table 6.

92. Table 6: Summary of financial model results

MODELS		NPV (MDL) @ 12%	Return to family labour (MDL)	FIRR	B/C ratio	Switching value Benefits	Switching value Costs	
Apple		324,890	1,758	19%	1.21	-17%	21%	
Apricot		136,322	1,857	15%	1.10	-9%	10%	
Cherry		279,171	1,375	18%	1.15	-13%	15%	
Plum		21,049	791	15%	1.06	-6%	6%	
Table grape (mechanized)		65,085	941	14%	1.05	-5%	5%	
Table grape (irrigated only)		115,021	613	17%	1.09	-8%	9%	
Tomato (greenhouse)		34,596	3,446	17%	1.17	-15%	17%	
Potato		11,162	302	17%	1.19	-16%	19%	
Garlic		69,490	534	37%	1.78	-44%	78%	
Onion		44,972	379	30%	1.60	-37%	60%	
Dried fruit processing unit		6,624,084	n/a	28%	1.05	-5%	5%	
Grape and apple processing unit		5,563,205	n/a	25%	1.10	-9%	10%	

93. The EFA has been conducted by including 5,107 HHs in the production models considered. The aggregation for production models is based on the number of HHs directly engaged in the activity. The total number of HHs expected to benefit from agro-processing units are based on an estimated outreach of 60 HHs per unit. Overall the project will benefits women, youth and men directly involved in farm and off-farm activities proposed by the project as well as indirect beneficiaries employed in the value adding activities and benefitting from the rehabilitated infrastructure. The inclusion pattern of the EFA modes and beneficiary is described in Table 7 below.

94. Table 7: Beneficiary and investment phasing

MODELS	unit	Y1	Y2	Y3	Y4	Y5	Y6	Total no. of HHs
Farm model - Apple orchard	HHs	0	23	23	23	23	23	117
Farm model - Apricot orchard	HHs	0	23	23	23	23	23	117

Farm model - Cherry orchard	HHs	0	23	23	23	23	23	117
Farm model - Plum orchard	HHs	0	23	23	23	23	23	117
Farm model - Table grape orchard (mech.)	HHs	0	23	23	23	23	23	117
Farm model - Table grape orchard (irrig.)	HHs	0	23	23	23	23	23	117
Tomato production in greenhouse (0.1 ha)	HHs	0	23	23	23	23	23	117
Potato production (1ha)	HHs	0	234	380	380	181	53	1,228
Garlic production (1ha)	HHs	0	234	380	380	181	54	1,229
Onion production (1 ha)	HHs	0	234	380	380	181	55	1,230
Dried fruit processing [32]	model	0	1	1	1	1	0	240
Grape and apple processing [33]	model	1	1	2	1	1	0	360
								5,107

95.

96.

97. **Key Assumptions.** The economic analysis of the project hinges on the following assumptions: (i) Project life has been assumed at 20 years in light of investments lifecycle; (ii) project inputs and outputs are valued at their economic parity prices estimated upon international prices as reported by the World Bank commodity outlook, and on the basis of custom duties and taxes rates as provided by the national bureau of international trade; (iii) an economic discount rate of 11% has been calculate as the weighted average of saving interest rates, long term bonds yields and the real interest rate; (iv) family labour is valued at its opportunity cost; (v) the shadow exchange rate factor (SERF) of 1.02 is calculated upon international trade statistics and applied for the conversion of tradable commodity prices; vi) conversion factors for main inputs and outputs are calculated starting from international prices and on the basis of import and export taxes and duties in Moldova; and (vii) the shadow exchange rate (SER), estimated upon international trade data, is equal to MDL 18.

98. **Economic Profitability.** The project is assessed to be economically viable. The Net Present Value (NPV) discounted at 11%, is MDL 636 million (USD 36.3 million) producing an EIRR of 22% for the base case scenario. The summary of economic analysis is presented in Figure 3.

99. **Sensitivity analysis.** Switching values and critical threshold have been identified for key variables. In particular, the project would no longer be viable in case: a) operating costs increases by 36%; b) benefits decline by 22%; c) input cost increase by 37%; d) output prices fall by 26%; e) project beneficiaries involved in productive activities are less than 1,022 HHs (2,964 people).

100. Finally, the sensitivity analysis allows to examine the effects of a simultaneous variation in some of the pre-identified key variables on the overall project profitability, hence determining all possible combinations of variables' changes that would result in a negative (or positive) NPV.

101. Table 8: Simultaneous sensitivity analysis

		Investment cost									
		20%	40%	60%	80%	100%	120%	140%	160%	180%	200%
Benefits	20%	(1,256,041)	(1,380,944)	(1,505,848)	(1,630,751)	(1,755,654)	(1,880,558)	(2,005,461)	(2,130,364)	(2,255,268)	(2,380,171)
	40%	(658,032)	(782,935)	(907,838)	(1,032,742)	(1,157,645)	(1,282,548)	(1,407,452)	(1,532,355)	(1,657,259)	(1,782,162)
	60%	(60,023)	(184,926)	(309,829)	(434,733)	(559,636)	(684,539)	(809,443)	(934,346)	(1,059,249)	(1,184,153)
	80%	537,986	413,083	288,180	163,276	38,373	(86,530)	(211,434)	(336,337)	(461,240)	(586,144)
	100%	1,135,996	1,011,092	886,189	761,285	636,382	511,479	386,575	261,672	136,769	11,865
	120%	1,734,005	1,609,101	1,484,198	1,359,295	1,234,391	1,109,488	984,585	859,681	734,778	609,875
	140%	2,332,014	2,207,110	2,082,207	1,957,304	1,832,400	1,707,497	1,582,594	1,457,690	1,332,787	1,207,884
	160%	2,930,023	2,805,119	2,680,216	2,555,313	2,430,409	2,305,506	2,180,603	2,055,699	1,930,796	1,805,893
	180%	3,528,032	3,403,129	3,278,225	3,153,322	3,028,419	2,903,515	2,778,612	2,653,708	2,528,805	2,403,902
	200%	4,126,041	4,001,138	3,876,234	3,751,331	3,626,428	3,501,524	3,376,621	3,251,718	3,126,814	3,001,911

		Investment cost									
		20%	40%	60%	80%	100%	120%	140%	160%	180%	200%
Recurrent cost	20%	2,527,329	2,410,442	2,293,555	2,176,668	2,059,781	1,942,894	1,826,007	1,709,120	1,592,233	1,475,346
	40%	2,179,496	2,060,605	1,941,714	1,822,822	1,703,931	1,585,040	1,466,149	1,347,258	1,228,367	1,109,475
	60%	1,831,662	1,710,767	1,589,872	1,468,977	1,348,082	1,227,186	1,106,291	985,396	864,501	743,606
	80%	1,483,829	1,360,930	1,238,030	1,115,131	992,232	869,333	746,433	623,534	500,635	377,736
	100%	1,135,996	1,011,092	886,189	761,285	636,382	511,479	386,575	261,672	136,769	11,865
	120%	788,162	661,255	534,347	407,440	280,532	153,625	26,718	(100,190)	(227,097)	(354,005)
	140%	440,329	311,417	182,506	53,594	(75,317)	(204,229)	(333,140)	(462,052)	(590,963)	(719,875)
	160%	92,495	(38,420)	(169,336)	(300,251)	(431,167)	(562,083)	(692,998)	(823,914)	(954,829)	(1,085,745)
	180%	(255,338)	(388,258)	(521,177)	(654,097)	(787,017)	(919,936)	(1,052,856)	(1,185,776)	(1,318,695)	(1,451,615)
	200%	(603,172)	(738,095)	(873,019)	(1,007,943)	(1,142,866)	(1,277,790)	(1,412,714)	(1,547,638)	(1,682,561)	(1,817,485)

e. Exit Strategy and Sustainability

102. There are several key elements of the project's exit strategy that are associated with each of its key components. Annex 10 provides more details of the Exit Strategy. The investment in physical and water efficient infrastructure will be maintained by the municipal authorities and the individual users and agribusinesses who contribute to their investment and take over operation and maintenance of the schemes after completion.
103. The investment in the Producer Groups and Associations is expected to be based on proper feasibility assessment and market demand in partnership with key market drivers and private sector entities. These are expected to be designed in a manner that is sustainable. The capacity of the producer groups will be strengthened to enable them to partner effectively with private sector agencies who will ensure that the partnership is professionally managed and is linked to markets. The exit strategy for the producer groups will be a key criteria at the time that the producer group is considered for support. Factors that will be part of the selection criterion will include the governance structure of the group, the role of the private sector in the endeavour and its strong links with market and its corporate capacity, a proper market analysis and value chain analysis that will be undertaken by the private sector and the producer group showing the feasibility of the enterprise, the financing and management arrangements, the financing and marketing plan and a proper cost-benefit analysis and business plan.
104. The arrangements for provision of access to finance are expected to help build the confidence of the commercial banking sector to lend to small-holder farmers, YE and women. The project is not providing any lines of credit to commercial banks but simply strengthening the mechanisms that will enable more effective use of the arrangements that the GoM has put in place to stimulate rural growth by leveraging the support provided by AIPA and ODIMM. Increased awareness about these facilities will enable the project to exit from its facilitation and mediation efforts at the end of the project period.
105. IFAD has through earlier investments worked closely with the National Commission for Financial Markets (NCFM) to develop a management information system that enables the Commission to track the key financial indicators with respect to SCA performance and assess their financial health. In addition, the NCFM will be provided technical assistance to develop a strategy for the future growth of SCAs and to assist in developing the regulatory framework. These measures will add to the sustainability of the financial sector. The project is expected to further contribute to the long-term sustainability of the SCA sector by providing mechanisms through which the NCFM can better supervise and regulate the sector through the provision of a SCA Stabilization Fund and the SCA Deposit Insurance Fund which will contribute to strengthening the SCA sector. IFAD's interventions have a clear exit strategy as both contributions will be temporary (a loan to NCFM in the case of the SCA Stabilization Fund and a guarantee fund placed with the government in the case of the SCA Deposit Fund); both funds will eventually be formed by SCAs themselves through their annual contributions to NCFM.

3. Risks

H. Project risks and mitigation measures

106. The project faces several risks which have been summarized in this section and detailed in Annex 9 which gives the Integrated Risk Framework (IRF). Projects in the past have not been targeted to the smallholders due to the ease with which the larger farmers and enterprises are able to adhere to the conditions of partnership and provide their share of cash contribution. In order to ensure that smallholders are not left out of the process of selection, additional weight is being assigned to the selection criterion to ensure their inclusion. In addition, some of the components are open only to youth entrepreneurs and women such as the entrepreneurship finance component. To ensure access to credit for poor households in rural areas, the SCAs are being provided a line of credit through the project. There is little risk that these funds will be captured by the elite, as the loan size is small and only the smallholders are interested in accessing them.
107. Any risks that are associated with the capacity of the Producer Groups, YEs or the sector institutions such as NCFM or SCAs will be addressed through strong emphasis on Technical assistance and capacity building. The risks inherent in the partnership between private sector and PGs will be managed by proper oversight and monitoring of the partnership arrangements by the service provider hired for the purpose and regular oversight by the CPIU. Additional risks that the project may suffer from is the fact that Government procedures generally do not allow for upfront provision of funds to beneficiaries and only allow reimbursement after it is secure that funds have been spent. This inhibits the selection of those without sufficient capital and delays implementation of activities. The way to mitigate this risk would be to use an escrow account operated by a partner bank which can hold the advance payment in the account until the transaction for the purchase of the equipment or the implementation of the investment is completed and the CPIU approves the payment of the final instalment. Banks are willing to offer these services at a small fee.
108. The fiduciary risk associated with projects implemented by CPIU is deemed to be of medium scale and emanate from the categorization of the country as a "medium" risk. However, there is "low" risk associated with the centralized CPIU. From a project implementation perspective, the risk of the PFM environment is well counterbalance by a solid CPIU which has been managing satisfactorily the on-going programmes. CPIU operations are synchronised with the country systems for what concerns budgeted preparation as well budget execution through the Treasury integrated financial management systems (IFMIS). The good practice to open both designated and project accounts at the NBM (instead of commercial banks) will be followed also for TRTP and be possibly extended to the accounts for the NCFM Funds/facilities.
109. Moldova ranked 117 out of 180 countries surveyed in 2018 by Transparency International. According to the PEFA Framework 2011: Procurement assessed under P1-19 methodology, the country and project procurement risks together are rated as Medium. The inherent procurement risk rating for the country and project is 2.4 out of 3. With the support of EU and EBRD, Moldova has made progress in implementing procurement reform. The introduction of e-procurement as standard for public procurement, which is currently being tested, is expected to bring about considerable improvements in the system.
110. After the major banking fraud in 2014, which involved the three major banks in the country, the GoM has continued its efforts to strengthen Public Financial Management (PFM), develop transparency and fight corruption. However, vulnerability and uncertainty in the financial sector (banking/non-banking) persist as well as gaps in financial consumer protection, financial education, and financial sector regulation. TRTP will address these issues by improving financial inclusion particularly in the non-banking sector. The project will support some of the reforms proposed by the NCFM, through the creation of a *Stabilization Fund* to secure sufficient credit supply to SCAs, an *Insurance Deposit Fund* (to secure emergency liquidity assistance in cases of default of SCAs) (iii) as well as other organizational initiatives (i.e. development of the Central Association of SCAs with its board participated by the NCFM), including enhancing transparency in transaction accountancy and data reporting (free software deployed to all SCAs). On top of this, TA interventions will be provided throughout the programme to mentor beneficiaries develop viable business plans.
111. Required Project risk and mitigation measures are presented above in detail.
112. The fiduciary risk associated with projects implemented by CPIU is deemed to be of medium scale and emanate from the categorization of the country as a "medium" risk. However, there is "low" risk associated with the centralized CPIU. From a project implementation perspective, the risk of the PFM environment is well counterbalance by a solid CPIU which has been managing satisfactorily the on-going programmes. CPIU operations are synchronised with the country systems for what concerns budgeted preparation as well budget execution through the Treasury integrated financial management systems (IFMIS). The good practice to open both designated and project accounts at the NBM (instead of commercial banks) will be followed also for TRTP and be possibly extended to the accounts for the NCFM Funds/facilities.

I. Environment and Social category

113. The Project is considered to be Category B (Annex 5: SECAP). Overall, the Project is not expected to have any significant adverse environmental or social implications. The road and irrigation schemes are of a small-scale and there are not expected to be any environmental risks associated with them. In any case, the design and construction specifications will strictly follow the Moldovan national laws.
114. Furthermore, through a participatory approach, the project will ensure that appropriate and innovative water saving measures will be identified and adopted by climate vulnerable smallholders. The Project is designed to enhance sustainable and resilient business opportunities for vulnerable rural households and assist them in diversifying their production, markets and access to technical support and financial resources to enable them to use climate-smart natural resource management practices as a main driver for local economic growth and sustainability.
115. The project is aligned to the National Environmental Strategy and will comply with national environmental standards. The design details the environmental screening that meets IFAD's requirements under the SECAP and how the project will address the ESA principles and presents an Environmental and Social Management Plan (SECAP Annex 5).

J. Climate Risk classification

116. The Project's climate risk classification is moderate (Annex 5). Based on assessments undertaken during preparation of the concept note and detailed design, the Project is expected to be moderately sensitive to climate risks, mainly due to the exposure of Moldova's agriculture sector to changes in temperature and rainfall. However, a key aim of the programme will be to reduce the vulnerability of the rural poor to those risks and Project's funds are allocated to ensure climate adaptation and resilience of both infrastructure and livelihood strategies of rural poor.
117. Mitigation of adverse environmental and climate risks due to water scarcity and its impact on agricultural production and food security is a key project objective. With funds provided by the Adaptation Fund the Project will mitigate any negative environmental impacts through increasing awareness of climate change and help in the promotion of innovative water efficient solutions for climate vulnerable farmers. Solutions like water efficient drip irrigation have been shown to simultaneously reduce water consumption while also increasing agricultural productivity, with farmers recovering investments within a year. Reduced overall water consumption will ultimately reduce the stress on the water supply and improve the resilience to climate shocks, with reduced financial impacts.

4. Implementation

K. Organizational Framework

a. Project management and coordination

118. The overall responsibility for the management and implementation of TRTP will be exercised by the existing IFAD Programme Steering Committee (IPSC), established by a GoM decree to manage all IFAD financed projects in the country. The IPSC will be responsible for providing overall policy guidance and oversight for all IFAD-supported projects and programmes in Moldova. The IPSC will have the same responsibility and function with respect to the TRTP. The IPSC membership may be amended depending on project requirements, with a view to reflect the increased emphasis on climate adaptation and resilience, subject to prior approval of IFAD. The CPIU programme director and a representative from the CLD and MoF will participate in the IPSC meetings. Logistical support and secretarial services for the IPSC will be provided by the CPIU.
119. Day-to-day management and implementation of the project will be exercised by the existing CPIU. However, given that the CPIU is already charged with implementing two on-going IFAD projects, the CPIU capacity will be strengthened to implement the TRTP by hiring an additional engineer, specialist to oversee the Adaptation Fund grant and an Agribusiness Specialist to coordinate the activities of TRTP. In addition, specialist expertise will be contracted out to consulting firms or NGOs with the requisite skills for communication, identification of beneficiaries and administration of grants for the AF activities. Apele Moldovei the State Water Administration Agency responsible for the planning and implementation of capital investments in the water supply and wastewater sectors will review all applications for water related infrastructure. The project will also partner with the Research Institute of Field Crops "Selectia for supporting research grants focused on Conservation Agriculture. The CPIU will work closely with the State Agrarian University of Moldova for the development of a Conservation Agriculture curriculum, and the translating of Conservation Agriculture text books and research papers into Moldovan language. The project could also potentially cooperate with the National Agency for Rural Development (ACSA) or other Service Providers like it, in the implementation of the Adaptation Funded activities for the developing the demo plots; the designing and implementation of the Training of Trainers (ToT) programme; and the training of extension workers and beneficiaries of on-farm water management activities.
120. A consulting firm with the knowledge and expertise in business development, providing mentoring and coaching services, establishing market linkages and strengthening producer associations will be hired to assist in the identification and implementation of the agribusiness component. Similarly, a firm will also be hired to provide mentoring coaching and business development services to young entrepreneurs and women who will be assisted in coordinating with accessing subsidies and interest rate rebates from AIPA, collateral guarantee arrangements from ODIMM, grants from the CPIU and credit from Participating Financial Institutions. An MOU will be signed with AIPA and ODIMM to clarify implementation responsibilities.
121. The principal functions of the CPIU will be to undertake the annual plans and budgets, take the lead in implementation, coordinate with partner institutions and supervise the service providers and infrastructure contractors. The CPIU will monitor and document project progress and ensure the timely availability of all progress reports. Specifically, the CPIU will assume responsibility for generating the AWPBs for submission to the IPSC for review and approval, and subsequently to IFAD for no objection. Likewise, the CPIU will take the lead in procurement of civil works and goods and services. The CPIU infrastructure specialist will oversee the implementation of infrastructure activities and the Adaptation Fund specialist will oversee the grants under the project and the Agribusiness Specialist will supervise the specialist firm dealing with the agribusiness component and the credit manager will oversee all activities related to the rural finance component. The responsibility for ensuring that the targeting and selection criterion is adhered to will be assumed by all component leads and the CPIU Director.

b. Financial Management, Procurement and Governance

122. Required information is provided in details in the below section.

123. The Financial Management Unit structure of the CPIU is adequate to manage the responsibilities envisaged under the proposed project. The Unit consists of a Finance Manager and an Accountant. The Finance Manager is currently also involved with procurement and legal aspects. However, it is expected that with the completion of one of the on-going projects in 2020 this involvement will be reduced. **The AWPB process** is already well established and follows on-budget national procedure. Budget preparation will be detailed by component/categories using proper Chart of Accounts to map/bridge expenses for the purpose of dual reporting both to Government and IFAD. AWPB will be maintained in the budget module of the CPIU accounting software (1-C) as well as entered quarterly in the IFMIS-Budget Module of the integrated national system.

124. **The project accounting system** will follow national standards, accrual basis, and transactions will be recorded in the 1-C stand-alone accounting software at the CPIU. As national **reporting** requirement differ from IFAD's, a specific set of Financial Statements can be easily prepared as per current practice based on records from 1-C, on a cash basis of accounting and in accordance to the requirements set in the IFAD Handbook on Reporting/Auditing. **On-going internal control** procedure will also be applied to TRTP, which ensure proper segregation of duties. The project can maintain the same audit arrangements as current on-going programmes. At the same time, the CPIU may take into consideration the opportunity to strengthen this area with dedicated resources. The project will be **externally audited** by independent firms acceptable to IFAD as is adopted for the on-going programmes. but for TRTP, the Borrower/Recipient should ensure that the IFAD funds transferred to the NCFM/Transitional Commercial Bank accounts are part of the audit and that the auditors are granted access to all documentation as may be required. The financial statement set and the auditing will follow IFAD Handbook[34] requirements, including TORs and timing of appointment of the Auditors.

125. The procurement for the new project will be managed by the CPIU which has a procurement specialist in place. Annex 7 provides the first 18 months procurement plan. However, this capacity needs to be strengthened through engagement of a second procurement specialist. The efficiency of the procurement process needs to be improved through selection of appropriate procurement methods keeping in mind size and purpose of procurement. In order to expedite the procurement process it is suggested that the tender committee members define the qualification requirements for the tenders at the start rather than only at the stage of the evaluation of submitted bids/proposals to avoid any disagreements among tender committee members during the evaluation. At the same time, it is important to ensure the involvement of procurement specialist in the bids/proposals opening meetings as a secretary of the meeting responsible to make the minutes of meetings. It is also suggested that the out-dated bidding documents should be changed to the World Bank standard bidding documents for all selection methods.

126. In accordance with provisions of the **IFAD Policy on Preventing Fraud and Corruption** in its Activities and Operations, IFAD applies a zero-tolerance policy with regard to any fraudulent, corrupt, collusive or coercive actions in the projects it finances. This entails not only pursuing all allegations of fraudulent practices and applying appropriate sanctions but also promoting preventive control measures such as assessments of national and project-specific FM, auditing and procurement systems during the project design phase. Where it is determined that fraudulent, corrupt, collusive or coercive practices have occurred in projects financed through its loans and grants, IFAD applies a range of sanctions, including disciplinary measures for IFAD staff; and pursues the recovery of any losses in accordance with the provisions of the applicable IFAD rules and regulations and legal instruments. The Policy on Preventing Fraud and Corruption has been integrated into IFAD's legal framework (Project Procurement Guidelines[35], General Conditions for Agricultural Development Financing[36], IFAD's Code of Conduct [37]) and applies to all recipients of IFAD financing.

L. Planning, M&E, Learning, KM and Communication

a. Planning, M&E, Learning, Knowledge Management and Communication

127. Planning

128. The Annual Work Plan and Budget will be the key planning document for the project and will be prepared according to the schedule stipulated in the financing agreement. A tentative AWPB has been prepared, together with the procurement plan for the first 18 months of the project (Annex 7). However, this plan will be detailed by the CPIU and refined as required as soon as negotiations have been completed between IFAD and the GoM and the financing agreement signed. The refined plan will be presented for discussion during the start-up workshop and submitted to the IPSC and IFAD for no objection. The preparation of the AWPBs will be undertaken discussed and approved no later than 60 days before the end of the preceding financial year. Where required, the CPIU, through IPSC, can propose adjustments to the AWPB during the relevant project year, which will become effective after clearance by IFAD.

129. Monitoring & Evaluation

130. The Monitoring and Evaluation (M&E) activities would be the responsibility of CPIU. The M&E will be organized around three main objectives: a) Facilitate project implementation; b) support economic decision and policy-making process; c) share knowledge and upscale good practices. The M&E specialists will be responsible for data keeping and analysis on activities, outputs, and outcomes and for reviewing the performance of components and sub-components on the basis of information collected from the field. Components specialists working at the CPIU would also be responsible for data gathering of specific aspects of the components under their responsibility. The detailed data collection required for Annual Outcome Surveys, baseline, mid-line and end-line studies will be outsourced to qualified consulting firms. The survey and studies will collect quantitative and qualitative data as well as gender and age-disaggregated information in order to further investigate gender

issues through an analysis of current and future trends in the Women's Empowerment in Agriculture Index in the country. The project also provides for a separate and detailed baseline about climate vulnerability issues.

131. **Beneficiary database.** A database will be developed in Excel to store detailed information on project beneficiaries. The database will allow for tracking beneficiaries and activities as well as providing a mean for sampling for data collection and visits during supervision missions. **New ORMS system.** The new system links the outputs and outcomes (core indicators) to strategic objectives (SOs) and areas of thematic focus of the IFAD Strategic Framework 2016-2025. The new core indicators that are relevant for the TRTP programme are included in the log frame with more details outlined in the PIM regarding the M&E responsibilities.

132. Strategic Communication

133. The project will use the in-house capacity established by the CPIU for disseminating information about the activities of the various IFAD financed projects through its Knowledge Management Specialist who has developed a social media profile for the CPIU and assisted in the development and dissemination of knowledge products. The Knowledge Management specialist will add the activities eligible under TRTP on the website with a clear explanation of the selection criterion and terms of partnership for each of the components. In addition, each of the component leads will work with the KM specialist and develop a plan for strategic communications for informing potential beneficiaries about the new project through the media including TV channels, radio broadcasts, posters and leaflets in primarias. CPIU will also organize forums, meetings with city halls and rayon councils to inform them about the TRTP project. The service providers hired for the specific components will also be required to develop strategic communication plans for dissemination of the project activities for which they are responsible across the country using a range of communication tools and forums.

134. Knowledge Management

135. The TRTP project is expected to generate learning and knowledge on several aspects that will be documented for sharing with key decision-makers and for policy advocacy. The first of these will be regarding the potential opportunities and impact of investments in water efficient technologies. The AF grant plans will build the knowledge in the country regarding the types of CA practices that are being used in the country. These are expected to help in the improved understanding regarding the adoption rates of different CA technologies and techniques and in further refining and developing GoM policy in this regard. The project will document its lessons and experience in linking smallholder farmers with markets through innovative equity partnership arrangements between producer groups and key market drivers. The success of the collaboration between AIPA, ODIMM and the CPIU will provide lessons on how to better organize the relationship between these public sector programmes and commercial banks and will help to illustrate how to structure these relationships for the benefit of the youth and smallholders. The fourth aspect that will need to be documented is the experience of the direct lending to SCAs and its implications for establishing greater opportunities for funds for SCAs from the public and commercial sector and a supportive policy framework within which this support could be facilitated. Lessons from the establishment of the Stabilization Fund and the Deposit Guarantee Fund will be documented in close partnership with NCFM which will be required to provide regular reports on the subject. Workshops will be organized on a periodic basis to share the experience of the project with key stakeholders and document the experience in project reports and case studies.

136. Policy Dialogue

137. The project has an opportunity to influence policy in several key areas. The first of these is building on the investments that IFAD has made in previous projects with respect to conservation agriculture. The TRTP will assist Government in making a nationwide inventory of conservation agriculture techniques and practices that are being followed and use this to further refine its approach. The project will test some innovative approaches to public private partnerships and link Producer Groups with private sector partners. The lessons could have implications for how GoM support could be better targeted to address the constraints that smallholders face with reference to agro-processing and value addition in agriculture. The close collaboration of the project with AIPA and ODIMM will also help in a better appreciation of how these facilities could be better structured for greater impact on smallholders, YE and women. The lessons will be shared with Government for refinement in GoM policy.
138. A key area for policy dialogue is with respect to the development of the SCA sector. The project is providing financing for two key policy instruments aimed at strengthening the entire SCA sector – namely the SCA Stabilization Fund and the SCA Deposit Insurance Fund, both to be managed by the NCFM as the SCA regulator and supervisor. IFAD's impact on rural finance is strongest when supported by the creation of a conducive policy framework. These two interventions are aimed at the creation of such enabling policy framework to support the development of the SCA sector – the one that caters most to the needs of the lowest-income rural residents in basic financial services (loans and savings), serving the niche that banks do not serve. The SCA Stabilization Fund will serve as the central liquidity facility for the whole SCA sector. The SCA Deposit Insurance Fund will help protect SCA members' deposits with SCAs and ensure a level playing field in terms of consumer protection both for bank customers (for whom a deposit insurance scheme already exist) and SCA customers. In addition, the project will be up-scaling lending opportunities for SCAs. These will form the basis for policy dialogue with Government on this key sector for the smallholders.

b. Innovation and scaling up

139. There are several innovative features of the project which are associated with several of its components. The infrastructure investments also incorporate technical design features which are innovative. The successful experience of applying vibrated concrete pavement for rural level roads piloted under the on-going IFAD interventions will be replicated under the TRTP. This is a valid, cheaper, climate resilient alternative that requires relatively less routine maintenance. In addition to this it is

envisaged that irrigation techniques that will be introduced for efficient water use at smallholder farm level will be replicated and scaled-up elsewhere in Moldova through the use of beneficiaries own contribution and AIPA which has provision for subsidizing investments in irrigation. Farmers with innovations and best practices will be used as mentors for other farmers in order to accelerate the scaling-up and replication of those innovations in water efficient use and adaptive conservation practices and techniques. Knowledge Management activities will include sharing project results and lessons with farmers in other regions and relevant Government agencies and private sector suppliers who can make the suitable technologies available for wider use and replication.

140. The financing of the equity share in public private partnerships between PGs and private sector entities is an innovative arrangement that will safeguard the smallholder farmers stake in the investments and ensure that the enterprise will be professionally managed by a private sector agency with established market linkages. This innovation will be tested during the TRTP by investing in several different horticulture and value added products with several producer groups. The experience from this innovation will be shared with MARDE to enable it to scale up the experience through AIPA financing or other interested donors and future projects or private sector firms.
141. An additional innovative mechanism is the up-scaling of the previous IFAD experience of lending directly to SCAs which has proved to be extremely successful. This experience will be further-up-scaled by providing financing to two or three additional SCAs under the current project. The project will also provide funding for establishing a Deposit Guarantee Fund and a Stabilization Fund for the SCAs to further enhance the SCA sector. The sustainability and confidence in the SCA sector will help to strengthen the outreach of rural households to financial services. In case of the success of the experience it is expected that the appetite and confidence of the Credit Line Department and Commercial Banks for lending to SCAs will be further enhanced and these avenues will be opened up for them.

M. Implementation plans

a. Implementation readiness and start-up plans.

142. It is suggested that the identification of the service providers for each of the three main areas of implementation for the project - namely the awareness raising and training and communication for the Adaptation Fund, the service provider for the agribusiness development sub-component and the service provider for the rural finance component should be initiated as soon as possible. IFAD and the Government will ensure implementation readiness at start-up by ensuring that the service providers and new staff can be recruited as soon as possible after project effectiveness. In addition, the additional staff identified for the Adaptation Fund activities namely the Environment and Climate Change Specialist, the Agribusiness Development Specialist, Engineer and procurement specialist should be shortlisted and selected prior to project start-up. The CPIU should begin the preparation of the Memorandum of Understanding between the CPIU and AIPA and the CPIU and ODIMM for collaboration between the TRTP and these agencies. Terms of reference for the baseline line surveys have been prepared as part of the design process and will be used to recruit a qualified firm on competitive basis within the first quarter of project start-up.

b. Supervision, Mid-term Review and Completion plans.

143. The project will be directly supervised by IFAD on an annual basis with implementation support provided as and when required. The MTR mission will be carried out during the third year of implementation. The main objective of the review would be to analyse operational aspects, assess implementation status and estimate the likelihood of achieving final objectives. During the MTR, corrective measures could be identified and thereof implemented to steer the project towards its ultimate objectives. During the last year of implementation, the project team will outsource the data collection task to a qualified consulting firm. The data will be used to determine project impact on target group by direct comparison of current data with past data collected during the baseline and mid-line survey. The evidences would backstop the narrative and key finding to be included in the project completion report (PCR).

Footnotes

[1] <http://ec.europa.eu/trade/policy/countries-and-regions/countries/moldova/>

[2] UNDP (2018) Human development report. <http://hdr.undp.org/en/2018-update>

[3] <https://www.statista.com/statistics/513314/moldova-gdp-distribution-across-economic-sectors/>

[4] Agriculture and Food Processing Republic of Moldova. 2014. <http://invest.gov.md/sites/default/>

[5] Agriculture and Food Processing Republic of Moldova. 2014. <http://invest.gov.md/sites/default/>

[6] <https://www.ifad.org/en/web/operations/country/id/moldova>

[7] World Bank. Moldova after the global crisis: promoting competitiveness and shared growth April 4, 2011. report no. 55195-md.

- [8] World Bank. Moldova after the global crisis: promoting competitiveness and shared growth April 4, 2011. report no. 55195-md.
- [9] <http://eca.unwomen.org/en/where-we-are/moldova>
- [10] Which comprehensively measures whether the youth achieve the minimum levels of education, employment, health, civic participation and social inclusion to allow them to be protagonists of their own lives
- [11] OECD. 2018. Youth Well-being Policy Review of Moldova. https://pjp-eu.coe.int/documents/1017981/11168156/Youth_Well-being_Policy_Review_Moldova.pdf/46b60e8a-6ca9-9d21-6aeb-9099debd361c
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- [17] World Bank (2016) Moldova Climate Adaptation Investment Planning Technical Assistance.
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- [19] Moldova Poverty Assessment 2016. Structural Transformation of Moldovan Smallholder Agriculture: Implications for Poverty and Shared Prosperity. World Bank. Report No. 105724-MD
- [20] Ibid. 2016.
- [21] IFAD, “Deepening IFAD's engagement with the private sector,” 2012.
- [22] Detailed mapping of climate vulnerability is financed by the GEF under the ongoing IRECR.
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- [24] Robert Cull and Jonathan Morduch. Microfinance and Economic Development. World Bank Group. Development Research Group. Finance and Private Sector Development Team. November 2017.
<http://documents.worldbank.org/curated/en/107171511360386561/pdf/WPS8252.pdf>
- [25] The share of 42% is based on discussions with AIPA during the project design. The actual co-funding from AIPA can be up to 48.75%
- [26] This represents the number of beneficiaries both funded through the direct window and through the RFC window.
- [27] According to the Law of the Republic of Moldova # 139-XVI dated 21 June 2007, as amended “On Savings and Credit Associations”, the funding sources for the SCA Stabilization Fund can include means from government sources, donations, grants and external financial assistance (Article 50).
- [28] Per the National Commission for Financial Market, 2018.
- [29] ProRural Invest NGO. Value chains analysis of Berries, Plums and Medicinal and Aromatic Plants (MAPs) in the Republic of Moldova. FAO. February 2018.
- [30] Strategic Recommendations for Internal and External Market Food Promotion in the Republic of Moldova. FAO. April, 2018.
- [31] IFAD Technical Note on In-kind Contributions – TFWG 2018/2/INF.1
- [32] Each processing unit is assumed to benefit at least 60 households
- [33] Each processing unit is assumed to benefit at least 60 households
- [34] [Handbook on Financial Reporting and Auditing of IFAD funded projects](#)
- [35] <https://www.ifad.org/web/guest/document-detail/asset/39438991>
- [36] <https://www.ifad.org/web/guest/document-detail/asset/39500875>
- [37] <https://www.ifad.org/web/guest/document-detail/asset/40186603>

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 1: Logframe

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Talent Retention for Rural Transformation

Logical Framework

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Outreach Number of persons directly receiving services promoted or supported by the programme (Core indicator outreach 1)	1.b Estimated corresponding total number of households members				M&E System	Semi-annually	M&E Officers	
	Household members	0	13597	33997				
	1.a Corresponding number of households reached				M&E System	Semi-annually	M&E Officers	
	Households	0	2720	11723				
	1 Persons receiving services promoted or supported by the project				M&E System	Semi-annually	M&E officers	
	Females		5439	13599				
	Males		8160	20398				
	Young		5439	13599				
	Not Young		8160	20398				
	Total number of persons receiving services		13599	33997				
Project Goal Reduction in poverty and outmigration from rural areas through the enhancement of smallholder resilience to climate change	Number of households that report a reduction an increase in income							Baseline, midline, completion surveys and impact study
	Households	0						
Development Objective To enable the rural poor (especially youth, women and smallholders to increase their productive capacity, resilience to economic, environmental and climate-related risks and their access to markets	Percentage increase in average monthly income of supported smallholders over baseline				Baseline, midline, completion surveys and impact study	Project start, midline and completion	PIU	
	Income increase			30				

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Outcome Enhanced resilience and increased employment opportunities through investments in rural infrastructure, facilitation of access to market and strengthening of farmer organizations	1.2.1 Households reporting improved access to land, forests, water or water bodies for production purposes				Annual outcome survey	Project start and annually	PMU/ M&E Officers	<input type="checkbox"/> Smallholder farmer are willing to participate in the programme <input type="checkbox"/> Demand driven investments in physical infrastructure and water efficient technologies can help enhance productivity and build resilience to climate change and extreme weather events. <input type="checkbox"/> Availability of qualified service providers for group facilitation, training and extension activities <input type="checkbox"/> Farmers and rural communities are keen to provide monetary contribution for rural infrastructure renovation and maintenance <input type="checkbox"/> Organizing producer groups and associations in innovative arrangements with clear specification of ownership rights, equity investments and professional management will encourage farmers to participate in
	Total no. of households reporting improved access to water	0	834	2085				
	2.2.3 Rural producers' organizations engaged in formal partnerships/agreements or contracts with public or private entities				annual outcome survey	Semi-annually	M&E Officers	
	Number of POs	0	5	10				
	2.2.1 New jobs created				Enterprise records	Annually	PIU/M&E officers	
	Job owner - men							
	New jobs	0	500	1000				
	Job owner - women							

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
	Job owner - young							to participate in collaborative agribusiness enterprises and access markets.
Output Climate resilient infrastructure is built	2.1.5 Roads constructed, rehabilitated or upgraded				Construction contracts/ progress reports	Semi-annually	M&E officers / Component officer	
	Length of roads	0	15	30				
	Number of small scale irrigation schemes rehabilitated				Construction contracts/ progress reports	Semi-annually	M&E officers / Component officer	
	Number small climate resilient scale irrigation schemes (core indicator 1.1.2)	0	10	20				
	Number of farmers adopting water saving technologies and adopting practices which are climate resilient				Component reports	Semi-annually	M&E officer / Component officer	

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
	Males	0	220	440				
	Females	0	198	398				
	Young	0	220	443				
	Number of persons trained in water and soil conservation agriculture which promotes CA				Training reports	Semi-annually	M&E officer / Component officer	
	Males	0	276	690				
	Females	0	644	1610				
	Young	0	920	2300				
Output Producer groups linked to markets	Number of producer group associations formed which display attributes of sustainability					Semi-annually	M&E officers / Component officer	☐ Smallholder farmer are willing to participate in the programme ☐ Demand driven investments in physical infrastructure and water efficient technologies can help enhance productivity and build resilience to climate change and extreme weather events. ☐ Availability of qualified service providers for group facilitation, training and extension activities ☐ Farmers and rural communities are keen to provide monetary contribution for rural infrastructure
	female members							
	Male members							
	Producer Groups Associations	0	5	10				
	Numbers of Market Facilitation meetings organized					Semi-annually	M&E officers / Component officer	
	Market Facilitation meetings	0	18	32				
	Number of business ideas/plans supported and mentored which assist in diversification of product					Semi-annually	M&E officers / Component officer	
	Business plans	0	5	10				
	Number of producer groups assisted with diversification of production and equity participation					Semi-annually	M&E officers / Component officer	
	Males							
	Females							

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
	Producer groups	0	6	10				<p>renovation and maintenance □</p> <p>Organizing producer groups and associations in innovative arrangements with clear specification of ownership rights, equity investments and professional management will encourage farmers to participate in collective agribusiness enterprises and access markets.</p>
Output Increased capacity of academic institutions and Government in disseminating policy and lessons learned regarding Conservation agriculture	Number of institutions that have introduced CA in their curricula				Curriculum of academic institutions	Semi-annually	M&E Officer/Component officer	
	Institutions	0	1	4				

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Outcome Increased access to rural finance for youth and increased sustainability of rural finance institutions, such as SCAs, through transformative changes in the sector	1.2.5 Households reporting using rural financial services					Annually	M&E officers / Component officer	<input type="checkbox"/> Business mentoring support and market integration through a skilled facilitator will help Young Entrepreneurs and women in business planning, access subsidies and finance and add value to produce. <input type="checkbox"/> Funds to SCAs will enhance access to finance in rural areas and generate growth. <input type="checkbox"/> Provision of a stabilization Fund and a Deposit Insurance Fund would assist in the growth and sustainability of the SCA sector thereby increasing access to finance in rural areas.
	Total number of household members	0	400	820				

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Output Affordable credit for youth and women is made available	1.1.5 Persons in rural areas accessing financial services					Annually	M&E officers / Component officer	<input type="checkbox"/> Business mentoring support and market integration through a skilled facilitator will help Young Entrepreneurs and women in business planning, access subsidies and finance and add value to produce. <input type="checkbox"/> Funds to SCAs will enhance access to finance in rural areas and generate growth. <input type="checkbox"/> Provision of a stabilization Fund and a Deposit Insurance Fund would assist in the growth and sustainability of the SCA sector thereby increasing access to finance in rural areas.
	Women in rural areas accessing financial services - savings	0	29	72				
	Young people in rural areas accessing financial services - savings	0	44	108				
	Men in rural areas accessing financial services - savings	0	0	0				
	Total persons accessing financial services - savings	0	72	180				
	Number of young entrepreneurs provided matching grant and collateral support					Annually	M&E officers / Component officer	
	Males	0	0	0				
	Females	0	55	136				
	Young	0	82	204				
	Number of young entrepreneurs and women provided loans through SCAs					Annually	M&E officers / Component officer	
	Males	0	12	30				
	Females	0	48	120				
	Young	0	60	150				

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Output SCA Stabilization Fund and Deposit Insurance Fund Established	Number of SCAs whose savings are protected by the Deposit insurance fund				M&E System	Semi-annually	M&E officers / Component officer	<input type="checkbox"/> Business mentoring support and market integration through a skilled facilitator will help Young Entrepreneurs and women in business planning, access subsidies and finance and add value to produce. <input type="checkbox"/> Funds to SCAs will enhance access to finance in rural areas and generate growth. <input type="checkbox"/> Provision of a stabilization Fund and a Deposit Insurance Fund would assist in the growth and sustainability of the SCA sector thereby increasing access to finance in rural areas.
	SCAs protected by the Deposit insurance fund	0	20	60				
Output Change in Policy Regarding SCAs	MoF and NCFM policy regarding SCAs				NCFM	Semi-annually	M&E Officers	
	Policy document	0	0	1				

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 2: Theory of change

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Annex 2: Theory of Change Talent Retention for Rural Transformation

Problems and Underlying Causes	Evidence	Theory of Change	Outputs	Outcomes	
High rate of outmigration of rural youth due to low level of wages and lack of productive employment and enterprise opportunities.	Emigration from Moldova is the eleventh highest in the world. Two thirds of the people who left the country are from rural areas and most are young people (UNDP, 2018). Annual population decline of around 1½ percent. (Word Bank 2018).	Business mentoring support and market integration through a skilled facilitator will help young entrepreneurs in business planning, access subsidies and finance and enable them to find productive opportunities in rural areas	70 YE and women provided support for equipment support through matching grants to access finance, 150 provided matching grant and collateral support and	OUTCOME 1: Enhanced resilience and increased employment opportunities through investments in rural infrastructure, facilitation of access to markets and strengthening of farmer organizations.	Reduction in Poverty and outmigration from rural areas
Limited opportunities for productive employment and income generation for women due to limited access to productive assets, capital and skills.	Women account for only 27.5 per cent of entrepreneurs; in rural areas this drops to 14.9 per cent. Around 36 per cent of landholders in Moldova are women, but these holdings account for only 19 per cent of agricultural lands (FAO, 2014).	A targeting strategy that ensures the inclusion of women by fixing quotas and budget allocations for them	TRTP will benefit approximately 11,723 households. Forty percent of the beneficiaries will be women		Enhancing smallholder Resilience to climate change
Lack of physical and productive infrastructure in rural areas due to limited public sector resources.	The budgets of Priamrias is limited with few investments made from their own resources	Demand driven investments in physical infrastructure can help enhance productivity in rural areas	15 village feeder roads improved with total length of about 30 km		

Limited access to water and water efficient technologies due to climate conditions and limited capacity of smallholder to invest in water and soil conserving technologies.	Since the 1980s, droughts increased in intensity and persistence compared to the past, mostly due to increased temperatures and decreased precipitation in the region.	Demand driven investments in water efficient and green technologies can help enhance productivity and build resilience to climate change and extreme weather events.	20 micro or small scale irrigation schemes and water efficient water technologies for 2,800 ha and training in water and soil conservation techniques, research study, TOTs, and university curriculum on CA
Lack of smallholder access to markets due to inability to organize, limited access to market infrastructure, logistical support and difficulty of accessing markets.	There are only one or two cooperatives which are working successfully, although more than 560 are formally registered.	Organizing producer groups and associations in innovative arrangements with clear specification of ownership rights, equity investments and professional management will encourage farmers to participate in collective agribusiness enterprises and access markets.	10 Producer group assisted with equity participation with a combined membership of 600 households.
Limited access to finance due to lack of collateral, high interest rates and lack of technical capacity and limited support to institutions such as SCA which can provide finance in rural areas	The financial sector provides less than 8% of funds to the agriculture sector and only 9% for food processing (NBM 2018).	Funds to SCAs will enhance access to finance in rural areas and generate growth.	300 Yes and women provided loans through SCAs
	The SCA sector provides important service to rural areas but its funding and capacity is limited	Provision of a stabilization Fund and a Deposit Insurance Fund would assist in the growth and sustainability of the SCA sector thereby increasing access to finance in rural areas.	SCA Stabilization Fund and Deposit Insurance Fund Established.

OUTCOME 2: Increased access to rural finance for youth and increased sustainability of rural finance institutions, such as SCAs, through transformative changes in the sector.

Government policies have favoured large-scale corporate farms.

While Government has recently initiated several measures to encourage smallholders, youth and women there is need for greater action

Policy advocacy on behalf of small holders can help to provide opportunities for smallholders, youth and women in the agriculture sector

Capacity of MARDE strengthened for economic and market analysis

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 3: Project cost and financing: Detailed costs tables

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Annex 3: Project Cost and Financing

A. Project Costs

Main assumptions

1. **Introduction.** This annex describes the assumptions underlying the derivation of costs, estimated costs and financing plan for the project . Total project costs are based on April 2019 prices.

2. **Project Period.** The project will be financed over a six-year period starting from beginning 2020.

3. **Inflation.** The base rate of domestic inflation has been set at 4 percent throughout project duration while international inflation is estimated at 1.5 percent during the first year of implementation and reaches 2.1 percent at project end.

Table 1: International Inflation (%)

	2020	2021	2022	2023	2024	2025
Domestic Inflation Rate	1.5	2.3	2.4	2.3	2.1	2.1

4. **Exchange Rate.** The exchange rate was fixed at 1USD = 17.5 MDL as per average market fluctuation in 2018/2019. Project costs are presented in both MDL and USD currency.

5. **Physical and price contingencies.** Both types of contingencies have been taken into account and included in the costing of project . In particular, in the category “works” a 7 percent physical contingency is considered.

6. **Taxes and Duties.** There is VAT of 20% levied on all imported and locally procured goods and services. The Government would finance the cost of all taxes on goods and services procured under the Project . Most items procured under the Project would be purchased locally.

7. **Expenditure Accounts.** Project 's expenditure accounts will be the following:

- i. Consultancies, Studies, Technical Assistance and Workshops
- ii. Credit
- iii. Equipement, Material, Goods and Services
- iv. Grants
- v. Works
- vi. Salaries and Allowances
- vii. Operating costs

8. **Total cost and Financing.** Total Project cost (investment cost and incremental recurrent cost, including physical and price contingencies) is estimated at USD 50.51 million, 20.7 million (41.1% of the total cost) of which will be financed by IFAD through loan. Ifad contribution will finance all project components as follows: USD 10.8 million (21% of total project costs) to finance Component 1, USD 8 million (15.8% of project

total cost) for Component 2, and USD 1.9 million for component 3 (3.7% of project total cost).

9. The Government of the Republic of Moldova (GoM) would provide USD 3.8 million (7.6% of total project costs) to the entire project. Resources amounting to around USD 3.3 million (6% of total project costs) will be used to finance component 1. Around USD 0.4 million (less than 1% of total project cost) will be financing component 2, while USD 0.1 million will be dedicated to Component 3. Contribution from GoM will mainly finance taxes and duties of any related expense.

10. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan/Grant, any future changes in the rates and/or structures of taxes and duties would have to be met by the Government. The estimate of taxes and duties was based on the rates prevailing at the time of Project design.

11. Grant resources of the Adaptation Fund (AF) for about USD 6 million (11% of total project cost) will be allocated mainly to component 1 with a financing of about USD 5 million (10% of total project costs) while the remainder USD 0.5 million will be absorbed in component 3. Unfortunately, at the time of the design mission it was not possible to allocate all AF resources 8 (USD 6 mil.). Therefore, the cost tables presented in this appendix does not account for an additional 0.5 million of AF fund to be allocated in the future.

12. The TRTP project would also include financial resource put in place from the Agency for Interventions and Payments in Agriculture (AIPA) and Public Finance Institutions (PFIs). AIPA will contribute a total amount of USD 1.6 million (3.3% of total project cost), to finance part of the intervention under component 2. The PFIs would instead provide a substantial contribution of USD 15.2 million (30.2% of total project cost) providing financial resources to young entrepreneurs under component 2.

13. Project beneficiaries are expected to provide both in-kind and in-cash contributions for about USD 3.4 million (6.8% of project total cost) co-financing investments and socio-environmental infrastructure and innovation under both components.

14. The foreign exchange component is estimated at USD 6.1 million. Taxes and duties are estimated at USD 3.8 million. Funds allocated to the Project Management Unit are of USD 2.5 million, equal to 5% of the total Project costs. Tables below summarize Project costs and financing. Detailed cost estimates are provided in annex A and B to this appendix.

Table 1: Project cost by component ('000 MDL / '000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Components Project Cost Summary

	(Local '000)			(US\$ '000)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
A. Resilient Economic Transformation								
1. Enhancing Climate Resilience								
a. Climate resilient infrastructure	109,449	72,013	181,461	6,254	4,115	10,369	40	21
b. On-Farm Adaptive Water Management	54,329	1,540	55,869	3,105	88	3,193	3	7
Subtotal	163,777	73,553	237,330	9,359	4,203	13,562	31	28
2. Agribusiness Development								
a. Strengthening Value chains for Producers Groups	91,418	1,357	92,775	5,224	78	5,301	1	11
b. Strengthening MARDE Technical Capacity	1,568	42	1,610	90	2	92	3	-
Subtotal	92,986	1,399	94,385	5,313	80	5,393	1	11
Subtotal	256,763	74,951	331,714	14,672	4,283	18,955	23	39
B. Inclusive Entrepreneurship Finance								
1. Affordable credit for youth and women	409,369	17,500	426,869	23,393	1,000	24,393	4	50
2. Rural finance sector development	47,075	-	47,075	2,690	-	2,690	-	6
Subtotal	456,444	17,500	473,944	26,083	1,000	27,083	4	56
C. Project Management	36,480	4,556	41,036	2,085	260	2,345	11	5
Total BASELINE COSTS	749,686	97,007	846,694	42,839	5,543	48,382	11	100
Physical Contingencies	9,720	4,878	14,598	555	279	834	33	2
Price Contingencies	34,825	10,790	45,616	993	309	1,302	24	3
Total PROJECT COSTS	794,232	112,676	906,908	44,388	6,131	50,518	12	104

Table 2: Project Costs by Expenditure Account ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Expenditure Accounts by Components - Totals Including Contingencies
(US\$ '000)

Expenditure Accounts by Components - Totals Including Contingencies (US\$ '000)	Resilient Economic Transformation				Inclusive			
	Enhancing Climate				Entrepreneurship			
	Resilience	Agribusiness Development			Finance			
		On-Farm	Strengthening	Strengthening	Affordable	Rural		
	Climate resilient infrastructure	Adaptive Water Management	Value chains for Producers Groups	MARDE Technical Capacity	credit for youth and women	finance sector development	Project Management	Total
I. Investment Costs								
A. Consultancies, Studies, Technical Assistance, Workshops /a	-	1,048	846	96	-	892	497	3,379
B. Credit	-	-	-	-	17,773	1,850	-	19,623
C. Equipment, Material, Goods and Services	-	-	4,887	-	2,000	-	97	6,984
D. Grant	-	2,213	-	-	4,620	-	-	6,833
E. Works	11,500	-	-	-	-	-	-	11,500
Total Investment Costs	11,500	3,261	5,733	96	24,393	2,742	594	48,319
II. Recurrent Costs								
A. Salaries & Allow ances	-	-	-	-	-	-	1,210	1,210
B. Operating Costs	288	-	-	-	-	-	702	989
Total Recurrent Costs	288	-	-	-	-	-	1,912	2,200
Total PROJECT COSTS	11,788	3,261	5,733	96	24,393	2,742	2,506	50,518
Taxes	2,358	-	977	-	400	-	109	3,844
Foreign Exchange	4,677	94	82	3	1,000	-	274	6,131

/a including trainings

Table 3: Financing Plan by Components ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Components by Financiers

A. Resilient Economic Transformation

1. Enhancing Climate Resilience

a. Climate resilient infrastructure

b. On-Farm Adaptive Water Management

Subtotal

2. Agribusiness Development

a. Strengthening Value chains for Producers Groups

b. Strengthening MARDE Technical Capacity

Subtotal

Subtotal

B. Inclusive Entrepreneurship Finance

1. Affordable credit for youth and women

2. Rural finance sector development

Subtotal

C. Project Management

Total PROJECT COSTS

(US\$ '000)																	
The Government		IFAD Loan		Beneficiaries		PFIs		AF		AIPA		Total		For.	Local	Duties &	
Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	(Excl. Taxes)	Taxes	
2,358	20.0	5,969	50.6	1,685	14.3	-	-	1,776	15.1	-	-	11,788	23.3	4,677	4,753	2,358	
-	-	-	-	-	-	-	-	3,261	100.0	-	-	3,261	6.5	94	3,167	-	
2,358	15.7	5,969	39.7	1,685	11.2	-	-	5,037	33.5	-	-	15,049	29.8	4,771	7,920	2,358	
977	17.0	4,755	83.0	-	-	-	-	-	-	-	-	5,733	11.3	82	4,673	977	
-	-	96	100.0	-	-	-	-	-	-	-	-	96	0.2	3	94	-	
977	16.8	4,852	83.2	-	-	-	-	-	-	-	-	5,829	11.5	85	4,767	977	
3,335	16.0	10,820	51.8	1,685	8.1	-	-	5,037	24.1	-	-	20,878	41.3	4,856	12,686	3,335	
400	1.6	5,290	21.7	1,768	7.2	15,260	62.6	-	-	1,675	6.9	24,393	48.3	1,000	22,993	400	
-	-	2,742	100.0	-	-	-	-	-	-	-	-	2,742	5.4	-	2,742	-	
400	1.5	8,032	29.6	1,768	6.5	15,260	56.2	-	-	1,675	6.2	27,135	53.7	1,000	25,735	400	
109	4.4	1,897	75.7	-	-	-	-	500	19.9	-	-	2,506	5.0	274	2,122	109	
3,844	7.6	20,750	41.1	3,453	6.8	15,260	30.2	5,537	11.0	1,675	3.3	50,518	100.0	6,131	40,543	3,844	

Table 4: Financing Plan by Expenditure Accounts ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Expenditure Accounts by Financiers

I. Investment Costs

A. Consultancies, Studies, Technical Assistance, Workshops /a

B. Credit

C. Equipment, Material, Goods and Services

D. Grant

E. Works

Total Investment Costs

II. Recurrent Costs

A. Salaries & Allowances

B. Operating Costs

Total Recurrent Costs

Total PROJECT COSTS

(US\$ '000)																
The Government		IFAD Loan		Beneficiaries		PFIs		AF		AIPA		Total		For.	Local	Duties &
Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	(Excl. Taxes)	Taxes
0	-	2,311	68.4	-	-	-	-	1,068	31.6	-	-	3,379	6.7	180	3,199	-
-	-	3,860	19.7	503	2.6	15,260	77.8	-	-	-	-	19,623	38.8	-	19,623	-
1,397	20.0	5,267	75.4	320	4.6	-	-	-	-	-	-	6,984	13.8	1,049	4,539	1,397
-	-	2,000	29.3	945	13.8	-	-	2,213	32.4	1,675	24.5	6,833	13.5	-	6,833	-
2,300	20.0	5,969	51.9	1,455	12.7	-	-	1,776	15.4	-	-	11,500	22.8	4,533	4,667	2,300
3,697	7.7	19,407	40.2	3,223	6.7	15,260	31.6	5,057	10.5	1,675	3.5	48,319	95.6	5,762	38,860	3,697
-	-	983	81.2	-	-	-	-	228	18.8	-	-	1,210	2.4	-	1,210	-
148	14.9	360	36.4	230	23.3	-	-	252	25.5	-	-	989	2.0	369	473	148
148	6.7	1,342	61.0	230	10.5	-	-	480	21.8	-	-	2,200	4.4	369	1,683	148
3,844	7.6	20,750	41.1	3,453	6.8	15,260	30.2	5,537	11.0	1,675	3.3	50,518	100.0	6,131	40,543	3,844

/a including trainings

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Table 1A: Components Project Cost Summary ('000 MDL / '000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Components Project Cost Summary

	(Local '000)			(US\$ '000)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
A. Resilient Economic Transformation								
1. Enhancing Climate Resilience								
a. Climate resilient infrastructure	109,449	72,013	181,461	6,254	4,115	10,369	40	21
b. On-Farm Adaptive Water Management	54,329	1,540	55,869	3,105	88	3,193	3	7
Subtotal	163,777	73,553	237,330	9,359	4,203	13,562	31	28
2. Agribusiness Development								
a. Strengthening Value chains for Producers Groups	91,418	1,357	92,775	5,224	78	5,301	1	11
b. Strengthening MARDE Technical Capacity	1,568	42	1,610	90	2	92	3	-
Subtotal	92,986	1,399	94,385	5,313	80	5,393	1	11
Subtotal	256,763	74,951	331,714	14,672	4,283	18,955	23	39
B. Inclusive Entrepreneurship Finance								
1. Affordable credit for youth and women	409,369	17,500	426,869	23,393	1,000	24,393	4	50
2. Rural finance sector development	47,075	-	47,075	2,690	-	2,690	-	6
Subtotal	456,444	17,500	473,944	26,083	1,000	27,083	4	56
C. Project Management	36,480	4,556	41,036	2,085	260	2,345	11	5
Total BASELINE COSTS	749,686	97,007	846,694	42,839	5,543	48,382	11	100
Physical Contingencies	9,720	4,878	14,598	555	279	834	33	2
Price Contingencies	34,825	10,790	45,616	993	309	1,302	24	3
Total PROJECT COSTS	794,232	112,676	906,908	44,388	6,131	50,518	12	104

Table 2A: Expenditure Accounts by Components – Total Including Contingencies ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Expenditure Accounts by Components - Totals Including Contingencies
(US\$ '000)

Talent Retention for Rural Transformation Project (TRTP) Expenditure Accounts by Components - Totals Including Contingencies (US\$ '000)	Resilient Economic Transformation				Inclusive			
	Enhancing Climate		Agribusiness Development		Entrepreneurship			
	Resilience				Finance			
	Climate resilient infrastructure	On-Farm Adaptive Water Management	Strengthening Value chains for Producers Groups	Strengthening MARDE Technical Capacity	Affordable credit for youth and women	Rural finance sector development	Project Management	
							Total	
I. Investment Costs								
A. Consultancies, Studies, Technical Assistance, Workshops /a	-	1,048	846	96	-	892	497	3,379
B. Credit	-	-	-	-	17,773	1,850	-	19,623
C. Equipment, Material, Goods and Services	-	-	4,887	-	2,000	-	97	6,984
D. Grant	-	2,213	-	-	4,620	-	-	6,833
E. Works	11,500	-	-	-	-	-	-	11,500
Total Investment Costs	11,500	3,261	5,733	96	24,393	2,742	594	48,319
II. Recurrent Costs								
A. Salaries & Allow ances	-	-	-	-	-	-	1,210	1,210
B. Operating Costs	288	-	-	-	-	-	702	989
Total Recurrent Costs	288	-	-	-	-	-	1,912	2,200
Total PROJECT COSTS	11,788	3,261	5,733	96	24,393	2,742	2,506	50,518
Taxes	2,358	-	977	-	400	-	109	3,844
Foreign Exchange	4,677	94	82	3	1,000	-	274	6,131

/a including trainings

Table 2AA: Expenditure Accounts by Components – Total Including Contingencies ('000 MDL)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Expenditure Accounts by Components - Totals Including Contingencies

(Local '000)

I. Investment Costs

A. Consultancies, Studies, Technical Assistance, Workshops /a

B. Credit

C. Equipment, Material, Goods and Services

D. Grant

E. Works

Total Investment Costs

II. Recurrent Costs

A. Salaries & Allowances

B. Operating Costs

Total Recurrent Costs

Total PROJECT COSTS

Taxes

Foreign Exchange

Resilient Economic Transformation					Inclusive		
Enhancing Climate Resilience		Agribusiness Development			Entrepreneurship Finance		
Climate resilient infrastructure	On-Farm Adaptive Water Management	Strenghtening Value chains for Producers Groups	Strengthening MARDE Technical Capacity	Affordable credit for youth and women	Rural finance sector development	Project Management	Total
-	19,536	15,591	1,763	-	16,550	9,205	62,645
-	-	-	-	311,019	32,375	-	343,394
-	-	90,141	-	35,000	-	1,740	126,881
-	38,719	-	-	80,850	-	-	119,569
213,314	-	-	-	-	-	-	213,314
213,314	58,255	105,732	1,763	426,869	48,925	10,946	865,803
-	-	-	-	-	-	22,917	22,917
5,414	-	-	-	-	-	12,774	18,188
5,414	-	-	-	-	-	35,690	41,105
218,728	58,255	105,732	1,763	426,869	48,925	46,636	906,908
43,746	-	18,028	-	7,000	-	2,010	70,784
86,807	1,754	1,529	47	17,500	-	5,038	112,676

/a including trainings

Table 3A: Project Components by Year – Totals Including Contingencies ('000 MDL)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Project Components by Year -- Totals Including Contingencies

Project Components by Year -- Totals Including Contingencies		Totals Including Contingencies (Local '000)					
		2020	2021	2022	2023	2024	2025
A. Resilient Economic Transformation							
1. Enhancing Climate Resilience							
a. Climate resilient infrastructure	1,156	40,452	63,693	66,485	33,070	13,873	218,728
b. On-Farm Adaptive Water Management	-	10,320	17,257	17,422	10,541	2,715	58,255
Subtotal	1,156	50,772	80,950	83,907	43,611	16,588	276,983
2. Agribusiness Development							
a. Strenghtening Value chains for Producers Groups	10,347	20,698	30,170	21,484	21,947	1,086	105,732
b. Strengthening MARDE Technical Capacity	214	520	463	482	84	-	1,763
Subtotal	10,562	21,218	30,633	21,966	22,030	1,086	107,495
Subtotal	11,717	71,991	111,583	105,872	65,641	17,674	384,478
B. Inclusive Entrepreneurship Finance							
1. Affordable credit for youth and w omen	-	85,374	85,374	85,374	85,374	85,374	426,869
2. Rural finance sector development	8,929	29,406	2,479	3,281	2,368	2,463	48,925
Subtotal	8,929	114,780	87,853	88,655	87,742	87,836	475,794
C. Project Management	9,107	2,988	3,565	7,805	11,035	12,136	46,636
Total PROJECT COSTS	29,753	189,758	203,000	202,332	164,418	117,646	906,908

Table 3AA: Project Components by Year – Totals Including Contingencies ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Project Components by Year -- Totals Including Contingencies

	Totals Including Contingencies (US\$ '000)						Total
	2020	2021	2022	2023	2024	2025	
A. Resilient Economic Transformation							
1. Enhancing Climate Resilience							
a. Climate resilient infrastructure	65	2,237	3,467	3,561	1,741	717	11,788
b. On-Farm Adaptive Water Management	-	582	975	980	583	140	3,261
Subtotal	65	2,819	4,442	4,541	2,324	857	15,049
2. Agribusiness Development							
a. Strengthening Value chains for Producers Groups	584	1,145	1,642	1,151	1,155	56	5,733
b. Strengthening MARDE Technical Capacity	12	29	25	26	4	-	96
Subtotal	596	1,173	1,667	1,177	1,160	56	5,829
Subtotal	661	3,993	6,109	5,718	3,484	913	20,878
B. Inclusive Entrepreneurship Finance							
1. Affordable credit for youth and women	-	4,879	4,879	4,879	4,879	4,879	24,393
2. Rural finance sector development	510	1,670	135	176	125	127	2,742
Subtotal	510	6,548	5,013	5,054	5,003	5,006	27,135
C. Project Management	514	166	195	419	582	629	2,506
Total PROJECT COSTS	1,686	10,707	11,317	11,191	9,069	6,548	50,518

Table 4A: Expenditure Accounts by Year – Totals Including Contingencies ('000 MDL)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Expenditure Accounts by Years -- Totals Including Contingencies

	Totals Including Contingencies (Local '000)						Total
	2020	2021	2022	2023	2024	2025	
I. Investment Costs							
A. Consultancies, Studies, Technical Assistance, Workshops /a	4,435	15,138	11,612	12,678	10,534	8,249	62,645
B. Credit	8,750	85,829	62,204	62,204	62,204	62,204	343,394
C. Equipment, Material, Goods and Services	9,603	24,194	33,799	25,962	26,324	7,000	126,881
D. Grant	-	22,295	29,295	29,295	22,514	16,170	119,569
E. Works	1,156	40,452	62,604	64,786	31,304	13,013	213,314
Total Investment Costs	23,943	187,907	199,513	194,925	152,878	106,636	865,803
II. Recurrent Costs							
A. Salaries & Allowances	730	1,223	1,272	3,791	7,795	8,106	22,917
B. Operating Costs	5,080	628	2,215	3,615	3,745	2,904	18,188
Total Recurrent Costs	5,810	1,851	3,487	7,406	11,540	11,010	41,105
Total PROJECT COSTS	29,753	189,758	203,000	202,332	164,418	117,646	906,908

/a including trainings

Table 4AA: Expenditure Accounts by Year – Totals Including Contingencies ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Expenditure Accounts by Years -- Totals Including Contingencies

I. Investment Costs

A. Consultancies, Studies, Technical Assistance, Workshops /a

B. Credit

C. Equipment, Material, Goods and Services

D. Grant

E. Works

Total Investment Costs

II. Recurrent Costs

A. Salaries & Allowances

B. Operating Costs

Total Recurrent Costs

Total PROJECT COSTS

Totals Including Contingencies (US\$ '000)						
2020	2021	2022	2023	2024	2025	Total
250	837	632	679	554	426	3,379
500	4,905	3,555	3,555	3,555	3,555	19,623
542	1,351	1,859	1,416	1,417	400	6,984
-	1,274	1,674	1,674	1,287	924	6,833
65	2,237	3,407	3,470	1,648	672	11,500
1,358	10,604	11,126	10,793	8,460	5,977	48,319
41	68	69	203	410	419	1,210
287	35	122	195	199	152	989
328	103	191	398	609	571	2,200
1,686	10,707	11,317	11,191	9,069	6,548	50,518

/a including trainings

Table 5A: Project Components by Financiers ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Components by Financiers

(US\$ '000)																	
	The Government		IFAD Loan		Beneficiaries		PFIs		AF		AIPA		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
A. Resilient Economic Transformation																	
1. Enhancing Climate Resilience																	
a. Climate resilient infrastructure	2,358	20.0	5,969	50.6	1,685	14.3	-	-	1,776	15.1	-	-	11,788	23.3	4,677	4,753	2,358
b. On-Farm Adaptive Water Management	-	-	-	-	-	-	-	-	3,261	100.0	-	-	3,261	6.5	94	3,167	-
Subtotal	2,358	15.7	5,969	39.7	1,685	11.2	-	-	5,037	33.5	-	-	15,049	29.8	4,771	7,920	2,358
2. Agribusiness Development																	
a. Strengthening Value chains for Producers Groups	977	17.0	4,755	83.0	-	-	-	-	-	-	-	-	5,733	11.3	82	4,673	977
b. Strengthening MARDE Technical Capacity	-	-	96	100.0	-	-	-	-	-	-	-	-	96	0.2	3	94	-
Subtotal	977	16.8	4,852	83.2	-	-	-	-	-	-	-	-	5,829	11.5	85	4,767	977
Subtotal	3,335	16.0	10,820	51.8	1,685	8.1	-	-	5,037	24.1	-	-	20,878	41.3	4,856	12,686	3,335
B. Inclusive Entrepreneurship Finance																	
1. Affordable credit for youth and w omen	400	1.6	5,290	21.7	1,768	7.2	15,260	62.6	-	-	1,675	6.9	24,393	48.3	1,000	22,993	400
2. Rural finance sector development	-	-	2,742	100.0	-	-	-	-	-	-	-	-	2,742	5.4	-	2,742	-
Subtotal	400	1.5	8,032	29.6	1,768	6.5	15,260	56.2	-	-	1,675	6.2	27,135	53.7	1,000	25,735	400
C. Project Management	109	4.4	1,897	75.7	-	-	-	-	500	19.9	-	-	2,506	5.0	274	2,122	109
Total PROJECT COSTS	3,844	7.6	20,750	41.1	3,453	6.8	15,260	30.2	5,537	11.0	1,675	3.3	50,518	100.0	6,131	40,543	3,844

Table 5AA: Project Components by Financiers ('000 MDL)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Components by Financiers

A. Resilient Economic Transformation

1. Enhancing Climate Resilience

a. Climate resilient infrastructure

b. On-Farm Adaptive Water Management

Subtotal

2. Agribusiness Development

a. Strengthening Value chains for Producers Groups

b. Strengthening MARDE Technical Capacity

Subtotal

Subtotal

B. Inclusive Entrepreneurship Finance

1. Affordable credit for youth and women

2. Rural finance sector development

Subtotal

C. Project Management

Total PROJECT COSTS

(Local '000)																
The Government		IFAD Loan		Beneficiaries		PFIs		AF		AIPA		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
43,746	20.0	110,713	50.6	31,334	14.3	-	-	32,936	15.1	-	-	218,728	24.1	86,807	88,176	43,746
0	-	-	-	-	-	-	-	58,255	100.0	-	-	58,255	6.4	1,754	56,500	-
43,746	15.8	110,713	40.0	31,334	11.3	-	-	91,190	32.9	-	-	276,983	30.5	88,561	144,676	43,746
18,028	17.1	87,704	82.9	-	-	-	-	-	-	-	-	105,732	11.7	1,529	86,174	18,028
0	-	1,763	100.0	-	-	-	-	-	-	-	-	1,763	0.2	47	1,715	-
18,028	16.8	89,467	83.2	-	-	-	-	-	-	-	-	107,495	11.9	1,577	87,890	18,028
61,774	16.1	200,180	52.1	31,334	8.1	-	-	91,190	23.7	-	-	384,478	42.4	90,138	232,566	61,774
7,000	1.6	92,575	21.7	30,935	7.2	267,050	62.6	-	-	29,309	6.9	426,869	47.1	17,500	402,369	7,000
-	-	48,925	100.0	-	-	-	-	-	-	-	-	48,925	5.4	-	48,925	-
7,000	1.5	141,500	29.7	30,935	6.5	267,050	56.1	-	-	29,309	6.2	475,794	52.5	17,500	451,294	7,000
2,010	4.3	35,546	76.2	-	-	-	-	9,079	19.5	-	-	46,636	5.1	5,038	39,587	2,010
70,784	7.8	377,226	41.6	62,268	6.9	267,050	29.4	100,270	11.1	29,309	3.2	906,908	100.0	112,676	723,447	70,784

Table 6A: Disbursement Accounts by Financiers ('000 MDL)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Disbursement Accounts by Financiers

(Local '000)																	
															Local		
The Government		IFAD Loan		Beneficiaries		PFIs		AF		AIPA		Total			(Excl.	Duties &	
Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	For. Exch.	Taxes)	Taxes	
1. Consultancies, Studies, Technical Assistance and Workshops /a	0	-	42,752	68.2	-	-	-	-	19,893	31.8	-	-	62,645	6.9	3,344	59,301	-
2. Equipment, Material, Goods and Services	25,376	20.0	95,905	75.6	5,600	4.4	-	-	-	-	-	-	126,881	14.0	18,370	83,135	25,376
3. Credit	-	-	67,550	19.7	8,794	2.6	267,050	77.8	-	-	-	-	343,394	37.9	-	343,394	-
4. Grant	-	-	35,000	29.3	16,541	13.8	-	-	38,719	32.4	29,309	24.5	119,569	13.2	-	119,569	-
5. Works	42,663	20.0	110,713	51.9	27,002	12.7	-	-	32,936	15.4	-	-	213,314	23.5	84,100	86,552	42,663
6. Salaries and Allowances	-	-	18,657	81.4	-	-	-	-	4,260	18.6	-	-	22,917	2.5	-	22,917	-
7. Operating Costs	2,745	15.1	6,649	36.6	4,331	23.8	-	-	4,463	24.5	-	-	18,188	2.0	6,863	8,580	2,745
Total PROJECT COSTS	70,784	7.8	377,226	41.6	62,268	6.9	267,050	29.4	100,270	11.1	29,309	3.2	906,908	100.0	112,676	723,447	70,784

/a including trainings

Table 6AA: Disbursement Accounts by Financiers ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Disbursement Accounts by Financiers

	(US\$ '000)																			
	The Government		IFAD Loan		The Government		IFAD Loan		Beneficiaries		PFIs		AF		AIPA		Total		For.	Local
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	(Excl. Taxes)
1. Consultancies, Studies, Technical Assistance and Workshops /a	0	-	42,752	68.2	0	-	2,311	68.4	-	-	-	-	1,068	31.6	-	-	3,379	6.7	180	3,199
2. Equipment, Material, Goods and Services	25,376	20.0	95,905	75.6	1,397	20.0	5,267	75.4	320	4.6	-	-	-	-	-	-	6,984	13.8	1,049	4,539
3. Credit	-	-	67,550	19.7	-	-	3,860	19.7	503	2.6	15,260	77.8	-	-	-	-	19,623	38.8	-	19,623
4. Grant	-	-	35,000	29.3	-	-	2,000	29.3	945	13.8	-	-	2,213	32.4	1,675	24.5	6,833	13.5	-	6,833
5. Works	42,663	20.0	110,713	51.9	2,300	20.0	5,969	51.9	1,455	12.7	-	-	1,776	15.4	-	-	11,500	22.8	4,533	4,667
6. Salaries and Allowances	-	-	18,657	81.4	-	-	983	81.2	-	-	-	-	228	18.8	-	-	1,210	2.4	-	1,210
7. Operating Costs	2,745	15.1	6,649	36.6	148	14.9	360	36.4	230	23.3	-	-	252	25.5	-	-	989	2.0	369	473
Total PROJECT COSTS	70,784	7.8	377,226	41.6	3,844	7.6	20,750	41.1	3,453	6.8	15,260	30.2	5,537	11.0	1,675	3.3	50,518	100.0	6,131	40,543

0.41073

/a including trainings

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Table 1B: Climate resilient infrastructure ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Table 1.1.1. Climate Resilience Infrastructure

Detailed Costs

(US\$)

I. Investment Costs

A. Climate Resilient Infrastructure

	Unit	Quantities							Unit Cost	Base Cost ('000)							Totals Including Contingencies ('000)						
		2020	2021	2022	2023	2024	2025	Total		2020	2021	2022	2023	2024	2025	Total	2020	2021	2022	2023	2024	2025	Total
Small scale irrigation	ha	-	560	840	840	400	160	2,800	2,500	-	1,400	2,100	2,100	1,000	400	7,000	-	1,538	2,361	2,417	1,176	480	7,972
Feeder roads	km	-	6	9	9	4	2	30	80,000	-	480	720	720	320	160	2,400	-	527	810	829	376	192	2,734
Consultancies services for awareness raising and mobilization/outreach	Lumpsum	1	1	1	1	-	-	4	38,000	38	38	38	38	-	-	152	41	42	43	44	-	-	169
Feasibility study of investment proposals	Lumpsum	9	15	15	9	-	-	48	2,500	23	38	38	23	-	-	120	24	41	42	26	-	-	134
Supervision of works /a	lumpsum	-	6	10	10	6	-	32	3,500	-	21	35	35	21	-	112	-	23	39	40	25	-	127
Design	Lumpsum	-	6	10	10	6	-	32	10,000	-	60	100	100	60	-	320	-	66	112	115	71	-	364
Total Investment Costs										61	2,037	3,031	3,016	1,401	560	10,104	65	2,237	3,407	3,470	1,648	672	11,500

II. Recurrent Costs

A. O&M for Infrastructures

O&M for irrigation	Lumpsum	-	-	560	840	840	400	2,640	75	-	-	42	63	63	30	198	-	-	44	68	69	34	215
O&M for roads	Lumpsum	-	-	6	9	9	4	28	2,400	-	-	14	22	22	10	67	-	-	15	23	24	11	73
Total Recurrent Costs										-	-	56	85	85	40	265	-	-	59	91	93	44	288
Total										61	2,037	3,087	3,100	1,486	600	10,369	65	2,237	3,467	3,561	1,741	717	11,788

/a Estimated at 2% of total small scale irrigation investment and feeder roads investment

Table 2B: On-farm climate adaptive water management ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Table 1.1.2. On-Farm Climate Adaptive Water Management

Detailed Costs

(US\$)

I. Investment Costs

A. Water and soil conservation Agriculture

	Unit	Quantities							Unit Cost	Base Cost ('000)							Totals Including Contingencies ('000)						
		2020	2021	2022	2023	2024	2025	Total		2020	2021	2022	2023	2024	2025	Total	2020	2021	2022	2023	2024	2025	Total
On-farm Training and Implementation Support	Lumpsum	-	0.2	0.3	0.3	0.2	-	1	380,000	-	76	114	114	76	-	380	-	78	120	123	84	-	404
On-farm Water Management proposals	no. of beneficiaries	-	140	300	300	145	-	885	2,500	-	350	750	750	363	-	2,213	-	350	750	750	363	-	2,213
Lessons learned, best practices and dissemination	Lumpsum	-	-	-	-	0.5	0.5	1	50,000	-	-	-	-	25	25	50	-	-	-	-	27	28	56
Conservation Agriculture National inventory	Survey	-	1	-	-	-	-	1	50,000	-	50	-	-	-	-	50	-	51	-	-	-	-	51
Develop curricula for Conservation Agriculture for University and College and training material ^{1a}	Lumpsum	-	0.2	0.2	0.2	0.2	0.2	1	500,000	-	100	100	100	100	100	500	-	103	105	108	110	112	537
Total										-	576	964	964	564	125	3,193	-	582	975	980	583	140	3,261

^{1a} Including specialist training of trainers on Conservation Agriculture

Table 3B: Strengthening value chain for producers groups ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Table 1.2.1. Strengthening Value chains for producers groups

Detailed Costs

(US\$)

I. Investment Costs

A. Strengthening value chains for producer groups

	Unit	Quantities							Unit Cost	Base Cost ('000)							Totals Including Contingencies ('000)						
		2020	2021	2022	2023	2024	2025	Total		2020	2021	2022	2023	2024	2025	Total	2020	2021	2022	2023	2024	2025	Total
Technical assistance	months	10	12	12	12	12	10	68	3,800	38	46	46	46	46	38	258	38	47	48	49	50	43	275
Regional visits for information dissemination	visits	6	6	6	6	4	4	32	2,000	12	12	12	12	8	8	64	12	12	13	13	9	9	68
Diagnostic survey for value chains	surveys	3	4	4	4	4	-	19	5,000	15	20	20	20	20	-	95	15	21	21	22	22	-	100
Market Facilitation meetings	meetings	6	6	6	6	6	2	32	2,000	12	12	12	12	12	4	64	12	12	13	13	13	4	68
Business plan and feasibility analysis	plans	2	4	3	3	2	-	14	15,000	30	60	45	45	30	-	210	30	62	47	48	33	-	220
Producer group strengthening	associations	1	4	4	1	1	-	11	10,000	10	40	40	10	10	-	110	10	41	42	11	11	-	115
Equity investment for agroprocessing	units	1	2	3	2	2	-	10	450,000	450	900	1,350	900	900	-	4,500	466	950	1,459	995	1,017	-	4,887
Total										567	1,090	1,525	1,045	1,026	50	5,301	584	1,145	1,642	1,151	1,155	56	5,733

Table 4B: Strengthening MARDE technical capacity ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Table 1.2.2. Strengthening MARDE technical capacity

Detailed Costs

(US\$)

(US\$)	Quantities								Unit Cost	Base Cost ('000)							Totals Including Contingencies ('000)							
	Unit	2020	2021	2022	2023	2024	2025	Total		2020	2021	2022	2023	2024	2025	Total	2020	2021	2022	2023	2024	2025	Total	
I. Investment Costs																								
	Workshop and learning events	event	-	1	-	-	1	-	2	4,000	-	4	-	-	4	-	8	-	4	-	-	4	-	9
	Strengthening of MARDE for economic analysis	Lumpsum	0.5	1	1	1	-	-	3.5	12,000	6	12	12	12	-	-	42	6	12	13	13	-	44	
	Strengthening of MARDE for market analysis	Lumpsum	0.5	1	1	1	-	-	3.5	12,000	6	12	12	12	-	-	42	6	12	13	13	-	44	
Total											12	28	24	24	4	-	92	12	29	25	26	4	96	

Table 5B: Affordable credit for youth and women ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Table 2.1. Affordable credit for youth and women

Detailed Costs

(US\$)

Unit	Unit Cost	Base Cost ('000)							Totals Including Contingencies ('000)						
		2020	2021	2022	2023	2024	2025	Total	2020	2021	2022	2023	2024	2025	Total
I. Investment Costs															
A. Financing packages for MSE															
Credit line through banks (60% of loan amount - with IFAD grants)	no. of borrowers	30,000	-	1,080	1,080	1,080	1,080	5,400	-	1,080	1,080	1,080	1,080	1,080	5,400
Credit line through banks (58% of loan amount - with AIPA grants)	no. of borrowers	29,000	-	1,972	1,972	1,972	1,972	9,860	-	1,972	1,972	1,972	1,972	1,972	9,860
Matching grants IFAD (40% of loan amount)	no. of grants	25,000	-	500	500	500	500	2,500	-	500	500	500	500	500	2,500
Matching grants for equipment IFAD (40% of loan amount)	no. of grants	25,000	-	400	400	400	400	2,000	-	400	400	400	400	400	2,000
Matching grants AIPA (42% of loan amount)	no. of grants	26,500	-	424	424	424	424	2,120	-	424	424	424	424	424	2,120
Subtotal			-	4,376	4,376	4,376	4,376	21,880	-	4,376	4,376	4,376	4,376	4,376	21,880
B. Credit line for MEs through SCAs															
Credit line through SCAs	no. of borrowers	8,375	-	503	503	503	503	2,513	-	503	503	503	503	503	2,513
Total			-	4,879	4,879	4,879	4,879	24,393	-	4,879	4,879	4,879	4,879	4,879	24,393

Table 6B: Rural finance sector development ('000 USD)

Moldova

Talent Retention for Rural Transformation Project (TRTP)

Table 2.2. Rural finance sector development

Detailed Costs

(US\$)

I. Investment Costs

A. SCA sector strengthening

SCA stabilization fund

Unit	Quantities							Unit Cost	Base Cost ('000)							Totals Including Contingencies ('000)						
	2020	2021	2022	2023	2024	2025	Total		2020	2021	2022	2023	2024	2025	Total	2020	2021	2022	2023	2024	2025	Total
Lumpsum	0.5	0.5	-	-	-	-	1	1,000,000	500	500	-	-	-	-	1,000	500	500	-	-	-	-	1,000

SCA Deposit Insurance Fund

Lumpsum	-	1	-	-	-	-	1	850,000	-	850	-	-	-	-	850	-	850	-	-	-	-	850
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Subtotal

	500	1,350	-	-	-	-		1,850	500	1,350	-	-	-	-	1,850
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B. SCA capacity building

Software development (accounting and reporting)

Lumpsum	-	1	-	-	-	-	1	30,000	-	30	-	-	-	-	30	-	31	-	-	-	-	31
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Software development (interest calculation and disclosure)

Lumpsum	-	-	1	-	-	-	1	15,000	-	-	15	-	-	-	15	-	-	16	-	-	-	16
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Software development (credit bureau reporting)

Lumpsum	-	-	-	1	-	-	1	50,000	-	-	-	50	-	-	50	-	-	-	54	-	-	54
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Training for SCAs

no. of trainings	-	1	1	1	1	1	5	25,000	-	25	25	25	25	25	125	-	26	26	27	27	28	134
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Subtotal

	-	55	40	75	25	25		220	-	56	42	81	27	28	235
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C. NCFM capacity building

Deposit insurance monitoring system development

Lumpsum	-	1	-	-	-	-	1	113,000	-	113	-	-	-	-	113	-	116	-	-	-	-	116
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Regulations and policy development

Lumpsum	-	1	-	-	-	-	1	30,000	-	30	-	-	-	-	30	-	31	-	-	-	-	31
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Study visits

no. of visits	-	1	-	-	-	-	1	25,000	-	25	-	-	-	-	25	-	26	-	-	-	-	26
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Subtotal

	-	168	-	-	-	-		168	-	172	-	-	-	-	172
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D. MSE mentoring

Business plan development and mentoring

no. of borrowers	-	52	52	52	52	52	260	1,700	-	88	88	88	88	88	442	-	91	93	95	97	99	475
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MSE information and mobilization

Lumpsum	1	-	-	-	-	-	1	10,000	10	-	-	-	-	-	10	10	-	-	-	-	-	10
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Subtotal

	10	88	88	88	88	88		452	10	91	93	95	97	99	485
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Total

	510	1,661	128	163	113	113		2,690	510	1,670	135	176	125	127	2,742
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Table 7B: Project management Unit ('000 USD)

Moldova
Talent Retention for Rural Transformation Project (TRTP)
Table 3. Project Management
Detailed Costs
(US\$)

(US\$)		Quantities							Base Cost ('000)							Totals Including Contingencies ('000)							
		Unit	2020	2021	2022	2023	2024	2025	Total	Unit Cost	2020	2021	2022	2023	2024	2025	Total	2020	2021	2022	2023	2024	2025
I. Investment Costs																							
A. Office Equipment and Furniture																							
Computers	computer	5	-	-	10	-	-	15	1,900	9.5	-	-	19.0	-	-	28.5	9.6	-	-	20.4	-	-	30.0
Printers	printer	2	2	-	-	-	-	4	400	0.8	0.8	-	-	-	-	1.6	0.8	0.8	-	-	-	1.6	
Furniture and desks for new staff	lumpsum	1	-	-	-	-	-	1	25,000	25.0	-	-	-	-	-	25.0	25.2	-	-	-	-	25.2	
Subtotal										35.3	0.8	-	19.0	-	-	55.1	35.6	0.8	-	20.4	-	-	56.8
B. Vehicle																							
Four Wheel Drive	vehicle	1	-	-	-	-	-	1	40,000	40.0	-	-	-	-	-	40.0	40.3	-	-	-	-	-	40.3
C. Workshops and studies																							
Start-up workshop	workshop	1	-	-	-	-	-	1	7,000	7.0	-	-	-	-	-	7.0	7.1	-	-	-	-	-	7.1
Annual progress reports	report	1	1	1	1	1	1	6	1,500	1.5	1.5	1.5	1.5	1.5	1.5	9.0	1.5	1.5	1.6	1.6	1.6	1.7	9.6
Annual data collection	per year	1	1	1	1	1	1	6	13,000	13.0	13.0	13.0	13.0	13.0	13.0	78.0	13.1	13.3	13.7	14.0	14.3	14.6	83.0
Annual review and planning workshop	workshop	-	1	1	1	1	1	5	3,000	-	3.0	3.0	3.0	3.0	3.0	15.0	-	3.1	3.2	3.2	3.3	3.4	16.1
Baseline survey and report	baseline	1	-	-	-	-	-	1	25,000	25.0	-	-	-	-	-	25.0	25.2	-	-	-	-	-	25.2
Baseline for climate vulnerability	baseline	1	-	-	-	-	-	1	20,000	20.0	-	-	-	-	-	20.0	20.2	-	-	-	-	-	20.2
Mid-line survey and report	review	-	-	-	-	1	-	1	25,000	-	-	-	25.0	-	-	25.0	-	-	-	26.9	-	-	26.9
End-line survey and impact assessment report	review	-	-	-	-	-	-	1	40,000	-	-	-	-	-	40.0	40.0	-	-	-	-	-	44.9	44.9
Training and studies	training	2	2	2	2	2	1	11	9,000	18.0	18.0	18.0	18.0	18.0	9.0	99.0	18.1	18.5	18.9	19.4	19.8	10.1	104.8
International and regional meetings for project staff /a	lumpsum	1	1	1	1	1	1	6	15,000	15.0	15.0	15.0	15.0	15.0	15.0	90.0	15.1	15.4	15.8	16.1	16.5	16.8	95.7
Subtotal										99.5	50.5	50.5	75.5	50.5	81.5	408.0	100.2	51.8	53.1	81.2	55.5	91.5	433.3
D. National Technical Assistance																							
Technical assistance - legal service provider	consultancy	1	1	1	1	1	1	6	9,935	9.9	9.9	9.9	9.9	9.9	9.9	59.6	10.0	10.2	10.4	10.7	10.9	11.1	63.4
Total Investment Costs										184.7	61.2	60.4	104.4	60.4	91.4	562.7	186.1	62.9	63.5	112.3	66.4	102.6	593.9
II. Recurrent Costs																							
A. Salaries																							
CPIU Director	person/year	-	-	-	0.4	1	1	2.4	38,537	-	-	-	15.4	38.5	38.5	92.5	-	-	-	16.6	42.4	43.2	102.2
Finance Manager	person/year	-	-	-	0.4	1	1	2.4	27,097	-	-	-	10.8	27.1	27.1	65.0	-	-	-	11.7	29.8	30.4	71.8
Accountant	person/year	-	-	-	0.4	1	1	2.4	15,656	-	-	-	6.3	15.7	15.7	37.6	-	-	-	6.7	17.2	17.6	41.5
Procurement and budget specialist	person/year	-	-	-	0.4	1	1	2.4	15,656	-	-	-	6.3	15.7	15.7	37.6	-	-	-	6.7	17.2	17.6	41.5
Climate Specialist for Adaptation fund	Pers-year	-	1	1	1	1	1	5	25,000	-	25.0	25.0	25.0	25.0	25.0	125.0	-	25.7	26.3	26.9	27.5	28.1	134.4
Climate resilience Senior Specialist	person/year	-	-	-	0.4	1	1	2.4	19,871	-	-	-	7.9	19.9	19.9	47.7	-	-	-	8.5	21.8	22.3	52.7
Climate resilience Specialist	person/year	-	-	-	0.4	1	1	2.4	15,656	-	-	-	6.3	15.7	15.7	37.6	-	-	-	6.7	17.2	17.6	41.5
Financial product development specialist	person/year	-	-	-	0.4	1	1	2.4	19,871	-	-	-	7.9	19.9	19.9	47.7	-	-	-	8.5	21.8	22.3	52.7
Credit Manager	person/year	-	-	-	0.4	1	1	2.4	27,097	-	-	-	10.8	27.1	27.1	65.0	-	-	-	11.7	29.8	30.4	71.8
Infrastructure development specialist	person/year	-	-	-	0.4	1	1	2.4	19,871	-	-	-	7.9	19.9	19.9	47.7	-	-	-	8.5	21.8	22.3	52.7
Irrigation engineer	Pers-year	1	1	1	1	1	1	6	21,000	21.0	21.0	21.0	21.0	21.0	21.0	126.0	21.2	21.6	22.1	22.6	23.1	23.6	134.0
Procurement specialist	person/year	-	-	-	0.4	1	1	2.4	19,871	-	-	-	7.9	19.9	19.9	47.7	-	-	-	8.5	21.8	22.3	52.7
Agribusiness Specialist for CPIU	person/year	1	1	1	1	1	1	6	19,871	19.9	19.9	19.9	19.9	19.9	19.9	119.2	20.0	20.4	20.9	21.4	21.8	22.3	126.8
M&E senior specialist	person/year	-	-	-	0.4	1	1	2.4	27,097	-	-	-	10.8	27.1	27.1	65.0	-	-	-	11.7	29.8	30.4	71.8
M&E Specialist	person/year	-	-	-	0.4	1	1	2.4	15,656	-	-	-	6.3	15.7	15.7	37.6	-	-	-	6.7	17.2	17.6	41.5
Knowledge management specialist	person/year	-	-	-	0.4	1	1	2.4	19,871	-	-	-	7.9	19.9	19.9	47.7	-	-	-	8.5	21.8	22.3	52.7
Translator/Project office assistant	person/year	-	-	-	0.4	1	1	2.4	15,656	-	-	-	6.3	15.7	15.7	37.6	-	-	-	6.7	17.2	17.6	41.5
Drivers	person/year	-	-	-	0.4	1	1	2.4	9,936	-	-	-	4.0	9.9	9.9	23.8	-	-	-	4.3	10.9	11.2	26.3
Subtotal										40.9	65.9	65.9	188.8	373.3	373.3	1,108.0	41.2	67.6	69.2	203.1	410.3	418.9	1,210.3
B. Operating Costs																							
Utilities	per year	-	-	0.4	1	1	1	3.4	10,000	-	-	4.0	10.0	10.0	10.0	34.0	-	-	4.2	10.8	11.0	11.2	37.2
Communication	per year	-	-	0.4	1	1	1	3.4	1,000	-	-	0.4	1.0	1.0	1.0	3.4	-	-	0.4	1.1	1.1	1.1	3.7
Stationery	per year	-	-	0.4	1	1	1	3.4	10,000	-	-	4.0	10.0	10.0	10.0	34.0	-	-	4.2	10.8	11.0	11.2	37.2
Audit	per year	1	1	1	1	1	1	6	15,000	15.0	15.0	15.0	15.0	15.0	15.0	90.0	15.1	15.4	15.8	16.1	16.5	16.8	95.7
Allowances for travel to project sites	per year	1	1	1	1	1	1	6	20,000	20.0	20.0	20.0	20.0	20.0	20.0	120.0	20.0	20.0	20.0	20.0	20.0	20.0	120.0
Office maintenance	per year	-	-	0.4	1	1	1	3.4	10,000	-	-	4.0	10.0	10.0	10.0	34.0	-	-	4.2	10.8	11.0	11.2	37.2
Website and softw are upgrading and updating	lumpsum	-	-	0.4	1	1	1	3.4	5,000	-	-	2.0	5.0	5.0	5.0	17.0	-	-	2.1	5.4	5.5	5.6	18.6
Other operating costs	lumpsum	-	-	0.4	1	1	1	3.4	4,000	-	-	1.6	4.0	4.0	4.0	13.6	-	-	1.7	4.3	4.4	4.5	14.9
GIS softw are update	per year	-	-	0.4	1	1	1	3.4	3,000	-	-	1.2	3.0	3.0	3.0	10.2	-	-	1.3	3.2	3.3	3.4	11.2
Vehicle O&M	per year	-	-	0.4	1	1	1	3.4	20,000	-	-	8.0	20.0	20.0	20.0	68.0	-	-	8.4	21.5	22.0	22.4	74.3
Overhead for On-farm w ater management implementation support	Lumpsum	1	-	-	-	-	-	1	250,000	250.0	-	-	-	-	-	250.0	251.9	-	-	-	-	-	251.9
Subtotal										285.0	35.0	60.2	98.0	98.0	98.0	674.2	287.0	35.4	62.2	103.9	105.7	107.5	701.8
Total Recurrent Costs										325.9	100.9	126.1	286.8	471.3	471.3	1,782.2	328.2	103.0	131.5	307.0	516.0	526.4	1,912.1
Total										510.6	162.1	186.5	391.3	531.7	562.7	2,344.9	514.3	165.9	195.0	419.3	582.4	629.0	2,505.9

a Capacity building support for MOF and MAFI, organized conferences, participation to the IFAD negotiation meetings.

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 4: Economic and Financial Analysis

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

APPENDIX 4: ECONOMIC AND FINANCIAL ANALYSIS

A. Introduction

1. The TRTP project is expected to generate substantial net incremental benefits for farmers, rural entrepreneurs and rural households in the project area. Benefits would directly accrue to farmers, women and youth through activities aimed at: i) diversifying productive activities for rural poor, ii) boosting agriculture through increase in production and productivity; iii) strengthening climate adaptation capacity, iv) facilitating access to market and access to finance v) promoting entrepreneurship and value-addition to agricultural produce. The project would be applying a holistic and systematic approach to the enhancement and improvement of the several sectors and productive activities identified during the project design mission.
2. Benefits to the TRTP target group would accrue from: (i) increased water availability for productive use; (ii) diversification of productive activities and sources of income thanks to access to finance; (iii) increased food availability for rural poor, (iv) increased value-added of agricultural outputs; (v) reduced transportation costs and enhanced processing efficiency through innovative technology and improved infrastructure; (vi) improved quality of processed products, thus attracting higher prices at local market; (vii) increased employment either for hired or family labour, for both on-farm and off-farm activities; and (viii) tax revenues as a result of increased volume of taxable production.
3. Increase in income would be largely dependent on rural household and producers groups adopting improved technologies which the project will promote through technical assistance, development plans and infrastructure investments, thereby improving market access, supporting marketing linkages and generally creating a favourable economic environment that encourages farmers/rural entrepreneurs to produce more competitive products and expand production.
4. This annex presents the Economic and Financial Analysis (EFA) of project's interventions through the use of indicative activity models. The analysis builds upon the precautionary principle, accounting for project benefits in a realistic and conservative manner. A cash-flow analysis is finally carried out to present the "with" and "without" project analysis. The key-indicators used to carry out the analysis are Net Present Values (NPVs), Financial and Economic Internal Rate of Return (FIRR - EIRR), Benefit-cost ratio (B/C ratio) and switching values for both benefits and costs.

B. Methodology, assumptions and data

5. Financial analysis. The primary objective of the financial analysis is to determine the financial viability and incentives for the project target group as a result of their engagement in project activities, and hence to determine the economic impact on family labour, cash flow and household incomes. A number of indicative economic activities to be supported by project were identified during the project design mission. The following 12 illustrative models are used in the EFA: (i) Apple orchard; (ii) Apricot orchard; (iii) Cherry orchard; iv) Plum orchard; v) Table grape production (mechanized); vi) Table grape production (irrigated); vii) Tomato production in greenhouse; viii) Potato production; ix) Garlic production; x) Onion Production; xi) Dried fruit processing unit and; xii) Grape and apple processing unit. These models will be used as building blocks for the economic evaluation of the entire project once aggregated for the target

population. All the technical assumptions within the models have been elaborated jointly with the team members on the basis of field surveys, national statistics, international and national expert consultation and technical studies. The diagram in figure 1 **Error! Reference source not found.** provides a logical sketch of the adopted approach while summary results from the financial models are presented in table 1.

Figure 1: EFA diagram

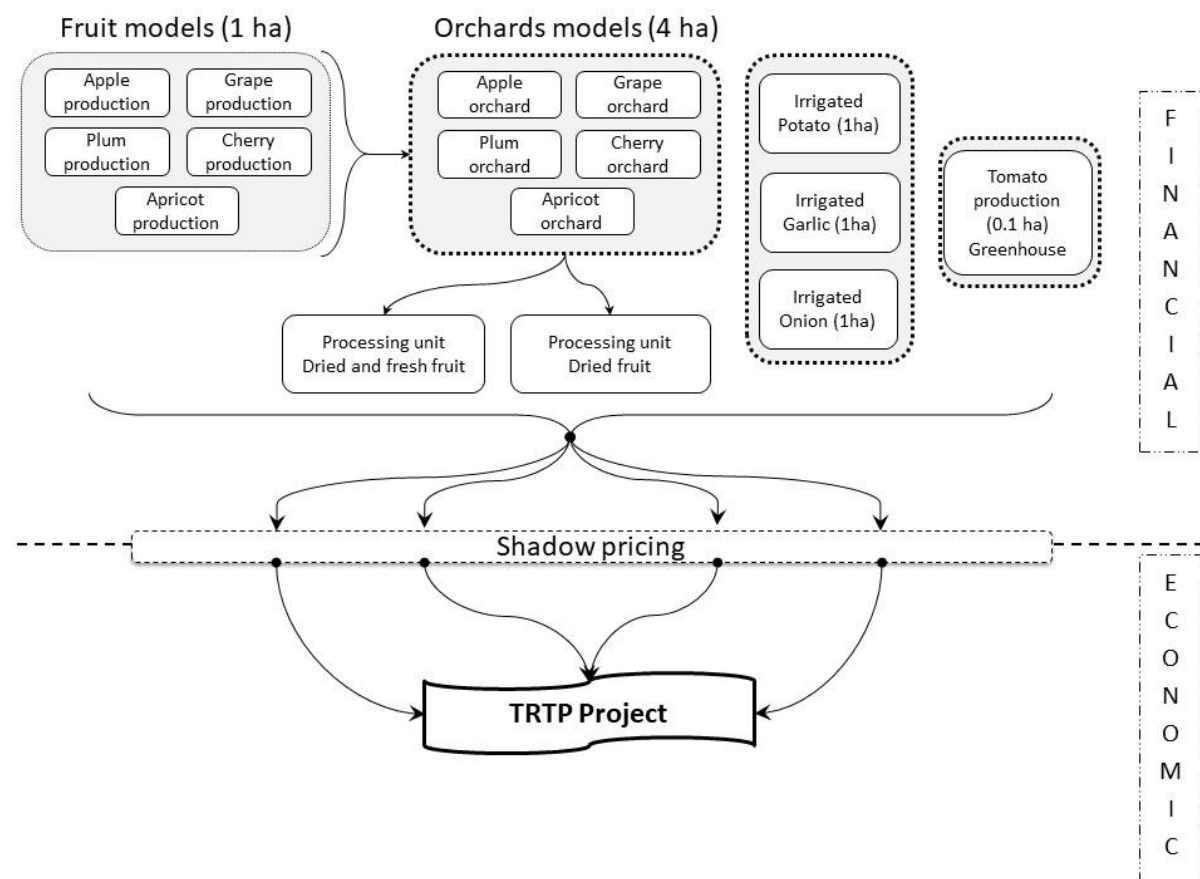


Table 1: Summary of financial models' results

MODELS	NPV (MDL) @ 12%	Return to family labour (MDL)	FIRR	B/C ratio	Switching value Benefits	Switching value Costs
Apple	324,890	1,758	19%	1.21	-17%	21%
Apricot	136,322	1,857	15%	1.10	-9%	10%
Cherry	279,171	1,375	18%	1.15	-13%	15%
Plum	21,049	791	15%	1.06	-6%	6%
Table grape (mechanized)	65,085	941	14%	1.05	-5%	5%
Table grape (irrigated only)	115,021	613	17%	1.09	-8%	9%
Tomato (greenhouse)	34,596	3,446	17%	1.17	-15%	17%
Potato	11,162	302	17%	1.19	-16%	19%
Garlic	69,490	534	37%	1.78	-44%	78%
Onion	44,972	379	30%	1.60	-37%	60%
Dried fruit processing unit	6,624,084	n/a	28%	1.05	-5%	5%
Grape and apple processing unit	5,563,205	n/a	25%	1.10	-9%	10%

6. Project target group and beneficiaries. The primary target group for the Project will be commercially-orientated smallholder farmers - particularly women - cultivating land up to 10 ha and young entrepreneurs. The project will have a poverty focus and it is estimated that the number of direct beneficiaries will be 11,723 HHs of whom 5,107 HHs are directly accounted for in the production models considered in the EFA. The aggregation for production models is based on the number of HHs directly engaged in the activity. This same approach could not be used for processing units - given the different nature of the investment. The aggregation is based primarily on the number of plan/facilities established. The total number of HHs benefitting of the newly formed agro-processing units are finally calculate and based on an estimated outreach of 60 HHs per unit.

7. Overall the project will benefits women, youth and men directly involved in farm and off-farm activities proposed by the project as well as indirect beneficiaries employed in the value adding activities and benefitting from the rehabilitated infrastructure. The inclusion pattern of the EFA modes and beneficiary is described in table 2 below.

Table 2: Beneficiary and investment phasing

MODELS	unit	Y1	Y2	Y3	Y4	Y5	Y6	Total no. of HHs
Farm model - Apple orchard	HHs	0	23	23	23	23	23	117
Farm model - Apricot orchard	HHs	0	23	23	23	23	23	117
Farm model - Cherry orchard	HHs	0	23	23	23	23	23	117
Farm model - Plum orchard	HHs	0	23	23	23	23	23	117
Farm model - Table grape orchard (mech.)	HHs	0	23	23	23	23	23	117
Farm model - Table grape orchard (irrig.)	HHs	0	23	23	23	23	23	117
Tomato production in greenhouse (0.1 ha)	HHs	0	23	23	23	23	23	117
Potato production (1ha)	HHs	0	234	380	380	181	53	1,228
Garlic production (1ha)	HHs	0	234	380	380	181	54	1,229
Onion production (1 ha)	HHs	0	234	380	380	181	55	1,230
Dried fruit processing ¹	model	0	1	1	1	1	0	240
Grape and apple processing ²	model	1	1	2	1	1	0	360
								5,107

8. Key assumptions. The following source of information gathered during the design mission have been used to set up the analysis: a) interviews with farmers and entrepreneurs; b) official statistics and surveys from the Moldovan Bureau of statistics, c) academic papers and; d) mission estimates. In particular, information on labour and input requirements for various operations, capital costs, prevailing wages, yields, farm gate and market prices of commodities, input and farm-to-market transport costs were collected during the field visit. Conservative assumptions were made both for inputs and outputs, and take account of possible risks.

9. Exchange rate. The exchange rate used in the analysis is fixed at 1 USD = 17.5 MDL computed as an average of the exchange rate prevailing during the design mission.

¹ Each processing unit is assumed to benefit at least 60 households

² Each processing unit is assumed to benefit at least 60 households

10. Numeraire and Prices. The adopted numeraire for the EFA is the domestic price level expressed in local currency unit. The financial prices for project inputs and products represent average market prices and were collected in the field during the design mission (April 2019). Prices used represent estimates of the average seasonal prices and the analysis is carried out using nominal constant prices.

11. Labour. Family labour has been valued both in financial and economic analysis. It has been assumed that farm labour is provided by the households and is valued at MDL 150 day⁻¹ (USD 8.5). Hired labour (skilled) is priced at MDL 200 day⁻¹ (USD 11.5), which is the prevailing market rate for on-farm activities.

12. Opportunity cost of capital. A discount rate of 12% has been used in this analysis to assess the viability and robustness of the investments. In order to consider the profitability of the foreseen investments with market alternatives, the selected value is calculated as an average of the lending, deposit and money market interest rates.

C. Productive models

13. Several production and processing models were elaborated to determine the economic aptness of project interventions, given the local economic context. This section presents the key findings of the financial analyses carried out.

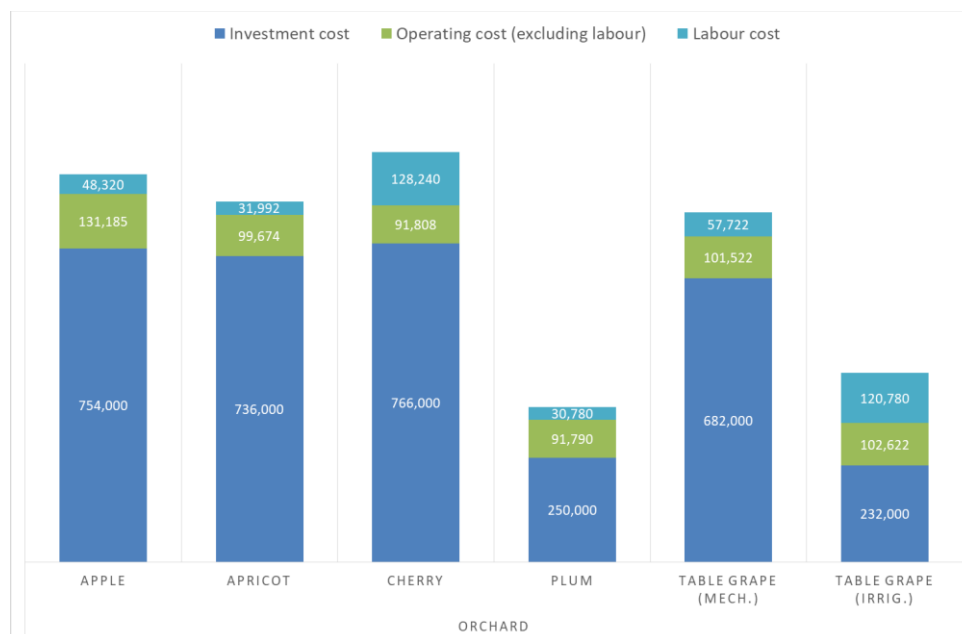
14. Intensifying sustainable fruit production. Several models foreseeing the establishment of fruit orchards for apples, apricots, cherries, plums and table grapes are presented. The underlying assumption is that, thanks to increased access to finance, promotion of water saving technologies and technical assistance, young farmers will be able and keen to rent extra land and expand current fruit production, increasing planted area from one to four hectares.

15. Initial investments in all fruit orchard models concerns the purchase of agricultural machineries and equipment such as tractors and drip irrigation systems, as well as the plantation of new trees on three additional hectares of rented land. The average investment cost in year one ranges from MDL 58,000 to MDL 191,500 per hectare of newly established orchards. This initial outlay includes expenses for machinery and/or the irrigation infrastructure. The least expensive orchards are table grapes and plums as no investment in tractor or other machinery was conceived. In the case of plum production, expected revenues - once compared to annual operating costs - do not allow to invest in machinery and still yield positive returns in the medium term (10 years). Grape production (mechanized model) would remain profitable despite the extra initial expenses for the machinery, as the use of such equipment would offset some of the manual labour required, therefore bringing savings in labour costs.

16. Operating costs concern mainly the buying of inputs, chemical fertilizers, pesticides, labour cost (both family and hired), water expenses and allowances for O&M of both machinery and irrigation infrastructure. The annual operating cost range from MDL 91,000 to MDL 131,185. Apple production is comparably more expensive than other fruits due to higher expenses for pest management. Similarly, labour intensity and cost vary according to commodities and access to mechanization. The most labour-intensive activity are cherry and grape farming (when not mechanized). Labour force requirement

ranges from 206 to 733 person day⁻¹ year⁻¹ thus totalling from MDL 30,780 to MDL 128,240 (USD 7,328).

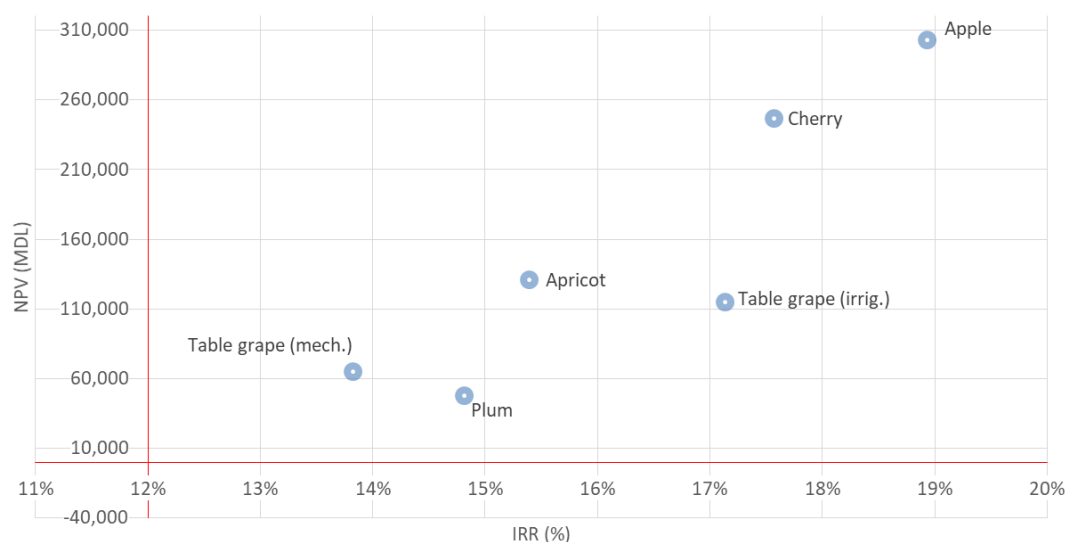
Figure 2: Production cost on four-hectare orchards



17. Fruit production at full development stage (sixth year onwards) would vary from 10 tons ha⁻¹ in cherry production to up to 35 tons ha⁻¹ for apple. In such case, annual gross revenues (per 4-ha orchard) would vary from MDL 254,000 for plum production to MDL 596,000 (USD 34,000) for apple. The cash flow of each fruit orchard model has been confronted with a “Without project scenario” (WoP) scenarios to avoid overestimating project impacts. Later, the net incremental cash flow (the difference in cash flows of the “with” and WoP models) is calculated. Profitability indicators (i.e. NPV, IRR, etc) are then calculated upon the net incremental cash flow.

18. The activities described present positive returns. Incremental net cash-flows over a period of ten years, discounted at 12%, produces NPVs ranging from MDL 21,049 (for plums) till up to MDL 324,890 (for apple). Similarly, FIRR vary from about 14% to 19% (for detail result please refer to Table 1).

Figure 3: Comparison on Orchards' NPVs and IRRs



19. Tomato production in greenhouse. The project will support young farmers in accessing finance and new technologies with the aim of promoting sustainable management practices oriented towards higher adaptation and a more efficient use of water resources. One of the technology that smallholders might find interesting concerns small-scale greenhouses for vegetable production. Currently, smallholder farmers - especially young farmers and women - lack initial seed capital for investing in similar technologies. This model shows the economic performance of tomato production based on the implementation of a drip-irrigation system and a small-scale greenhouse (0.1 ha).

20. The initial investment cost of MDL 204,000 (USD 11,600) includes the drip irrigation system and the installation of the main greenhouse infrastructure. Operating cost related to inputs, tools and utilities costs would sum up to an average MDL 9,181 per year (USD 550). Labour cost would instead sum up to MDL 2,180 (about USD 124).

21. Under optimal conditions and proper management regime, tomato production can easily reach up to 25 tons per 0.1 ha. At full development stage, we assumed to reach a very conservative yield of 15 tons per 0.1 ha. This productivity level would translate into an annual gross revenue of MDL 58,800 (USD 3,360). In the WoP scenario, the actual performances of tomato production is considered as the counterfactual.

22. The NPV for the activity is a positive MDL 34,596 (USD 1,977) with an FIRR of 17% and a B/C ratio equal to 1.17. The sensitivity analysis in the model shows that activity results would turn negative in case of benefits declines of 15% or costs increase of 17%.

23. Irrigated tubers and root vegetables production model. Production of tubers and root vegetables such as potato, garlic and onion is an important source of income for rural farmers. Yet, inadequate access to water and lack of rainfall during summer can seriously hamper production and ultimately impact farmers' livelihoods. Models related to garlic, onion and potato production are elaborated on a one-ha-scale and included in the EFA. Thanks to the project, water infrastructure schemes will be rehabilitated and farmers will at first regain access to water and later acquire water saving technologies,

as well as knowledge on conservation agriculture and good water management practices. Expected changes in yields, revenues and costs are compared to current practices and performances considered as counterfactual.

24. In all three models, the initial investment cost concerns the procurement and installation of a drip irrigation system capable of covering one ha. The expenses related to the investment amount to MDL 40,000 (about USD 2,500).

25. For potato production, operating costs in year 1 – concerning acquisition of new seeds, chemical fertilizers, tools and expenses for water and labour – would attain MDL 65,217 (about USD 3,726). Revenues at full development would be equal to MDL 78,789 (USD 4,500). The model's cash-flow discounted at 12%, produces a NPV of 11,162 (USD 637) and an FIRR of 17%. The switching values for benefits and costs are of -16% and 19% respectively while the B/C ratio amounts to 1.19.

26. Investing in garlic production would require, in addition to the irrigation system, annual expenses for about MDL 86,483 (USD 4,441) for seeds, land preparation, fertilizers and herbicides mainly. Revenues, at full development stage, would be equal to MDL 152,547 (USD 8,716). The NPV of the activity is equal to MDL 64,490 (USD 3,970) while the FIRR will reach 37%. The B/C ratio is equal to 1.78 showing that each Lei invested in the activity would provide an extra worth (in addition to the one Lei already spent) of 78 cents. Switching values for benefits and costs are equal to -44% and +78% respectively.

27. Onion production is currently carried-out with little use of fertilizer and almost no control of diseases. The new scenario foresees that thanks to better management and improved irrigation, yields will increase. Initial outlays for the activity is once again related to the drip-irrigation system. Operating costs would attain MDL 80,596 (USD 4,605) and would mainly cover expenses on land preparation and inputs for disease control. Revenues at full development would on average equal MDL 125,000 (USD 7,142). The model's cash-flow discounted at 12%, yields a NPV of MDL 44,972 (USD 2,570) with an FIRR of 30%. The B/C ratio of the models is equal to 1.6 while switching values for benefits and cost would fall in the range of -37% and 60%.

28. Dry and fresh fruit processing model. The project will support producers groups, enterprises and cooperatives to invest in cold storage and processing facilities. Increase in value-addition is pursued through the use of efficient technology and technical knowledge aimed at transforming raw materials to high-value products, preserving produce for longer periods and marketing final products to higher segments of the domestic and export markets. Profitability is also pursued through increased processing capacity and professional management of the facility by qualified managers. In the current scenario, processors would invest in synchronous processing thanks to new machineries. The latter would contribute to stabilize input acquisition and reduce operating costs overtime. In order to consolidate the EFA around the value chain crops, two models of fruit processing facilities are elaborated to describe both the drying and the storing/packaging procedures as well as their economic value.

29. The apple and grape processing facility will invest in a new processing line with two processing segments dedicated to washing and packaging on one side and drying and packaging on the other side. In particular, investment will concern installation of a

cold chamber and machinery for drying, sorting, cleaning of products. The processing capacity at full regime is assumed to reach 1,800 tons of fresh product per year. The investment cost is of MDL 7.85 M (USD 450,000) in year one while operating costs at full development stage would reach about MDL 5.4 M (USD 308,500). Labour costs for 10 specialized workers would sum up to MDL 2 M (USD 114,200). Administrative staff and managers would instead cost MDL 960,000 (USD 54,800). Gross revenues from sales of fresh and dried product is expected to attain MDL 16.5 M (USD 940,000). Considering the lack of a proper counterfactual, the foregone income opportunity for all the people employed in the facility has been considered in the WoP scenario, thus avoiding an overestimation of the activity benefits.

30. The cash-flow over the period of ten years, discounted at 12%, yields a NPV of MDL 5.5 M (USD 318,000) with an FIRR of 25%. Considering the longer life of the investment, the salvage value of the machinery and the building has been estimated according to a linear depreciation method and considered in the calculation of the NPV. In addition, for every dollar invested, this activity generates a 10 cents of extra worth (B/C ratio equal to 1.10) and investments could be repaid within the first three years. Finally, the activity profitability could be at risk in the events of a benefits decline of 9% or an increase in cost of 10%.

31. Another model concerning a fruit drying facility has been elaborated. The unit has a working capacity of 2,750 tons per year and - as in the case of the previous model - the processing line will include equipment for weighing, packing and sorting. The initial outlay for the investment is equal to MDL 7.85 M (USD 450,000). Once reaching the full-processing regime, the facility will bear operating costs for about MDL 21 M (USD 1.2 M) mainly related to the purchase of fresh fruit. Labour cost for specialized and administrative staff would be equal to MDL 3 (171,000). Overtime, the enterprise may acquire fresh fruit of higher quality from farmers, with a further potential to fetch prices on the final market sensibly higher than those envisaged in this model. At full development stage, the activity would reach an annual gross revenue of about MDL 32.3 M (USD 1.8 M). More details on the cost and revenues structure are provided in annex to this appendix.

32. Activity's results are positive with NPV equal to MDL 6.6 M (USD 377,100) and FIRR of 28%. The B/C ratio is equal to 1.05 and switching values for benefits and cost are relatively low, displaying a certain degree of risk related to input-output price fluctuations. Indeed, increase or fall of costs and benefits beyond ± 5 percent would provide a negative NPV.

D. Economic analysis

33. The objectives of the economic analysis are: (i) to examine the overall Project viability; (ii) to assess the Project's impact and the overall economic rate of return; and (iii) to perform sensitivity analyses upon risks and variables affecting project's results.

34. Key Assumptions. Production and activity models considered in the financial analysis are used as building blocks for determining the viability of the whole project, once addressing for market distortion and opportunity costs for inputs and outputs. The economic analysis of the project hinges on the following assumptions: (i) Project life has been assumed at 20 years in light of investments lifecycle; (ii) project inputs and outputs are valued at their economic parity prices estimated upon international prices as reported

by the World Bank commodity outlook, and on the basis of custom duties and taxes rates as provided by the national bureau of international trade; (iii) an economic discount rate of 11% has been calculate as the weighted average of saving interest rates, long term bonds yields and the real interest rate; (iv) family labour is valued at its opportunity cost; (v) the shadow exchange rate factor (SERF) of 1.02 is calculated upon international trade statistics and applied for the conversion of tradable commodity prices; vi) conversion factors for main inputs and outputs are calculated starting from international prices and on the basis of import and export taxes and duties in Moldova; and (vii) the shadow exchange rate (SER), estimated upon international trade data, is equal to MDL 18 (Figure 4).

Figure 4: Calculation of the SER and SCF

		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average
Total imports of G&S	M	51,901,937,000	58,896,787,000	44,410,590,000	56,462,700,000	70,679,449,000	74,059,765,000	81,006,586,000	87,988,598,000	90,529,205,000	96,053,480,000	83,386,180,500
Total exports of G&S	X	24,353,647,000	25,683,973,000	22,281,751,000	28,197,232,000	37,033,615,000	38,364,049,000	43,564,775,000	46,537,911,000	52,462,516,000	58,848,335,000	46,135,200,167
Average duties on imports	t	2.70%	2.02%	3.21%	2.28%	3.35%	2.61%	5.71%	2.53%	3.39%	3.54%	
Import duties	Tm	1,401,352,299	1,189,715,097	1,425,579,939	1,287,349,560	2,367,761,542	1,932,959,867	4,625,476,061	2,226,111,529	3,068,940,050	3,400,293,192	2,936,923,707
Total international commerc	M+X	76,255,584,000	84,580,760,000	66,692,341,000	84,659,932,000	107,713,064,000	112,423,814,000	124,571,361,000	134,526,509,000	142,991,721,000	154,901,815,000	111,018,326,286
	M+Tm	53,303,289,299	60,086,502,097	45,836,169,939	57,750,049,560	73,047,210,542	75,992,724,867	85,632,062,061	90,214,709,529	93,598,145,050	99,453,773,192	73,991,232,177
	X-Tx	24,353,647,000	25,683,973,000	22,281,751,000	28,197,232,000	37,033,615,000	38,364,049,000	43,564,775,000	46,537,911,000	52,462,516,000	58,848,335,000	39,544,457,286
	SCF	0.982	0.986	0.979	0.985	0.978	0.983	0.964	0.984	0.979	0.979	0.978
	OER (MDL/USD)	12.14	10.39	11.11	12.37	11.74	12.11	12.59	14.04	18.82	19.92	
	SER	12	11	11	13	12	12	13	14	19	20	

35. **Project Economic Costs.** The economic analysis includes the investment and incremental recurrent costs of project components. Project financial costs have been converted to economic values by removal of taxes, duties and subsidies. In order to avoid double counting, the final aggregation considered only those costs that were not included in financial models. Specifically, the estimation of economic costs considered: (a) all investments costs deducted from taxes; (b) the recurrent costs of the program; and (c) the use of a conversion factor of 1.02 (SERF) to correct market costs to economic costs into Costab.

36. **Benefits Estimation.** The incremental benefits stream comprises the economic net values of all the models developed in the financial analysis. These benefits are then aggregated following the inclusion phasing foreseen for targeted households and cooperatives (Table 2).

37. **Economic Profitability.** The project is a technical and economically viable investment to the economy as a whole. The project economic NPV of the net benefit stream, discounted at 11%, is MDL 636 million (USD 36.3 million) producing an EIRR of 22% for the base case scenario. The summary of economic analysis is presented in Figure 3.

Table 3: Project economic cash flow ('000 MDL)

	Total incremental benefits	Total costs		Total net incremental benefits
		Investment	Operating	
Year 1	(7,560)	20,669		(28,228)
year 2	(147,287)	49,192		(196,479)
Year 3	(184,010)	27,415		(211,424)
Year 4	(139,653)	31,070		(170,723)
Year 5	(53,204)	24,024		(77,228)
Year 6	48,894	17,558		31,336
Year 7	221,324		9,121	212,204
Year 8	285,560		9,121	276,439
Year 9	308,999		9,121	299,879
Year 10	321,866		9,121	312,745
Year 11	328,872		9,121	319,751
Year 12	330,544		9,121	321,423
Year 13	331,421		9,121	322,300
Year 14	331,791		9,121	322,670
Year 15	331,791		9,121	322,670
Year 16	331,791		9,121	322,670
Year 17	331,791		9,121	322,670
Year 18	331,791		9,121	322,670
Year 19	331,791		9,121	322,670
Year 20	331,791		9,121	322,670
NPV ('000 MDL) @ 11%				636,382
NPV ('000 USD) @ 11%				36,365
EIRR (%)				22%

38. Sensitivity Analysis. The section presents the effect of variations in Project benefits and costs. Project results were tested to sensitivity analysis so as to measure variations due to unforeseen factors, hence identifying those variables affecting final results the most. Figure 5 **Error! Reference source not found.** depicts the extent to which a change in key variables (the change is marked on the horizontal axis) would induce a change to the project NPV (reported on vertical axis). The steeper the curve of a specific variable, the higher the impact and the change this variable would bring to the NPV. As one can notice, the project is more sensitive to changes in benefits and input prices, rather than investment costs.

Figure 5: Sensitivity of NPV to changes in key variables



39. However, only the variability and uncertainty around specific variables could put at risk the overall viability of the project, and therefore need to be monitored more closely than others. Threshold values in variables changes are identified in Figure 6. For instance, an increase in recurrent cost of 40% (from 100% to 140%) would bring the NPV down to MDL -75 million. Similarly, the project would no longer be viable if benefits drop by 21% (from 100% to 79%).

Figure 6: Sensitivity of the NPV to changes in key variables (detailed)

Investment cost			Recurrent cost			Benefits		
	20%	1,135,996		20%	2,059,781		20%	(1,755,654)
	40%	1,011,092		40%	1,703,931		40%	(1,157,645)
	60%	886,189		60%	1,348,082		60%	(559,636)
	80%	761,285		80%	992,232		80%	38,373
	100%	636,382		100%	636,382		100%	636,382
	120%	511,479		120%	280,532		120%	1,234,391
	140%	386,575		140%	(75,317)		140%	1,832,400
	160%	261,672		160%	(431,167)		160%	2,430,409
	180%	136,769		180%	(787,017)		180%	3,028,419
	200%	11,865		200%	(1,142,866)		200%	3,626,428

Input prices			Output prices		
	20%	2,037,822		20%	1,398,559
	40%	1,688,214		40%	(889,824)
	60%	1,338,105		60%	(381,089)
	80%	987,494		80%	127,647
	100%	636,382		100%	636,382
	120%	284,769		120%	1,145,117
	140%	(67,345)		140%	1,653,853
	160%	(419,960)		160%	2,162,588
	180%	(773,077)		180%	2,671,324
	200%	(1,126,694)		200%	3,180,059

40. More in detail, switching values and critical threshold have been identified for key variables. In particular, the project would no longer be viable in case: a) operating costs increases of 36%; b) benefits decline by 22%; c) input cost increase by 37%; d) output

prices fall by 26% e) project beneficiaries involved in productive activities are less than 1,022 HHs (2,964 people).

41. Finally, the sensitivity analysis allows to examine the effects of a simultaneous variation in some of the pre-identified key variables on the overall project profitability, hence determining all possible combinations of variables' changes that would result in a negative (or positive) NPV.

Figure 7: Simultaneous sensitivity analysis

		Investment cost									
		20%	40%	60%	80%	100%	120%	140%	160%	180%	200%
Benefits	20%	(1,256,041)	(1,380,944)	(1,505,848)	(1,630,751)	(1,755,654)	(1,880,558)	(2,005,461)	(2,130,364)	(2,255,268)	(2,380,171)
	40%	(658,032)	(782,935)	(907,838)	(1,032,742)	(1,157,645)	(1,282,548)	(1,407,452)	(1,532,355)	(1,657,259)	(1,782,162)
	60%	(60,023)	(184,926)	(309,829)	(434,733)	(559,636)	(684,539)	(809,443)	(934,346)	(1,059,249)	(1,184,153)
	80%	537,986	413,083	288,180	163,276	38,373	(86,530)	(211,434)	(336,337)	(461,240)	(586,144)
	100%	1,135,996	1,011,092	886,189	761,285	636,382	511,479	386,575	261,672	136,769	11,865
	120%	1,734,005	1,609,101	1,484,198	1,359,295	1,234,391	1,109,488	984,585	859,681	734,778	609,875
	140%	2,332,014	2,207,110	2,082,207	1,957,304	1,832,400	1,707,497	1,582,594	1,457,690	1,332,787	1,207,884
	160%	2,930,023	2,805,119	2,680,216	2,555,313	2,430,409	2,305,506	2,180,603	2,055,699	1,930,796	1,805,893
	180%	3,528,032	3,403,129	3,278,225	3,153,322	3,028,419	2,903,515	2,778,612	2,653,708	2,528,805	2,403,902
	200%	4,126,041	4,001,138	3,876,234	3,751,331	3,626,428	3,501,524	3,376,621	3,251,718	3,126,814	3,001,911
		Investment cost									
		20%	40%	60%	80%	100%	120%	140%	160%	180%	200%
Recurrent cost	20%	2,527,329	2,410,442	2,293,555	2,176,668	2,059,781	1,942,894	1,826,007	1,709,120	1,592,233	1,475,346
	40%	2,179,496	2,060,605	1,941,714	1,822,822	1,703,931	1,585,040	1,466,149	1,347,258	1,228,367	1,109,476
	60%	1,831,662	1,710,767	1,589,872	1,468,977	1,348,082	1,227,186	1,106,291	985,396	864,501	743,606
	80%	1,483,829	1,360,930	1,238,030	1,115,131	992,232	869,333	746,433	623,534	500,635	377,736
	100%	1,135,996	1,011,092	886,189	761,285	636,382	511,479	386,575	261,672	136,769	11,865
	120%	788,162	661,255	534,347	407,440	280,532	153,625	26,718	(100,190)	(227,097)	(354,005)
	140%	440,329	311,417	182,506	53,594	(75,317)	(204,229)	(333,140)	(462,052)	(590,963)	(719,875)
	160%	92,495	(38,420)	(169,336)	(300,251)	(431,167)	(562,083)	(692,998)	(823,914)	(954,829)	(1,085,745)
	180%	(255,338)	(388,258)	(521,177)	(654,097)	(787,017)	(919,936)	(1,052,856)	(1,185,776)	(1,318,695)	(1,451,615)
	200%	(603,172)	(738,095)	(873,019)	(1,007,943)	(1,142,866)	(1,277,790)	(1,412,714)	(1,547,638)	(1,682,561)	(1,817,485)

Annex A

PRICES AND MODELS

Figura A 1: EFA prices (1/2)

Figura A 2: Apple Orchard (4

	Unit	Financial Prices (MDL)	Conversion factors	Economic Prices (MDL)
OUTPUTS				
Commodities sold				
Apples	ton	4,000	1.02	4,090.7
Apricots	ton	7,000	1.02	7,159
Cherries	ton	15,000	1.02	15,340
Plums	ton	4,000	1.02	4,091
Table grapes	ton	7,000	1.02	7,159
Tomato	ton	4,000	1.02	4,091
Potato	ton	2,962	1.02	3,029
Garlic	ton	20,370	1.02	20,832
Onion	ton	2,777	1.02	2,840
Dry plums with seeds	ton	40,000	1.02	40,907
Dry plums without seeds	ton	45,000	1.02	46,020
Dry Apples	ton	68,000	1.02	69,542
Dry Apricot	ton	57,000	1.02	58,292
Dry Cherry	ton	70,000	1.02	71,587
Fresh red and green grape	ton	12,000	1.02	12,272
Fresh apple	ton	9,000	1.02	9,204
Dried red and green grape	ton	85,000	1.02	86,927
INPUTS				
Seeds				
Apple trees	unit	240	1.02	245
Apricot trees	unit	210	1.02	215
Cherry trees	unit	260	1.02	266
Plum trees	unit	150	1.02	153
Grape vine	unit	20	1.02	20
Tomato seeds	no.	0.60	1.02	1
Potato seeds	kg	8.00	1.02	8
Garlic seeds	kg	32	1.02	33
Onion seeds	seeds	78.00	1.02	80
Agricultural inputs				
Manure	ton	0	1.02	-
Packaging material	per ton	80	1.02	82
Fertilizers:	0	0	1.02	-
Macro & micro elements (type I)	kg	22	1.02	22
Macro & micro elements (type II)	kg	44	1.02	45
Ammonium sulphate	kg	7	1.02	7
Superphosphate 18% P2O5	kg	10	1.02	11
Basal Fertilizers (NPK, DAP, CAN)	kg	10	1.02	10
Chemical products:	0	0	1.02	-
Erbicide - quizalofop-p-etil	lt	455	1.02	465
Erbicide - metribuzin	kg	737	1.02	754
Insecticid - lambda-cihalotrin+tiametoxam	lt	2,108	1.02	2,155
Fungicide - sulfat de cupru tribazic	lt	132	1.02	135
Insecticid - tiacloprid	lt	2,107	1.02	2,155
Fungicide - dimetomorf+folpet	kg	400	1.02	409
Fungicide - dimetomorf+mancozeb	lt	318	1.02	325
Fungicide - piraclostrobin+boscalid	kg	1,260	1.02	1,288
Tools	lumpsum	3,000	1.02	3,068
Water for irrigation	m3	1	1.00	1
Service for irrigation	m3	6	1.00	6
Mechanical operations (land preparation, fertilization, irrigation)				
Mechanical operations for tomato	lumpsum/ha	21,000	1.00	21,000
Mechanical operations for potato	lumpsum/ha	16,000	1.00	16,000
Mechanical operations for garlic	lumpsum/ha	14,000	1.00	14,000
Mechanical operations for onion	lumpsum/ha	17,450	1.00	17,450
Mechanical operations for plums	lumpsum/ha	4,330	1.00	4,330
Mechanical operations for apricot	lumpsum/ha	2,962	1.00	2,962
Mechanical operations for cherry	lumpsum/ha	3,065	1.00	3,065
Mechanical operations for table grape	lumpsum/ha	3,516	1.00	3,516
Mechanical operations for apple	lumpsum/ha	3,516	1.00	3,516
Income Taxes for farming enterprises	%	7%	0	0
Social security contributions in private sector	%	18%	0	0
Social security contributions in agriculture	%	12%	0	0
Discount rate	%	12%	0.92	11%

ha)

YIELDS AND INPUTS					WITHOUT PROJECT										WITH PROJECT									
ITEMS	UNIT	PRICE (MDL)	1	1	2	3	4	5	6	7	8	9	10											
Croppin pattern and distribution																								
Main production																								
Apples	ton	4,000	16	25	28	32	35	35	35	35	35	35	35											
Newly planted apples	ton	4,000	0			53	74	95	105	105	105	105	105											
Selfconsumption	ton		0	0	0	0	0	0	0	0	0	0	0											
Post harvest losses	%		10%	5%	5%	4%	4%	4%	3%	3%	3%	2%	2%											
Total Production	ton		14	23	27	81	104	124	136	136	136	137	137											
Investment inputs																								
Drip irrigation system	per ha	40,000	0	4.0																				
Tractor	unit	450,000		1.0																				
Apples trees	unit	240		600																				
Operating inputs																								
Seeds	kg	0.0	0	0	0	0	0	0	0	0	0	0	0											
Manure	ton	0.0	0	0	0	0	0	0	0	0	0	0	0											
Packaging material	per ton	80.0	16	23	27	81	104	124	136	136	136	137	137											
Fertilizers:																								
Macro & micro elements (type I)	kg	22.0	0	20	20	20	20	20	20	20	20	20	20											
Macro & micro elements (type II)	kg	44.0	5	40	40	40	40	40	40	40	40	40	40											
Ammonium sulphate	kg	6.5	0	0	0	0	0	0	0	0	0	0	0											
Superphosphate 18% P2O5	kg	10.4	0																					
Basal Fertilizers (NPK, DAP, CAN)	kg	9.5	150	800	800	800	800	800	800	800	800	800	800											
Chemical products:																								
Erbicide - quizalofop-p-etil	lt	455.0	1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0											
Erbicide - metribuzin	kg	737.5	0	0	0	0	0	0	0	0	0	0	0											
Insecticide - lambda-cyhalothrin+tiamectox	lt	2,107.7	1	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0											
Fungicide - sulfat de cupru tribazic	lt	132.4	7	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0											
Insecticide - thiacloprid	lt	2,107.0	0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8											
Fungicide - dimetomorf+folpet	kg	399.7	2	12	12	12	12	12	12	12	12	12	12											
Fungicide - dimetomorf+mancozeb	lt	317.9	2	12	12	12	12	12	12	12	12	12	12											
Fungicide - piraclostrobin+boscalid	kg	1,259.7	1	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0											
Tools	lumpsum	3,000.0	1	4	4	4	4	4	4	4	4	4	4											
Water for irrigation	m3	1.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600											
Service for irrigation	m3	6.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600											
Mechanical operations (land preparation, fertilization, irrigation)	lumpsum/ha	3,516.0	1	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40											
O&M investment	lumpsum	6,100	0		1	1	1	1	1	1	1	1	1											
Land rent	Per ha	1,200	0	12	12	12	12	12	12	12	12	12	12											
Labour																								
Land Preparation and sowing	pers. day		0	0	0	0	0	0	0	0	0	0	0											
Transplanting	pers. day		0	0	0	0	0	0	0	0	0	0	0											
Various operations	pers. day		42	42	42	42	42	42	42	42	42	42	42											
Harvesting	pers. day		55	182	208	234	260	260	260	260	260	260	260											
Sub-total labour days																								
Skilled labour (S)	pers. day	200	0	45	50	55	60	60	60	60	60	60	60											
Family labour (F)	pers. day	150	97	179	200	221	242	242	242	242	242	242	242											

FINANCIAL BUDGET ('000 MDL)					WITHOUT PROJECT										WITH PROJECT									
ITEMS			1	1	2	3	4	5	6	7	8	9	10											
Main production revenue																								
Apples		64,000	98,000	112,000	126,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000											
Newly planted apples		0	0	0	210,000	294,000	378,000	420,000	420,000	420,000	420,000	420,000	420,000											
Selfconsumption		0	0	0	0	0	0	0	0	0	0	0	0											
Post harvest losses		6,400	4,900	5,600	5,040	5,600	5,600	4,200	4,200	4,200	4,200	2,800	2,800											
Total revenue		57,600	93,100	106,400	330,960	428,400	512,400	555,800	555,800	555,800	555,800	557,200	557,200											
Investment input costs																								
Drip irrigation system		0	160,000	0	0	0	0	0	0	0	0	0	0											
Tractor		0	450,000	0	0	0	0	0	0	0	0	0	0											
Apples trees		0	144,000	0	0	0	0	0	0	0	0	0	0											
Sub-total investment costs		0	754,000	0	0	0	0	0	0	0	0	0	0											
Operating inputs																								
Seeds		0	0	0	0	0	0	0	0	0	0	0	0											
Manure		0	0	0	0	0	0	0	0	0	0	0	0											
Packaging material		1,280	1,862	2,128	6,451	8,333	9,946	10,864	10,864	10,864	10,864	10,976	10,976											
Fertilizers:																								
Macro & micro elements (type I)		0	440	440	440	440	440	440	440	440	440	440	440											
Macro & micro elements (type II)		220	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760											
Ammonium sulphate		0	0	0	0	0	0	0	0	0	0	0	0											
Superphosphate 18% P2O5		0	0	0	0	0	0	0	0	0	0	0	0											
Basal Fertilizers (NPK, DAP, CAN)		1,425	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600											
Chemical products:																								
Erbicide - quizalofop-p-etil		228	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820											
Erbicide - metribuzin		0	0	0	0	0	0	0	0	0	0	0	0											
Insecticide - lambda-cyhalothrin+tiamectoxam		2,108	12,646	12,646	12,646	12,646	12,646	12,646	12,646	12,646	12,646	12,646	12,646											
Fungicide - sulfat de cupru tribazic		927	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296											
Insecticide - thiacloprid		0	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900											
Fungicide - dimetomorf+folpet		799	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796											
Fungicide - dimetomorf+mancozeb		636	3,814	3,814	3,814	3,814	3,814	3,814	3,814	3,814	3,814	3,814	3,814											
Fungicide - piraclostrobin+boscalid		630	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078											
Tools		3,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000											
Water for irrigation		0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600											
Service for irrigation		0	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600											
Mechanical operations (land preparation, fertilization, irrigation)		3,516	15,470	15,470	15,470	15,470	15,470	15,470	15,470	15,470	15,470	15,470	15,470											
O&M investment		0	0	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100											
Land rent		0	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400											
Sub-total operating costs		14,768	116,083	122,449	126,772	128,654	130,266	131,185	131,185	131,185	131,185	131,297	131,297											
Labour costs																								
Skilled labour costs		0	8,960	10,000	11,040	12,080	12,080	12,080	12,080	12,080	12,080	12,080	12,080											
Family labour costs		14,550	26,880	30,000	33,120	36,240	36,240	36,240	36,240	36,240	36,240	36,240	36,240											
Sub-total labour costs		14,550	35,840	40,000	44,160	48,320	48,320	48,320	48,320	48,320	48,320	48,320	48,320											
Total production costs		29,318	905,923	162,449	170,932	176,974	178,586	179,505	179,505	179,505	179,505	179,617	179,617											
Net Benefits (after labour costs)																								
		28,282	-812,823	-56,049	160,028	251,426	333,814	376,295	376,295	376,295	376,295	377,583	377,583											
Net Incremental Benefits (NIB)																								
			-841,105	-84,331	131,746	223,144	305,532	348,013	348,013	348,013	348,013	349,301	349,301											
Net Benefits (before labour costs)*																								
		42,832	-776,983	-16,049	204,188	299,746	382,134	424,615	424,615	424,615	424,615	425,903	425,903											

FINANCIAL BUDGET ('000 MDL)				WITHOUT PROJECT		WITH PROJECT								
ITEMS		1	1	2	3	4	5	6	7	8	9	10		
Main production revenue														
Apples		64,000	98,000	112,000	126,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000		
Newly planted apples		0	0	0	210,000	294,000	378,000	420,000	420,000	420,000	420,000	420,000		
Selfconsumption		0	0	0	0	0	0	0	0	0	0	0		
Post harvest losses		6,400	4,900	5,600	5,040	5,600	5,600	4,200	4,200	4,200	2,800	2,800		
Total revenue		57,600	93,100	106,400	330,960	428,400	512,400	555,800	555,800	555,800	557,200	557,200		
Investment input costs														
Drip irrigation system		0	160,000	0	0	0	0	0	0	0	0	0		
Tractor		0	450,000	0	0	0	0	0	0	0	0	0		
Apples trees		0	144,000	0	0	0	0	0	0	0	0	0		
Sub-total investment costs		0	754,000	0	0	0	0	0	0	0	0	0		
Operating inputs														
Seeds		0	0	0	0	0	0	0	0	0	0	0		
Manure		0	0	0	0	0	0	0	0	0	0	0		
Packaging material		1,280	1,862	2,128	6,451	8,333	9,946	10,864	10,864	10,864	10,976	10,976		
Fertilizers:														
Macro & micro elements (type I)		0	440	440	440	440	440	440	440	440	440	440		
Macro & micro elements (type II)		220	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760		
Ammonium sulphate		0	0	0	0	0	0	0	0	0	0	0		
Superphosphate 18% P2O5		0	0	0	0	0	0	0	0	0	0	0		
Basal Fertilizers (NPK, DAP, CAN)		1,425	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600		
Chemical products:														
Erbicide - quizalofop-p-etil		228	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820		
Erbicide - metribuzin		0	0	0	0	0	0	0	0	0	0	0		
Insecticid - lambda-chialotrin+tiامتومتام		2,108	12,646	12,646	12,646	12,646	12,646	12,646	12,646	12,646	12,646	12,646		
Fungicide - sulfat de cupru tribazic		927	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296		
Insecticid - tiacloprid		0	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900		
Fungicide - dimetomorf+folpet		799	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796		
Fungicide - dimetomorf+mancozeb		636	3,814	3,814	3,814	3,814	3,814	3,814	3,814	3,814	3,814	3,814		
Fungicide - piraclostrobin+boscalid		630	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078		
Tools		3,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000		
Water for irrigation		0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600		
Service for irrigation		0	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600		
Mechanical operations (land preparation, fertilization, irrigation)		3,516	15,470	15,470	15,470	15,470	15,470	15,470	15,470	15,470	15,470	15,470		
O&M investment		0	0	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100		
Land rent		0	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400		
Sub-total operating costs		14,768	116,083	122,449	126,772	128,654	130,266	131,185	131,185	131,185	131,297	131,297		
Labour costs														
Skilled labour costs		0	8,960	10,000	11,040	12,080	12,080	12,080	12,080	12,080	12,080	12,080		
Family labour costs		14,550	26,880	30,000	33,120	36,240	36,240	36,240	36,240	36,240	36,240	36,240		
Sub-total labour costs		14,550	35,840	40,000	44,160	48,320	48,320	48,320	48,320	48,320	48,320	48,320		
Total production costs		29,318	905,923	162,449	170,932	176,974	178,586	179,505	179,505	179,505	179,617	179,617		
Net Benefits (after labour costs)		28,282	-812,823	-56,049	160,028	251,426	333,814	376,295	376,295	376,295	377,583	377,583		
Net Incremental Benefits (NIB)			-841,105	-84,331	131,746	223,144	305,532	348,013	348,013	348,013	349,301	349,301		
Net Benefits (before labour costs)*		42,832	-776,983	-16,049	204,188	299,746	382,134	424,615	424,615	424,615	425,903	425,903		

*Farm liquidity: Net benefits from sales plus family labour

Return to family labour* (MDL/day)		1,758
*consider full development year family labour requirements		
Discount rate	12%	
NPV (MDL) @ 0.12	303,461	
IRR	19%	
NPVb	1,778,885	
NPVc	1,475,424	
B/C ratio	1.21	
Switching values Benefits	-17%	
Switching values Costs	21%	

Figura A 3: Apricot Orchard (4 ha)

FIELDS AND INPUTS				WITHOUT PROJECT		WITH PROJECT										
ITEMS	UNIT	PRICE (MDL)	1	1	2	3	4	5	6	7	8	9	10			
Croppin pattern and distribution																
Total land available to HHs			ha	1	4	4	4	4	4	4	4	4	4			
Apricot			ha	1	1	1	1	1	1	1	1	1	1			
Newly planted			ha	0	3	3	3	3	3	3	3	3	3			
			ha	0	0	0	0	0	0	0	0	0				
			ha	0	0	0	0	0	0	0	0	0				
			ha	0	0	0	0	0	0	0	0	0				
			ha	0	0	0	0	0	0	0	0	0				
Main production																
Apricots			ton	7,000	10	11	13	14	16	16	16	16	16			
Newly planted			ton	7,000	0			34	43	48	48	48	48			
Selfconsumption			ton	0	0	0	0	0	0	0	0	0	0			
Post harvest losses			%	10%	5%	5%	4%	4%	4%	3%	3%	2%	2%			
Total Production			ton		9	11	12	46	52	57	62	62	63			
Investment inputs																
Drip irrigation system			per ha	40,000	0	4.0										
Tractor			unit	450,000	1.0											
Apricot trees			unit	210	600											
Operating inputs																
Seeds			kg	0.0	0	0	0	0	0	0	0	0	0			
Manure			ton	0.0	0	0	0	0	0	0	0	0	0			
Packaging material			per ton	80.0	10	11	12	46	52	57	62	62	63			
Fertilizers:																
Macro & micro elements (type I)			kg	22.0	0	20	20	20	20	20	20	20	20			
Macro & micro elements (type II)			kg	44.0	0	40	40	40	40	40	40	40	40			
Ammonium sulphate			kg	6.5	0	0	0	0	0	0	0	0	0			
Superphosphate 18% P2O5			kg	10.4	0											
Basal Fertilizers (NPK, DAP, CAN)			kg	9.5	100	800	800	800	800	800	800	800	800			
Chemical products:																
Erbicide - quizalofop-p-etil			lt	455.0	0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0			
Erbicide - metribuzin			kg	737.5	0	0	0	0	0	0	0	0	0			
Insecticid - lambda-chalotrin+tiامتox			lt	2,107.7	0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8			
Fungicide - sulfat de cupru tribazic			lt	132.4	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0			
Insecticid - tialclorid			lt	2,107.0	0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8			
Fungicide - dimetomorf+folpet			kg	399.7	0	0	0	0	0	0	0	0	0			
Fungicide - dimetomorf+mancozeb			lt	317.9	0	4	4	4	4	4	4	4	4			
Fungicide - piraclostrobin+boscalid			kg	1,259.7	0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0			
Tools			lumpsum	3,000.0	1	4	4	4	4	4	4	4	4			
Water for irrigation			m3	1.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600			
Service for irrigation			m3	6.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600			
Mechanical operations (land preparation, fertilization, irrigation)			lumpsum/ha	2,962.0	1	6.40	6.40	6.40	6.40	6.40	6.40	6.40	6.40			
O&M investment			lumpsum	6,100	0		1	1	1	1	1	1	1			
Land rent			Per ha	1,200	0	3	3	3	3	3	3	3	3			
Labour																
Land Preparation and sowing			pers. day		0	0	0	0	0	0	0	0	0			
Transplanting			pers. day		0	0	0	0	0	0	0	0	0			
Various operations			pers. day	18	14	14	14	14	14	14	14	14	14			
Harvesting			pers. day	24	134	154	173	192	192	192	192	192	192			
Sub-total labour days				42	149	168	187	206	206	206	206	206	206			
Skilled labour (S)			pers. day	200	0	15	17	19	21	21	21	21	21			
Family labour (F)			pers. day	150	42	134	151	168	186	186	186	186	186			
FINANCIAL BUDGET ('000 MDL)					WITHOUT PROJECT		WITH PROJECT									
ITEMS					1	1	2	3	4	5	6	7	8	9	10	
Main production revenue																
Apricots				66,500	78,400	89,600	100,800	112,000	112,000	112,000	112,000	112,000	112,000	112,000	112,000	
Newly planted				0	0	0	235,200	268,800	302,400	336,000	336,000	336,000	336,000	336,000	336,000	
Selfconsumption				0	0	0	0	0	0	0	0	0	0	0	0	
Post harvest losses				6,650	3,920	4,480	4,032	4,480	4,480	3,360	3,360	3,360	2,240	2,240	2,240	
Total revenue				59,850	74,480	85,120	331,968	376,320	409,920	444,640	444,640	444,640	445,760	445,760	445,760	
Investment input costs																
Drip irrigation system				0	160,000	0	0	0	0	0	0	0	0	0	0	
Tractor				0	450,000	0	0	0	0	0	0	0	0	0	0	
Cherry trees				0	126,000	0	0	0	0	0	0	0	0	0	0	
Sub-total investment costs				0	736,000	0	0	0	0	0	0	0	0	0	0	
Operating inputs																
Seeds				0	0	0	0	0	0	0	0	0	0	0	0	
Manure				0	0	0	0	0	0	0	0	0	0	0	0	
Packaging material				760	851	973	3,686	4,178	4,547	4,966	4,966	4,966	5,018	5,018	5,018	
Fertilizers:																
Macro & micro elements (type I)				0	440	440	440	440	440	440	440	440	440	440	440	
Macro & micro elements (type II)				0	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	
Ammonium sulphate				0	0	0	0	0	0	0	0	0	0	0	0	
Superphosphate 18% P2O5				0	0	0	0	0	0	0	0	0	0	0	0	
Basal Fertilizers (NPK, DAP, CAN)				950	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	
Chemical products:																
Erbicide - quizalofop-p-etil				0	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	
Erbicide - metribuzin				0	0	0	0	0	0	0	0	0	0	0	0	
Insecticid - lambda-chalotrin+tiامتoxam				422	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	
Fungicide - sulfat de cupru tribazic				1,324	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	5,296	
Insecticid - tialclorid				0	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	
Fungicide - dimetomorf+folpet				0	0	0	0	0	0	0	0	0	0	0	0	
Fungicide - dimetomorf+mancozeb				0	1,271	1,271	1,271	1,271	1,271	1,271	1,271	1,271	1,271	1,271	1,271	
Fungicide - piraclostrobin+boscalid				0	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	
Tools				3,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	
Water for irrigation				0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	
Service for irrigation				0	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	
Mechanical operations (land preparation, fertilization, irrigation)				2,962	18,957	18,957	18,957	18,957	18,957	18,957	18,957	18,957	18,957	18,957	18,957	
O&M investment				0	0	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	
Land rent				0	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	
Sub-total operating costs				9,418	89,459	95,681	98,394	98,886	99,254	99,674	99,674	99,674	99,726	99,726	99,726	
Labour costs																
Skilled labour costs				0	2,976	3,360	3,744	4,128	4,128	4,128	4,128	4,128	4,128	4,128	4,128	
Family labour costs				6,300	20,088	22,680	25,272	27,864	27,864	27,864	27,864	27,864	27,864	27,864	27,864	
Sub-total labour costs				6,300	23,064	26,040	29,016	31,992	31,992	31,992	31,992	31,992	31,992	31,992	31,992	
Total production costs				15,718	848,523	121,721	127,410	130,878	131,246	131,666	131,666	131,666	131,718	131,718	131,718	
Net Benefits (after labour costs)				44,132	-774,043	-36,601	204,558	245,442	278,674	312,974	312,974	312,974	314,042	314,042	314,042	
Net Incremental Benefits (NIB)					-818,175	-80,733	160,425	201,310	234,541	268,841	268,841	268,841	269,910	269,910	269,910	
Net Benefits (before labour costs)*				50,432	-750,979	-10,561	233,574	277,434	310,666	344,966	344,966	344,966	346,034	346,034	346,034	
*Farm liquidity: Net benefits from sales plus family labour																
Return to family labour* (MDL/day)				1,857												
*consider full development year family labour requirements																
Discount rate				12%												
NPV (MDL) @ 0.12				130,965												
IRR				15%												
NPVx				1,414,489												
NPVc				1,283,524												
B/C ratio				1.10												
Switching values Benefits				-9%												
Switchine values Costs				10%												

Figura A 4: Cherry orchard (4 ha)

YIELDS AND INPUTS			WITHOUT PROJECT		WITH PROJECT									
ITEMS	UNIT	PRICE (MDL)	1	1	2	3	4	5	6	7	8	9	10	
Croppin pattern and distribution														
Total land available to HHs	ha		1.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Cherries	ha		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Newly planted	ha		0	3	3	3	3	3	3	3	3	3	3	
	ha		0	0	0	0	0	0	0	0	0	0	0	
	ha		0	0	0	0	0	0	0	0	0	0	0	
	ha		0	0	0	0	0	0	0	0	0	0	0	
	ha		0	0	0	0	0	0	0	0	0	0	0	
Main production														
Cherries	ton	15,000	5	7	8	9	10	10	10	10	10	10	10	
Newly planted	ton	15,000	0	0	0	0	24	27	30	30	30	30	30	
Selfconsumption	ton		0	0	0	0	0	0	0	0	0	0	0	
Post harvest losses	%		10%	5%	5%	4%	4%	4%	3%	3%	3%	2%	2%	
Total Production	ton		5	7	8	29	33	36	39	39	39	39	39	
Investment inputs														
Drip irrigation system	per ha	40,000	0	4.0										
Tractor	unit	450,000		1.0										
Cherry trees	unit	260		600										
Operating inputs														
Seeds	kg	0.0	0	0	0	0	0	0	0	0	0	0	0	
Manure	ton	0.0	0	0	0	0	0	0	0	0	0	0	0	
Packaging material	per ton	80.0	5	7	8	29	33	36	39	39	39	39	39	
Fertilizers:			0											
Macro & micro elements (type I)	kg	22.0	0	28	28	28	28	28	28	28	28	28	28	
Macro & micro elements (type II)	kg	44.0	5	40	40	40	40	40	40	40	40	40	40	
Ammonium sulphate	kg	6.5	0	0	0	0	0	0	0	0	0	0	0	
Superphosphate 18% P2O5	kg	10.4	0											
Basal Fertilizers (NPK, DAP, CAN)	kg	9.5	200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	
Chemical products:			0											
Erbicide - quizalofop-p-etil	lt	455.0	0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Erbicide - metribuzin	kg	737.5	0	0	0	0	0	0	0	0	0	0	0	
Insecticid - lambda-chalotrin+tiامتotox	lt	2,107.7	0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Fungicide - sulfat de cupru tribazic	lt	132.4	5	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	
Insecticid - tiacloprid	lt	2,107.0	0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	
Fungicide - dimetomorf+folpet	kg	399.7	0	0	0	0	0	0	0	0	0	0	0	
Fungicide - dimetomorf+mancozeb	lt	317.9	0	20	20	20	20	20	20	20	20	20	20	
Fungicide - piraclostrobin+boscalid	kg	1,259.7	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Tools	lumpsum	3,000.0	1	4	4	4	4	4	4	4	4	4	4	
Water for irrigation	m3	1.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	
Service for irrigation	m3	6.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	
Mechanical operations (land preparation, fertilization, irrigation)	lumpsum/ha	3,065.0	1	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	
O&M investment	lumpsum	6,100	0	1	1	1	1	1	1	1	1	1	1	
Land rent	Per ha	1,200	0	3	3	3	3	3	3	3	3	3	3	
Labour														
Land Preparation and sowing	pers. day		0	0	0	0	0	0	0	0	0	0	0	
Transplanting	pers. day		0	0	0	0	0	0	0	0	0	0	0	
Various operations	pers. day		40	29	29	29	29	29	29	29	29	29	29	
Harvesting	pers. day		93	493	563	634	704	704	704	704	704	704	704	
Sub-total labour days			133	522	592	662	733	733	733	733	733	733	733	
Skilled labour (S)	pers. day	200	0	261	296	331	366	366	366	366	366	366	366	
Family labour (F)	pers. day	150	133	261	296	331	366	366	366	366	366	366	366	
FINANCIAL BUDGET ('000 MDL)			WITHOUT PROJECT		WITH PROJECT									
ITEMS			1	1	2	3	4	5	6	7	8	9	10	
Main production revenue														
Cherries			81,750	105,000	120,000	135,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	
Newly planted			0	0	0	315,000	360,000	405,000	450,000	450,000	450,000	450,000	450,000	
Selfconsumption			0	0	0	0	0	0	0	0	0	0	0	
Post harvest losses			8,175	5,250	6,000	5,400	6,000	6,000	4,500	4,500	4,500	3,000	3,000	
Total revenue			73,575	99,750	114,000	444,600	504,000	549,000	595,500	595,500	595,500	597,000	597,000	
Investment input costs														
Drip irrigation system			0	160,000	0	0	0	0	0	0	0	0	0	
Tractor			0	450,000	0	0	0	0	0	0	0	0	0	
Cherry trees			0	150,000	0	0	0	0	0	0	0	0	0	
Sub-total investment costs			0	766,000	0	0	0	0	0	0	0	0	0	
Operating inputs														
Seeds			0	0	0	0	0	0	0	0	0	0	0	
Manure			0	0	0	0	0	0	0	0	0	0	0	
Packaging material			436	532	608	2,304	2,611	2,842	3,104	3,104	3,104	3,136	3,136	
Fertilizers:														
Macro & micro elements (type I)			0	616	616	616	616	616	616	616	616	616	616	
Macro & micro elements (type II)			220	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	
Ammonium sulphate			0	0	0	0	0	0	0	0	0	0	0	
Superphosphate 18% P2O5			0	0	0	0	0	0	0	0	0	0	0	
Basal Fertilizers (NPK, DAP, CAN)			1,900	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	
Chemical products:														
Erbicide - quizalofop-p-etil			0	910	910	910	910	910	910	910	910	910	910	
Erbicide - metribuzin			0	0	0	0	0	0	0	0	0	0	0	
Insecticid - lambda-chalotrin+tiامتotoxam			422	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	
Fungicide - sulfat de cupru tribazic			662	4,237	4,237	4,237	4,237	4,237	4,237	4,237	4,237	4,237	4,237	
Insecticid - tiacloprid			527	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	5,900	
Fungicide - dimetomorf+folpet			0	0	0	0	0	0	0	0	0	0	0	
Fungicide - dimetomorf+mancozeb			0	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	
Fungicide - piraclostrobin+boscalid			0	0	0	0	0	0	0	0	0	0	0	
Tools			3,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	
Water for irrigation			0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	
Service for irrigation			0	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	
Mechanical operations (land preparation, fertilization, irrigation)			3,065	15,938	15,938	15,938	15,938	15,938	15,938	15,938	15,938	15,938	15,938	
O&M investment			0	0	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	6,100	
Land rent			0	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	
Sub-total operating costs			10,231	83,136	89,312	91,008	91,315	91,545	91,808	91,808	91,808	91,840	91,840	
Labour costs														
Skilled labour costs			0	52,160	59,200	66,240	73,280	73,280	73,280	73,280	73,280	73,280	73,280	
Family labour costs			19,950	39,120	44,400	49,680	54,960	54,960	54,960	54,960	54,960	54,960	54,960	
Sub-total labour costs			19,950	91,280	103,600	115,920	128,240	128,240	128,240	128,240	128,240	128,240	128,240	
Total production costs			30,181	940,416	192,912	206,928	219,555	219,785	220,048	220,048	220,048	220,080	220,080	
Net Benefits (after labour costs)			43,394	-840,666	-78,912	237,672	284,445	329,215	375,452	375,452	375,452	376,920	376,920	
Net incremental Benefits (NIB)				-884,059	-122,305	194,279	241,051	285,821	332,059	332,059	332,059	333,527	333,527	
Net Benefits (before labour costs)*			63,344	-749,386	24,688	353,592	412,685	457,455	503,692	503,692	503,692	505,160	505,160	

*Farm liquidity: Net benefits from sales plus family labour

Return to family labour* (MDL/day)		1,375
*consider full development year family labour requirements		
Discount rate	12%	
NPV (MDL) @ 0.12	247,029	
IRR	18%	
NPVb	1,931,591	
NPVc	1,684,562	
B/C ratio	1.15	
Switching values Benefits	-13%	
Switching values Costs	15%	

Figura A 5: Plum orchard (4 ha)

Crop pattern and distribution													
Main production													
Plums	ton	4,000	8	11	13	14	16	16	16	16	16	16	16
Newly planted plums	ton	4,000	0			34	38	43	48	48	48	48	48
	ton		0	0	0	0	0	0	0	0	0	0	0
Post harvest losses	%		10%	5%	5%	4%	4%	4%	3%	3%	3%	2%	2%
	ton		7	11	12	46	52	57	62	62	62	63	63
Total Production													
Investment inputs													
Drip irrigation system	per ha	40,000	0	4.0									
Tractor	unit	450,000	0.0										
Plum trees	unit	150	600										
Operating inputs													
Seeds	kg	0.0	0	0	0	0	0	0	0	0	0	0	0
Manure	ton	0.0	0	0	0	0	0	0	0	0	0	0	0
Packaging material	per ton	80.0	8	11	12	46	52	57	62	62	62	63	63
Fertilizers:													
Macro & micro elements (type I)	kg	22.0	0	32	32	32	32	32	32	32	32	32	32
Macro & micro elements (type II)	kg	44.0	0	40	40	40	40	40	40	40	40	40	40
Ammonium sulphate	kg	6.5	0	0	0	0	0	0	0	0	0	0	0
Superphosphate 18% P2O5	kg	10.4	0										
Basal Fertilizers (NPK, DAP, CAN)	kg	9.5	100	800	800	800	800	800	800	800	800	800	800
Chemical products:													
Erbicide - quizalofop-p-etil	lt	455.0	0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Erbicide - metribuzin	kg	737.5	0	0	0	0	0	0	0	0	0	0	0
Insecticid - lambda-cihalotrin+tiametox	lt	2,107.7	0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fungicide - sulfat de cupru tribazic	lt	132.4	8	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Insecticid - tiacloprid	lt	2,107.0	0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Fungicide - dimetomorf+folpet	kg	399.7	0	0	0	0	0	0	0	0	0	0	0
Fungicide - dimetomorf+mancozeb	lt	317.9	3	40	40	40	40	40	40	40	40	40	40
Fungicide - piraclostrobin+boscalid	kg	1,259.7	0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Tools	lumpsum	3,000.0	1	4	4	4	4	4	4	4	4	4	4
Water for irrigation	m3	1.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Service for irrigation	m3	6.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Mechanical operations (land preparation, fertilization, irrigation)	lumpsum/ha	4,330.0	1	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40
O&M investment	lumpsum	1,600	0		1	1	1	1	1	1	1	1	1
Land rent	Per ha	1,200	0	3	3	3	3	3	3	3	3	3	3
Labour													
Land Preparation and sowing	pers. day		0	0	0	0	0	0	0	0	0	0	0
Transplanting	pers. day		0	0	0	0	0	0	0	0	0	0	0
Various operations	pers. day		20	25	25	25	25	25	25	25	25	25	25
Harvesting	pers. day		24	126	144	162	180	180	180	180	180	180	180
Sub-total labour days			44	151	169	187	205	205	205	205	205	205	205
Skilled labour (S)	pers. day	200	0	0	0	0	0	0	0	0	0	0	0
Family labour (F)	pers. day	150	44	151	169	187	205	205	205	205	205	205	205

FINANCIAL BUDGET ('000 MDL)			WITHOUT PROJECT			WITH PROJECT							
ITEMS		1	1	2	3	4	5	6	7	8	9	10	
Main production revenue													
Plums		32,000	44,800	51,200	57,600	64,000	64,000	64,000	64,000	64,000	64,000	64,000	
Newly planted plums		0	0	0	134,400	153,600	172,800	192,000	192,000	192,000	192,000	192,000	
Selfconsumption		0	0	0	0	0	0	0	0	0	0	0	
Post harvest losses		3,200	2,240	2,560	2,304	2,560	2,560	1,920	1,920	1,920	1,280	1,280	
Total revenue		28,800	42,560	48,640	189,696	215,040	234,240	254,080	254,080	254,080	254,720	254,720	
Investment input costs													
Drip irrigation system		0	160,000	0	0	0	0	0	0	0	0	0	
Tractor		0	0	0	0	0	0	0	0	0	0	0	
Plum trees		0	90,000	0	0	0	0	0	0	0	0	0	
Sub-total investment costs		0	250,000	0	0	0	0	0	0	0	0	0	
Operating inputs													
Seeds		0	0	0	0	0	0	0	0	0	0	0	
Manure		0	0	0	0	0	0	0	0	0	0	0	
Packaging material		640	851	973	3,686	4,178	4,547	4,966	4,966	4,966	5,018	5,018	
Fertilizers:													
Macro & micro elements (type I)		0	704	704	704	704	704	704	704	704	704	704	
Macro & micro elements (type II)		0	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	
Ammonium sulphate		0	0	0	0	0	0	0	0	0	0	0	
Superphosphate 18% P2O5		0	0	0	0	0	0	0	0	0	0	0	
Basal Fertilizers (NPK, DAP, CAN)		950	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	
Chemical products:													
Erbicide - quizalofop-p-etil		0	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	
Erbicide - metribuzin		0	0	0	0	0	0	0	0	0	0	0	
Insecticide - lambda-cihalotrin+tiامتoxam		422	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	
Fungicide - sulfat de cupru tribazic		1,059	4,237	4,237	4,237	4,237	4,237	4,237	4,237	4,237	4,237	4,237	
Insecticide - tiacloprid		0	843	843	843	843	843	843	843	843	843	843	
Fungicide - dimetomorf+folpet		0	0	0	0	0	0	0	0	0	0	0	
Fungicide - dimetomorf+mancozeb		954	12,714	12,714	12,714	12,714	12,714	12,714	12,714	12,714	12,714	12,714	
Fungicide - piraclostrobin+boscalid		0	1,008	1,008	1,008	1,008	1,008	1,008	1,008	1,008	1,008	1,008	
Tools		3,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	
Water for irrigation		0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	
Service for irrigation		0	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	
Mechanical operations (land preparation, fertilization, irrigation)		4,330	19,052	19,052	19,052	19,052	19,052	19,052	19,052	19,052	19,052	19,052	
O&M investment		0	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	
Land rent		0	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	
Sub-total operating costs		11,354	86,075	87,797	90,510	91,002	91,370	91,790	91,790	91,790	91,841	91,841	
Labour costs													
Skilled labour costs		0	0	0	0	0	0	0	0	0	0	0	
Family labour costs		6,600	22,680	25,380	28,080	30,780	30,780	30,780	30,780	30,780	30,780	30,780	
Sub-total labour costs		6,600	22,680	25,380	28,080	30,780	30,780	30,780	30,780	30,780	30,780	30,780	
Total production costs		17,954	358,755	113,177	118,590	121,782	122,150	122,570	122,570	122,570	122,621	122,621	
Net Benefits (after labour costs)		10,846	-316,195	-64,537	71,106	93,258	112,090	131,510	131,510	131,510	132,099	132,099	
Net Incremental Benefits (NIB)		-327,041	-75,382	60,260	82,413	101,244	120,664	120,664	120,664	121,253	121,253		
Net Benefits (before labour costs)*		17,446	-293,515	-39,157	99,186	124,038	142,870	162,290	162,290	162,290	162,879	162,879	

*Farm liquidity= Net benefits from sales plus family labour

Return to family labour* (MDL/day)	791
*consider full development year family labour requirements	
Discount rate	12%
NPV (MDL) @ 0.12	47,834
IRR	15%
NPVb	838,791
NPVc	790,956
B/C ratio	1.06
Switching values Benefits	-6%
Switching values Costs	6%

Figura A 6: Table grapes orchards (4 ha - mechanized)

Croppin pattern and distribution													
Main production													
Table grapes	ton	7,000	7	11	12	14	15	15	15	15	15	15	15
Newly planted vineyards	ton	7,000	0			32	36	41	45	45	45	45	45
<i>Selfconsumption</i>	ton		0	0	0	0	0	0	0	0	0	0	0
Post harvest losses	%		10%	5%	5%	4%	4%	4%	3%	3%	3%	2%	2%
Total Production	ton		6	10	11	43	49	53	58	58	58	59	59
Investment inputs													
Drip irrigation system	per ha	40,000	0	4.0									
Tractor	unit	450,000		1.0									
Vine seedlings	per ha	20		3,600									
Operating inputs													
Seeds	kg	0.0	0	0	0	0	0	0	0	0	0	0	0
Manure	ton	0.0	0	0	0	0	0	0	0	0	0	0	0
Packaging material	per ton	80.0	7	10	11	43	49	53	58	58	58	59	59
Fertilizers:													
Macro & micro elements (type I)	kg	22.0	0	28	28	28	28	28	28	28	28	28	28
Macro & micro elements (type II)	kg	44.0	5	40	40	40	40	40	40	40	40	40	40
Ammonium sulphate	kg	6.5	0	0	0	0	0	0	0	0	0	0	0
Superphosphate 18% P2O5	kg	10.4	0										
Basal Fertilizers (NPK, DAP, CAN)	kg	9.5	100	800	800	800	800	800	800	800	800	800	800
Chemical products:													
Erbicide - quizalofop-p-etil	lt	455.0	0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Erbicide - metribuzin	kg	737.5	0	4	4	4	4	4	4	4	4	4	4
Insecticid - lambda-cihalotrin+tiametox	lt	2,107.7	0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fungicide - sulfat de cupru tribazic	lt	132.4	7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Insecticid - tiacloprid	lt	2,107.0	0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Fungicide - dimetomorf+folpet	kg	399.7	1	0	0	0	0	0	0	0	0	0	0
Fungicide - dimetomorf+mancozeb	lt	317.9	2	20	20	20	20	20	20	20	20	20	20
Fungicide - piraclostrobin+boscalid	kg	1,259.7	0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Tools	lumpsum	3,000.0	1	4	4	4	4	4	4	4	4	4	4
Water for irrigation	m3	1.0	0	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Service for irrigation	m3	6.0	0	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Mechanical operations (land preparation, fertilization, irrigation)	lumpsum/ha	3,516.0	1	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
O&M investment	lumpsum	6,820		1	1	1	1	1	1	1	1	1	1
Land rent	Per ha	1,200	0	3	3	3	3	3	3	3	3	3	3
Labour													
Land Preparation and sowing	pers. day		0	0	0	0	0	0	0	0	0	0	0
Transplanting	pers. day		0	0	0	0	0	0	0	0	0	0	0
Various operations	pers. day		57	68	68	68	68	68	68	68	68	68	68
Harvesting	pers. day		50	213	243	274	304	304	304	304	304	304	304
<i>Sub-total labour days</i>			107	281	312	342	372	372	372	372	372	372	372
Skilled labour (S)	pers. day	200	0	28	31	34	37	37	37	37	37	37	37
Family labour (F)	pers. day	150	107	253	280	308	335	335	335	335	335	335	335

FINANCIAL BUDGET ('000 MDL)													
ITEMS		WITHOUT PROJECT		WITH PROJECT									
		1	1	2	3	4	5	6	7	8	9	10	
Main production revenue													
Table grapes		49,980	73,500	84,000	94,500	105,000	105,000	105,000	105,000	105,000	105,000	105,000	
Newly planted vineyards		0	0	0	220,500	252,000	283,500	315,000	315,000	315,000	315,000	315,000	
Selfconsumption		0	0	0	0	0	0	0	0	0	0	0	
Post harvest losses		4,998	3,675	4,200	3,780	4,200	4,200	3,150	3,150	3,150	2,100	2,100	
Total revenue		44,982	69,825	79,800	311,220	352,800	384,300	416,850	416,850	416,850	417,900	417,900	
Investment input costs													
Drip irrigation system		0	160,000	0	0	0	0	0	0	0	0	0	
Tractor		0	450,000	0	0	0	0	0	0	0	0	0	
Vine seedlings		0	72,000	0	0	0	0	0	0	0	0	0	
Sub-total investment costs		0	682,000	0	0	0	0	0	0	0	0	0	
Operating inputs													
Seeds		0	0	0	0	0	0	0	0	0	0	0	
Manure		0	0	0	0	0	0	0	0	0	0	0	
Packaging material		571	798	912	3,456	3,917	4,262	4,656	4,656	4,656	4,704	4,704	
Fertilizers:													
Macro & micro elements (type I)		0	616	616	616	616	616	616	616	616	616	616	
Macro & micro elements (type II)		220	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	
Ammonium sulphate		0	0	0	0	0	0	0	0	0	0	0	
Superphosphate 18% P2O5		0	0	0	0	0	0	0	0	0	0	0	
Basal Fertilizers (NPK, DAP, CAN)		950	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	
Chemical products:													
Erbicide - quizalofop-p-etil		0	910	910	910	910	910	910	910	910	910	910	
Erbicide - metribuzin		0	2,950	2,950	2,950	2,950	2,950	2,950	2,950	2,950	2,950	2,950	
Insecticid - lambda-cihalotrin+tiametoxam		0	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	
Fungicide - sulfat de cupru tribazic		927	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	
Insecticid - tiacloprid		0	8,428	8,428	8,428	8,428	8,428	8,428	8,428	8,428	8,428	8,428	
Fungicide - dimetomorf+folpet		200	0	0	0	0	0	0	0	0	0	0	
Fungicide - dimetomorf+mancozeb		636	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	
Fungicide - piraclostrobin+boscalid		0	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	
Tools		3,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	
Water for irrigation		0	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	
Service for irrigation		0	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	
Mechanical operations (land preparation, fertilization, irrigation)		3,516	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	
O&M investment		0	6,820	6,820	6,820	6,820	6,820	6,820	6,820	6,820	6,820	6,820	
Land rent		0	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	
Sub-total operating costs		10,020	90,844	97,778	100,322	100,782	101,128	101,522	101,522	101,522	101,570	101,570	
Labour costs													
Skilled labour costs		0	5,624	6,232	6,840	7,448	7,448	7,448	7,448	7,448	7,448	7,448	
Family labour costs		16,050	37,962	42,066	46,170	50,274	50,274	50,274	50,274	50,274	50,274	50,274	
Sub-total labour costs		16,050	43,586	48,298	53,010	57,722	57,722	57,722	57,722	57,722	57,722	57,722	
Total production costs		26,070	816,430	146,076	153,332	158,504	159,244	159,244	159,244	159,244	159,292	159,292	
Net Benefits (after labour costs)		18,912	-746,605	-66,276	157,888	194,296	225,450	257,606	257,606	257,606	258,608	258,608	
Net Incremental Benefits (NIB)			-765,517	-85,188	138,976	175,383	206,538	238,694	238,694	238,694	239,696	239,696	
Net Benefits (before labour costs)*		34,962	-703,019	-17,978	210,898	252,018	283,172	315,328	315,328	315,328	316,330	316,330	

*Farm liquidity: Net benefits from sales plus family labour

Return to family labour* (MDL/day)		941
*consider full development year family labour requirements		
Discount rate	12%	
NPV (MDL) @ 0.12	65,085	
IRR	14%	
NPVb	1,388,956	
NPVc	1,323,871	
B/C ratio	1.05	
Switching values Benefits	-5%	
Switching values Costs	5%	

Figura A 7: Table grape orchard (4 ha - irrigated)

Croppin pattern and distribution													
Main production													
Table grapes	ton	7,000	7	11	12	14	15	15	15	15	15	15	15
Newly planted grapes	ton	7,000	0	0	0	32	36	41	45	45	45	45	45
<i>Selfconsumption</i>	ton		0	0	0	0	0	0	0	0	0	0	0
Post harvest losses	%		10%	5%	5%	4%	4%	4%	3%	3%	3%	2%	2%
Total Production	ton		6	10	11	43	49	53	58	58	58	59	59
Investment inputs													
Drip irrigation system	per ha	40,000	0	4.0									
Vine seedlings	per ha	20		3,600									
Operating inputs													
Seeds	kg	0.0	0	0	0	0	0	0	0	0	0	0	0
Manure	ton	0.0	0	0	0	0	0	0	0	0	0	0	0
Packaging material	per ton	80.0	7	10	11	43	49	53	58	58	58	59	59
Fertilizers:													
Macro & micro elements (type I)	kg	22.0	0	28	28	28	28	28	28	28	28	28	28
Macro & micro elements (type II)	kg	44.0	5	40	40	40	40	40	40	40	40	40	40
Ammonium sulphate	kg	6.5	0	0	0	0	0	0	0	0	0	0	0
Superphosphate 18% P2O5	kg	10.4	0										
Basal Fertilizers (NPK, DAP, CAN)	kg	9.5	100	800	800	800	800	800	800	800	800	800	800
Chemical products:													
Erbicide - quizalofop-p-etil	lt	455.0	0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Erbicide - metribuzin	kg	737.5	0	4	4	4	4	4	4	4	4	4	4
Insecticid - lambda-cihalotrin+tiametox	lt	2,107.7	0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fungicide - sulfat de cupru tribazic	lt	132.4	7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Insecticid - tiacloprid	lt	2,107.0	0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Fungicide - dimetomorf+folpet	kg	399.7	1	0	0	0	0	0	0	0	0	0	0
Fungicide - dimetomorf+mancozeb	lt	317.9	2	20	20	20	20	20	20	20	20	20	20
Fungicide - piraclostrobin+boscalid	kg	1,259.7	0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Tools	lumpsum	3,000.0	1	4	4	4	4	4	4	4	4	4	4
Water for irrigation	m3	1.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Service for irrigation	m3	6.0	0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Mechanical operations (land preparation, fertilization, irrigation)	lumpsum/ha	3,516.0	1	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
O&M investment	lumpsum	2,320.0			1	1	1	1	1	1	1	1	1
Land rent	per ha	1,200		3	3	3	3	3	3	3	3	3	3
Labour													
Land Preparation and sowing	pers. day		0	0	0	0	0	0	0	0	0	0	0
Transplanting	pers. day		0	0	0	0	0	0	0	0	0	0	0
Various operations	pers. day		57	268	268	268	268	268	268	268	268	268	268
Harvesting	pers. day		50	325	371	418	464	464	464	464	464	464	464
<i>Sub-total labour days</i>			107	593	639	686	732	732	732	732	732	732	732
Skilled labour (S)	pers. day	200	0	178	192	206	220	220	220	220	220	220	220
Family labour (F)	pers. day		107	415	447	480	512	512	512	512	512	512	512
FINANCIAL BUDGET (*'000 MDL)													
ITEMS			1	1	2	3	4	5	6	7	8	9	10
Main production revenue													
Table grapes		49,980	73,500	84,000	94,500	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000
Newly planted grapes		0	0	0	220,500	252,000	283,500	315,000	315,000	315,000	315,000	315,000	315,000
<i>Selfconsumption</i>		0	0	0	0	0	0	0	0	0	0	0	0
Post harvest losses		4,998	3,675	4,200	3,780	4,200	4,200	3,150	3,150	3,150	2,100	2,100	2,100
Total revenue		44,982	69,825	79,800	311,220	352,800	384,300	416,850	416,850	416,850	417,900	417,900	417,900
Investment input costs													
Drip irrigation system		0	160,000	0	0	0	0	0	0	0	0	0	0
Vine seedlings		0	72,000	0	0	0	0	0	0	0	0	0	0
Sub-total investment costs		0	232,000	0	0	0	0	0	0	0	0	0	0
Operating inputs													
Seeds		0	0	0	0	0	0	0	0	0	0	0	0
Manure		0	0	0	0	0	0	0	0	0	0	0	0
Packaging material		571	798	912	3,456	3,917	4,262	4,656	4,656	4,656	4,704	4,704	4,704
Fertilizers:													
Macro & micro elements (type I)		0	616	616	616	616	616	616	616	616	616	616	616
Macro & micro elements (type II)		220	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760	1,760
Ammonium sulphate		0	0	0	0	0	0	0	0	0	0	0	0
Superphosphate 18% P2O5		0	0	0	0	0	0	0	0	0	0	0	0
Basal Fertilizers (NPK, DAP, CAN)		950	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600
Chemical products:													
Erbicide - quizalofop-p-etil		0	910	910	910	910	910	910	910	910	910	910	910
Erbicide - metribuzin		0	2,950	2,950	2,950	2,950	2,950	2,950	2,950	2,950	2,950	2,950	2,950
Insecticid - lambda-cihalotrin+tiametoxam		0	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686	1,686
Fungicide - sulfat de cupru tribazic		927	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178	3,178
Insecticid - tiacloprid		0	8,428	8,428	8,428	8,428	8,428	8,428	8,428	8,428	8,428	8,428	8,428
Fungicide - dimetomorf+folpet		200	0	0	0	0	0	0	0	0	0	0	0
Fungicide - dimetomorf+mancozeb		636	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357	6,357
Fungicide - piraclostrobin+boscalid		0	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078	10,078
Tools		3,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Water for irrigation		0	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Service for irrigation		0	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600
Mechanical operations (land preparation, fertilization, irrigation)		3,516	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283	18,283
O&M investment		0	0	2,320	2,320	2,320	2,320	2,320	2,320	2,320	2,320	2,320	2,320
Land rent		0	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600
Sub-total operating costs		10,020	96,444	98,878	101,422	101,882	102,228	102,622	102,622	102,622	102,622	102,670	102,670
Labour costs													
Skilled labour costs		0	35,568	38,352	41,136	43,920	43,920	43,920	43,920	43,920	43,920	43,920	43,920
Family labour costs		16,050	62,244	67,116	71,988	76,860	76,860	76,860	76,860	76,860	76,860	76,860	76,860
Sub-total labour costs		16,050	97,812	105,468	113,124	120,780	120,780	120,780	120,780	120,780	120,780	120,780	120,780
Total production costs		26,070	426,256	204,346	214,546	222,662	223,008	223,402	223,402	223,402	223,402	223,450	223,450
Net Benefits (after labour costs)		18,912	-356,431	-124,546	96,674	130,138	161,292	193,448	193,448	193,448	194,450	194,450	194,450
Net Incremental Benefits (NIB)			-375,343	-143,458	77,762	111,225	142,380	174,536	174,536	174,536	175,538	175,538	175,538
Net Benefits (before labour costs)*			34,962	-258,619	-19,078	209,798	250,918	282,072	314,228	314,228	314,228	315,230	315,230

*Farm liquidity: Net benefits from sales plus family labour

Return to family labour* (MDL/day)		613
*consider full development year family labour requirements		
Discount rate	12%	
NPV (MDL) @ 0.12	115,021	
IRR	17%	
NPVb	1,388,956	
NPVc	1,273,935	
B/C ratio	1.09	
Switching values Benefits	-8%	
Switching values Costs	9%	

Figura A 8: Tomato production in greenhouse (0.1 ha)

Croppin pattern and distribution													
Main production													
Tomato	ton	4,000	3	11	12	14	15	15	15	15	15	15	15
<i>Selfconsumption</i>	ton		0	0	0	0	0	0	0	0	0	0	0
Post harvest losses	%		10%	4%	4%	3%	3%	2%	2%	2%	2%	2%	2%
Total Production	ton		3	10	12	13	15	15	15	15	15	15	15
Investment inputs													
Drip irrigation system	per ha	40,000	0	0.1									
Greenhouse	per ha	2,000,000		0.1									
Operating inputs													
Seeds	kg	0.6	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Manure	ton	0	0	0	0	0	0	0	0	0	0	0	0
Packaging material	per ton	80	3	11	12	14	15	15	15	15	15	15	15
Fertilizers:													
Macro & micro elements (type I)	kg	22	0	1	1	1	1	1	1	1	1	1	1
Macro & micro elements (type II)	kg	44	0	1	1	1	1	1	1	1	1	1	1
Ammonium sulphate	kg	7	0	10	10	10	10	10	10	10	10	10	10
Superphosphate 18% P2O5	kg	10	0										
Basal Fertilizers (NPK, DAP, CAN)	kg	10	10	20	20	20	20	20	20	20	20	20	20
Chemical products:													
Erbicide - quizalofop-p-etil	lt	455	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Erbicide - metribuzin	kg	737	0	0	0	0	0	0	0	0	0	0	0
Insecticid - lambda-cihalotrin+tiametox	lt	2,108	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fungicide - sulfat de cupru tribazic	lt	132	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Insecticid - tiacloprid	lt	2,107	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fungicide - dimetomorf+folpet	kg	400	0	0	0	0	0	0	0	0	0	0	0
Fungicide - dimetomorf+mancozeb	lt	318	0	0	0	0	0	0	0	0	0	0	0
Fungicide - piradostrobil+boscalid	kg	1,260	0										
Tools	lumpsum	3,000	0	0	0	0	0	0	0	0	0	0	0
Water for irrigation	m3	1	123	65	65	65	65	65	65	65	65	65	65
Service for irrigation	m3	6	123	65	65	65	65	65	65	65	65	65	65
Mechanical operations (land preparation, fertilization, irrigation)	lumpsum/ha	21,000	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
O&M investment	lumpsum	2,040		1	1	1	1	1	1	1	1	1	1
Labour													
Land Preparation and sowing	pers. day		0	0	0	0	0	0	0	0	0	0	0
Transplanting	pers. day		0	0	0	0	0	0	0	0	0	0	0
Various operations	pers. day		1	5	5	5	5	5	5	5	5	5	5
Harvesting	pers. day		4	7	8	8	9	9	9	9	9	9	9
<i>Sub-total labour days</i>			5	12	13	13	14	14	14	14	14	14	14
Skilled labour (S)	pers. day	200	0	0	0	0	0	0	0	0	0	0	0
Family labour (F)	pers. day	150	5	12	13	13	14	14	14	14	14	14	14

FINANCIAL BUDGET ('000 MDL)			WITHOUT PROJECT										
ITEMS			1	1	2	3	4	5	6	7	8	9	10
Main production revenue													
Tomato			12,800	42,000	48,000	54,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
<i>Selfconsumption</i>			0	0	0	0	0	0	0	0	0	0	0
Post harvest losses			1,280	1,680	1,920	1,620	1,800	1,800	1,200	1,200	1,200	1,200	1,200
Total revenue			11,520	40,320	46,080	52,380	58,200	58,200	58,800	58,800	58,800	58,800	58,800
Investment input costs													
Drip irrigation system			0	4,000	0	0	0	0	0	0	0	0	0
Greenhouse			0	200,000	0	0	0	0	0	0	0	0	0
Sub-total investment costs			0	204,000	0	0	0	0	0	0	0	0	0
Operating inputs													
Seeds			3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Manure			0	0	0	0	0	0	0	0	0	0	0
Packaging material			256	840	960	1,080	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Fertilizers:													
Macro & micro elements (type I)			0	29	29	29	29	29	29	29	29	29	29
Macro & micro elements (type II)			0	22	22	22	22	22	22	22	22	22	22
Ammonium sulphate			0	65	65	65	65	65	65	65	65	65	65
Superphosphate 18% P2O5			0	0	0	0	0	0	0	0	0	0	0
Basal Fertilizers (NPK, DAP, CAN)			95	190	190	190	190	190	190	190	190	190	190
Chemical products:													
Erbicide - quizalofop-p-etil			0	59	59	59	59	59	59	59	59	59	59
Erbicide - metribuzin			0	74	74	74	74	74	74	74	74	74	74
Insecticid - lambda-cihalotrin+tiametoxam			42	42	42	42	42	42	42	42	42	42	42
Fungicide - sulfat de cupru tribazic			66	66	66	66	66	66	66	66	66	66	66
Insecticid - tiacloprid			0	0	0	0	0	0	0	0	0	0	0
Fungicide - dimetomorf+folpet			0	0	0	0	0	0	0	0	0	0	0
Fungicide - dimetomorf+mancozeb			64	64	64	64	64	64	64	64	64	64	64
Fungicide - piradostrobil+boscalid			0	0	0	0	0	0	0	0	0	0	0
Tools			300	300	300	300	300	300	300	300	300	300	300
Water for irrigation			123	65	65	65	65	65	65	65	65	65	65
Service for irrigation			738	390	390	390	390	390	390	390	390	390	390
Mechanical operations (land preparation, fertilization, irrigation)			2,100	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575
O&M investment			0	0	2,040	2,040	2,040	2,040	2,040	2,040	2,040	2,040	2,040
Sub-total operating costs			6,784	6,781	8,941	9,061	9,181	9,181	9,181	9,181	9,181	9,181	9,181
Labour costs													
Skilled labour costs			0	0	0	0	0	0	0	0	0	0	0
Family labour costs			735	1,737	1,878	2,019	2,160	2,160	2,160	2,160	2,160	2,160	2,160
Sub-total labour costs			735	1,737	1,878	2,019	2,160	2,160	2,160	2,160	2,160	2,160	2,160
Total production costs			7,519	212,518	10,819	11,080	11,341	11,341	11,341	11,341	11,341	11,341	11,341
Net Benefits (after labour costs)			4,001	-172,198	35,261	41,300	46,859	46,859	47,459	47,459	47,459	47,459	47,459
Net Incremental Benefits (NIB)				-176,199	31,260	37,299	42,858	42,858	43,458	43,458	43,458	43,458	43,458
Net Benefits (before labour costs)*			4,736	-170,461	37,139	43,319	49,019	49,019	49,619	49,619	49,619	49,619	49,619

*Farm liquidity: Net benefits from sales plus family labour

Return to family labour* (MDL/day)		3,446
*consider full development year family labour requirements		
Discount rate	12%	
NPV (MDL) @ 0.12	34,596	
IRR	17%	
NPVb	235,211	
NPVc	200,614	
B/C ratio	1.17	
Switching values Benefits	-15%	
Switching values Costs	17%	

1,977

Figura A 9: Efficient irrigation - potato (1ha)

[illegible]

Figura A 10: Efficient irrigation - garlic (1ha)

YIELDS AND INPUTS					WITHOUT PROJECT										WITH PROJECT									
ITEMS	UNIT	PRICE (MDL)	1	1	2	3	4	5	6	7	8	9	10											
Croppin pattern and distribution																								
Main production																								
Garlic	ton	20,370	6	6	7	7	8	8	8	8	8	8	8											
Selfconsumption	ton		0	0	0	0	0	0	0	0	0	0	0											
Post harvest losses	%		10%	10%	10%	9%	9%	9%	8%	8%	8%	7%	7%											
Total Production	ton		5	5	6	7	7	7	7	7	7	8	8											
Investment inputs																								
Drip irrigation system	per ha	40,000	0	1																				
				0																				
Operating inputs																								
Seeds	kg	32	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000											
Manure	ton	0	0	0	0	0	0	0	0	0	0	0	0											
Packaging material	per ton	80	6	6	7	7	8	8	8	8	8	8	8											
Fertilizers:																								
Macro & micro elements (type I)	kg	22	0	25	25	25	25	25	25	25	25	25	25											
Macro & micro elements (type II)	kg	44	4	6	6	6	6	6	6	6	6	6	6											
Ammonium sulphate	kg	7	0	100	100	100	100	100	100	100	100	100	100											
Superphosphate 18% P2O5	kg	10	0																					
Basal Fertilizers (NPK, DAP, CAN)	kg	10	200	200	200	200	200	200	200	200	200	200	200											
Chemical products:																								
Erbicide - quizalofop-p-etil	lt	455	0																					
Erbicide - metribuzin	kg	737	0	1	1	1	1	1	1	1	1	1	1											
Insecticid - lambda-chalotrin+tiametox	lt	2,108	0	2	2	2	2	2	2	2	2	2	2											
Fungicide - sulfat de cupru tribazic	lt	132	3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0											
Insecticid - tiacloprid	lt	2,107	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5											
Fungicide - dimetomorf+folpet	kg	400	0	2	2	2	2	2	2	2	2	2	2											
Fungicide - dimetomorf+mancozeb	lt	318	2	2	2	2	2	2	2	2	2	2	2											
Fungicide - piradostrobin+boscalid	kg	1,260	0																					
Tools	lumpsum	3,000	1	1	1	1	1	1	1	1	1	1	1											
Water for irrigation	m3	1	1,200	840	840	840	840	840	840	840	840	840	840											
Service for irrigation	m3	6	1,200	840	840	840	840	840	840	840	840	840	840											
Mechanical operations (land preparation, fertilization, irrigation)	lumpsum/ha	14,000	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5											
O&M investment	lumpsum	2,000			1	1	1	1	1	1	1	1	1											
Labour																								
Land Preparation and sowing	pers. day		0	0	0	0	0	0	0	0	0	0	0											
Transplanting	pers. day		0	0	0	0	0	0	0	0	0	0	0											
Various operations	pers. day		30	42	42	42	42	42	42	42	42	42	42											
Harvesting	pers. day		62	91	104	117	130	130	130	130	130	130	130											
Sub-total labour days			92	133	146	159	172	172	172	172	172	172	172											
Skilled labour (S)	pers. day	200	0	0	0	0	0	0	0	0	0	0	0											
Family labour (F)	pers. day	150	92	133	146	159	172	172	172	172	172	172	172											

FINANCIAL BUDGET ('000 MDL)					WITHOUT PROJECT										WITH PROJECT									
ITEMS			1	1	2	3	4	5	6	7	8	9	10											
Main production revenue																								
Garlic			122,220	116,068	132,649	149,231	165,812	165,812	165,812	165,812	165,812	165,812	165,812											
Selfconsumption			0	0	0	0	0	0	0	0	0	0	0											
Post harvest losses			12,222	11,607	13,265	13,431	14,923	14,923	13,265	13,265	13,265	11,607	11,607											
Total revenue			109,998	104,461	119,384	135,800	150,889	150,889	152,547	152,547	152,547	154,205	154,205											
Investment input costs																								
Drip irrigation system			0	40,000	0	0	0	0	0	0	0	0	0											
0			0	0	0	0	0	0	0	0	0	0	0											
Sub-total investment costs			0	40,000	0	0	0	0	0	0	0	0	0											
Operating inputs																								
Seeds			32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000											
Manure			0	0	0	0	0	0	0	0	0	0	0											
Packaging material			480	456	521	586	651	651	651	651	651	651	651											
Fertilizers:																								
Macro & micro elements (type I)			0	550	550	550	550	550	550	550	550	550	550											
Macro & micro elements (type II)			176	264	264	264	264	264	264	264	264	264	264											
Ammonium sulphate			0	653	653	653	653	653	653	653	653	653	653											
Superphosphate 18% P2O5			0	0	0	0	0	0	0	0	0	0	0											
Basal Fertilizers (NPK, DAP, CAN)			1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900											
Chemical products:																								
Erbicide - quizalofop-p-etil			0	0	0	0	0	0	0	0	0	0	0											
Erbicide - metribuzin			0	737	737	737	737	737	737	737	737	737	737											
Insecticid - lambda-chalotrin+tiametoxam			211	3,162	3,162	3,162	3,162	3,162	3,162	3,162	3,162	3,162	3,162											
Fungicide - sulfat de cupru tribazic			397	397	397	397	397	397	397	397	397	397	397											
Insecticid - tiacloprid			0	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053	1,053											
Fungicide - dimetomorf+folpet			0	799	799	799	799	799	799	799	799	799	799											
Fungicide - dimetomorf+mancozeb			636	636	636	636	636	636	636	636	636	636	636											
Fungicide - piradostrobin+boscalid			0	0	0	0	0	0	0	0	0	0	0											
Tools			3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000											
Water for irrigation			1,200	840	840	840	840	840	840	840	840	840	840											
Service for irrigation			7,200	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040											
Mechanical operations (land preparation, fertilization, irrigation)			14,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000											
O&M investment			0	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000											
Sub-total operating costs			61,200	58,488	60,553	60,618	60,683	60,683	60,683	60,683	60,683	60,683	60,683											
Labour costs																								
Skilled labour costs			0	0	0	0	0	0	0	0	0	0	0											
Family labour costs			13,800	19,950	21,900	23,850	25,800	25,800	25,800	25,800	25,800	25,800	25,800											
Sub-total labour costs			13,800	19,950	21,900	23,850	25,800	25,800	25,800	25,800	25,800	25,800	25,800											
Total production costs			75,000	118,438	82,453	84,468	86,483	86,483	86,483	86,483	86,483	86,483	86,483											
Net Benefits (after labour costs)			34,998	-13,976	36,932	51,332	64,406	64,406	66,064	66,064	66,064	67,722	67,722											
Net Incremental Benefits (NIB)				-48,975	1,933	16,334	29,407	29,407	31,065	31,065	31,065	32,724	32,724											
Net Benefits (before labour costs)*			48,798	5,974	58,832	75,182	90,206	90,206	91,864	91,864	91,864	93,522	93,522											

*Farm liquidity: Net benefits from sales plus family labour

Return to family labour* (MDL/day)		534
*consider full development year family labour requirements		
Discount rate	12%	
NPV (MDL) @ 0.12	69,490	
IRR	37%	
NPVb	158,257	
NPVc	88,767	
B/C ratio	1.78	
Switching values Benefits	-44%	
Switching values Costs	78%	

Figura A 11: Efficient irrigation - onion (1ha)

YIELDS AND INPUTS					WITHOUT PROJECT										WITH PROJECT									
ITEMS		UNIT	PRICE (MDL)	1	1	2	3	4	5	6	7	8	9	10										
Croppin pattern and distribution																								
Main production																								
Onion		ton	2,777	37	34	39	44	49	49	49	49	49	49	49										
	Selfconsumption	ton		0	0	0	0	0	0	0	0	0	0	0										
Post harvest losses		%		10%	10%	10%	9%	9%	9%	8%	8%	8%	7%	7%										
Total Production		ton		33	31	35	40	45	45	45	45	45	46	46										
Investment inputs																								
Drip irrigation system		per ha	40,000	0	1																			
				0																				
Operating inputs																								
Seeds		kg	78	200	200	200	200	200	200	200	200	200	200	200										
Manure		ton	0	0	0	0	0	0	0	0	0	0	0	0										
Packaging material		per ton	80	37	34	39	44	49	49	49	49	49	49	49										
Fertilizers:																								
Macro & micro elements (type I)		kg	22	0	25	25	25	25	25	25	25	25	25	25										
Macro & micro elements (type II)		kg	44	4	6	6	6	6	6	6	6	6	6	6										
Ammonium sulphate		kg	7	100	150	150	150	150	150	150	150	150	150	150										
Superphosphate 18% P2O5		kg	10	0																				
Basal Fertilizers (NPK, DAP, CAN)		kg	10	100	200	200	200	200	200	200	200	200	200	200										
Chemical products:																								
Erbicide - quizalofop-p-etil		lt	455	2	2	2	2	2	2	2	2	2	2	2										
Erbicide - metribuzin		kg	737	0	1	1	1	1	1	1	1	1	1	1										
Insecticid - lambda-cihalotrin+tiامتox		lt	2,108	0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2										
Fungicide - sulfat de cupru tribazic		lt	132	4	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0										
Insecticid - tiaclopid		lt	2,107	0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2										
Fungicide - dimetomorf+folpet		kg	400	0	2	2	2	2	2	2	2	2	2	2										
Fungicide - dimetomorf+mancozeb		lt	318	2	3	3	3	3	3	3	3	3	3	3										
Fungicide - piraclostrobin+boscalid		kg	1,260	0																				
Tools		lumpsum	3,000	1	1	1	1	1	1	1	1	1	1	1										
Water for irrigation		m3	1	1,200	840	840	840	840	840	840	840	840	840	840										
Service for irrigation		m3	6	1,200	840	840	840	840	840	840	840	840	840	840										
Mechanical operations (land preparation, fertilization, irrigation)		lumpsum/ha	17,450	1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7										
O&M investment		lumpsum	2,000			1	1	1	1	1	1	1	1	1										
Labour																								
Land Preparation and sowing		pers. day		0	0	0	0	0	0	0	0	0	0	0										
Transplanting		pers. day		0	0	0	0	0	0	0	0	0	0	0										
Various operations		pers. day		53	75	75	75	75	75	75	75	75	75	75										
Harvesting		pers. day		80	84	96	108	120	120	120	120	120	120	120										
Sub-total labour days				133	159	171	183	195	195	195	195	195	195	195										
Skilled labour (S)		pers. day	200	0	0	0	0	0	0	0	0	0	0	0										
Family labour (F)		pers. day	150	133	159	171	183	195	195	195	195	195	195	195										

FINANCIAL BUDGET ('000 MDL)					WITHOUT PROJECT										WITH PROJECT									
ITEMS				1	1	2	3	4	5	6	7	8	9	10										
Main production revenue																								
Onion				102,194	95,251	108,858	122,466	136,073	136,073	136,073	136,073	136,073	136,073	136,073										
	Selfconsumption			0	0	0	0	0	0	0	0	0	0	0										
Post harvest losses				10,219	9,525	10,886	11,022	12,247	12,247	10,886	10,886	10,886	9,525	9,525										
Total revenue				91,974	85,726	97,973	111,444	123,826	123,826	125,187	125,187	125,187	126,548	126,548										
Investment input costs																								
Drip irrigation system				0	40,000	0	0	0	0	0	0	0	0	0										
0				0	0	0	0	0	0	0	0	0	0	0										
Sub-total investment costs				0	40,000	0	0	0	0	0	0	0	0	0										
Operating inputs																								
Seeds				15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600	15,600										
Manure				0	0	0	0	0	0	0	0	0	0	0										
Packaging material				2,944	2,744	3,136	3,528	3,920	3,920	3,920	3,920	3,920	3,920	3,920										
Fertilizers:																								
Macro & micro elements (type I)				0	550	550	550	550	550	550	550	550	550	550										
Macro & micro elements (type II)				176	264	264	264	264	264	264	264	264	264	264										
Ammonium sulphate				653	980	980	980	980	980	980	980	980	980	980										
Superphosphate 18% P2O5				0	0	0	0	0	0	0	0	0	0	0										
Basal Fertilizers (NPK, DAP, CAN)				950	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900										
Chemical products:																								
Erbicide - quizalofop-p-etil				910	910	910	910	910	910	910	910	910	910	910										
Erbicide - metribuzin				147	737	737	737	737	737	737	737	737	737	737										
Insecticid - lambda-cihalotrin+tiامتoxam				0	422	422	422	422	422	422	422	422	422	422										
Fungicide - sulfat de cupru tribazic				530	794	794	794	794	794	794	794	794	794	794										
Insecticid - tiaclopid				0	421	421	421	421	421	421	421	421	421	421										
Fungicide - dimetomorf+folpet				0	799	799	799	799	799	799	799	799	799	799										
Fungicide - dimetomorf+mancozeb				636	954	954	954	954	954	954	954	954	954	954										
Fungicide - piraclostrobin+boscalid				0	0	0	0	0	0	0	0	0	0	0										
Tools				3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000										
Water for irrigation				1,200	840	840	840	840	840	840	840	840	840	840										
Service for irrigation				7,200	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040										
Mechanical operations (land preparation, fertilization, irrigation)				17,450	12,215	12,215	12,215	12,215	12,215	12,215	12,215	12,215	12,215	12,215										
O&M investment				0	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000										
Sub-total operating costs				51,396	48,170	50,562	50,954	51,346	51,346	51,346	51,346	51,346	51,346	51,346										
Labour costs																								
Skilled labour costs				0	0	0	0	0	0	0	0	0	0	0										
Family labour costs				19,950	23,850	25,650	27,450	29,250	29,250	29,250	29,250	29,250	29,250	29,250										
Sub-total labour costs				19,950	23,850	25,650	27,450	29,250	29,250	29,250	29,250	29,250	29,250	29,250										
Total production costs				71,346	112,020	76,212	78,404	80,596	80,596	80,596	80,596	80,596	80,596	80,596										
Net Benefits (after labour costs)				20,628	-26,294	21,760	33,039	43,230	43,230	44,591	44,591	44,591	45,952	45,952										
Net Incremental Benefits (NIB)					-46,923	1,132	12,411	22,602	22,602	23,962	23,962	23,962	25,323	25,323										
Net Benefits (before labour costs)*				40,578	-2,444	47,410	60,489	72,480	72,480	73,841	73,841	73,841	75,202	75,202										

*Farm liquidity: Net benefits from sales plus family labour

Return to family labour* (MDL/day)		379
*consider full development year family labour requirements		
Discount rate	12%	
NPV (MDL) @ 0.12	44,972	
IRR	30%	
NPVb	120,242	
NPVc	75,269	
B/C ratio	1.60	
Switching values Benefits	-37%	
Switching values Costs	60%	

Figura A 12: Processing unit - dried and fresh fruit

YIELDS AND INPUTS			WITHOUT PROJECT		WITH PROJECT									
ITEMS	UNIT	PRICE (MDL)	1	2	3	4	5	6	7	8	9	10		
Main production														
Dry plums with seeds	ton	40,000	66	77	88	99	110	110	110	110	110	110		
Dry plums without seeds	ton	45,000	17	19	22	25	28	28	28	28	28	28		
Dry Apples	ton	68,000	83	96	110	124	138	138	138	138	138	138		
Dry Apricot	ton	57,000	83	96	110	124	138	138	138	138	138	138		
Dry Cherry	ton	70,000	83	96	110	124	138	138	138	138	138	138		
Total processing	ton		248	289	330	371	413	413	413	413	413	413		
Selfconsumption	ton													
Post-processing losses	%		8%	7%	6%	5%	4%	3%	2%	2%	2%	2%		
Investment inputs														
Warehouse construction	no.	1,800,000	1											
Dryers	no.	1,925,000	2											
Conveyors for fruit sorting	no.	400,000	1											
Cold freezing warehouse for post-preliminary	no.	900,000	1											
Cleaning equipment	no.	600,000	1											
Miscellaneous	no.	300,000	1											
Operating inputs														
Plums	ton	4,000	413	481	550	619	688	688	688	688	688	688		
Apples	ton	4,000	413	481	550	619	688	688	688	688	688	688		
Apricots	ton	7,000	413	481	550	619	688	688	688	688	688	688		
Cherries	ton	15,000	413	481	550	619	688	688	688	688	688	688		
Water cost for fruit cleaning	ton	100	248	289	330	371	413	413	413	413	413	413		
Packagings for products (10Kg)	no.	0.7	24,750	28,875	33,000	37,125	41,250	41,250	41,250	41,250	41,250	41,250		
Operating cost machinery (fuel and electricity)	MDL/hour	170	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764		
Maintenance for machinery and building	lumpsum	78,500		1	1	1	1	1	1	1	1	1		
Transportation	ton	52	248	289	330	371	413	413	413	413	413	413		
Tools/equipment	lumpsum	30,000	1	1	1	1	1	1	1	1	1	1		
Labour														
Operations	pers.month	S/F	120	120	120	120	120	120	120	120	120	120		
Harvesting	pers.month	S/F												
Administrative staff, managers, etc	pers.month	S/F	48	48	48	48	48	48	48	48	48	48		
Sub-total labour			168	168	168	168	168	168	168	168	168	168		
Skilled (paid) labour (S)	pers.month	16,800	120	120	120	120	120	120	120	120	120	120		
Administrative staff, managers, etc	pers.month	20,000	48	48	48	48	48	48	48	48	48	48		

Return to family labour*		204,213.50
*consider full development year family labour requirements		
Discount rate	12%	
NPV ('000 VND) @ 0.12	6,624,084	
IRR	28%	
NPVb	139,300,203	
NPVc	132,875,914	
B/C ratio	1.05	
Switching values Benefits	5%	
Switching values Costs	5%	

Figura A 13: Processing unit - Drying fruit

YIELDS AND INPUTS					WITHOUT PROJECT										WITH PROJECT									
ITEMS	UNIT	PRICE (MDL)		1	2	3	4	5	6	7	8	9	10											
Main production																								
Fresh red and green grape	ton	12,000	0	257	299	342	385	428	428	428	428	428	428											
Fresh apple	ton	9,000	0	257	299	342	385	428	428	428	428	428	428											
Dried red and green grape	ton	85,000	0	54	63	72	81	90	90	90	90	90	90											
Dried apple	ton	68,000	0	54	63	72	81	90	90	90	90	90	90											
Total processing	ton		0	621	725	828	932	1,035	1,035	1,035	1,035	1,035	1,035											
Selfconsumption	ton																							
Post-processing losses	%		10%	8%	7%	6%	5%	4%	3%	2%	2%	2%	2%											
Investment inputs																								
Warehouse construction	no.	1,800,000	0	1																				
Dryers	no.	1,925,000	0	2																				
Conveyors for fruit sorting	no.	400,000	0	1																				
Cold freezing warehouse for post-preliminary processing	no.	900,000	0	1																				
Cleaning equipment	no.	600,000	0	1																				
Miscellaneous	no.	300,000	0	1																				
Operating inputs																								
Fresh red and green grape	ton	6,500	0	270	315	360	405	450	450	450	450	450	450											
Fresh apple	ton	4,000	0	270	315	360	405	450	450	450	450	450	450											
Water cost for cleaning of grape and apple	ton	100	0	621	725	828	932	1,035	1,035	1,035	1,035	1,035	1,035											
Packagings for fresh products (10Kg)	no.	1	0	51,300	59,850	68,400	76,950	85,500	85,500	85,500	85,500	85,500	85,500											
Packagings for dried products (10Kg)	no.	1	0	10,800	12,600	14,400	16,200	18,000	18,000	18,000	18,000	18,000	18,000											
Operating cost machinery	MDL/hour	170	0	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764	1,764											
O&M for machinery and building	lumpsum	78,500	0	1	1	1	1	1	1	1	1	1	1											
Transportation	ton	52	0	621	725	828	932	1,035	1,035	1,035	1,035	1,035	1,035											
Tools/equipment	lumpsum	30,000	0	1	1	1	1	1	1	1	1	1	1											
Labour																								
Operations	pers.month	S/F	0	120	120	120	120	120	120	120	120	120	120											
Harvesting	pers.month	S/F																						
Administrative staff, managers, etc	pers.month	S/F	0	48	48	48	48	48	48	48	48	48	48											
Sub-total labour																								
Skilled (paid) labour (5)	pers.month	16,800	0	168	168	168	168	168	168	168	168	168	168											
Administrative staff, managers, etc	pers.month	20,000	0	48	48	48	48	48	48	48	48	48	48											
FINANCIAL BUDGET																								
ITEMS				1	2	3	4	5	6	7	8	9	10											
Main production revenue																								
Fresh red and green grape		0		3,078,000	3,591,000	4,104,000	4,617,000	5,130,000	5,130,000	5,130,000	5,130,000	5,130,000	5,130,000											
Fresh apple		0		2,308,500	2,693,250	3,078,000	3,462,750	3,847,500	3,847,500	3,847,500	3,847,500	3,847,500	3,847,500											
Dried red and green grape		0		4,590,000	5,355,000	6,120,000	6,885,000	7,650,000	7,650,000	7,650,000	7,650,000	7,650,000	7,650,000											
Dried apple		0		3,672,000	4,284,000	4,896,000	5,508,000	6,120,000	6,120,000	6,120,000	6,120,000	6,120,000	6,120,000											
Sales		0		9,976,500	11,639,250	13,302,000	14,964,750	16,627,500	16,627,500	16,627,500	16,627,500	16,627,500	16,627,500											
Selfconsumption		0		0	0	0	0	0	0	0	0	0	0											
Post-processing losses		0		430,920	439,898	430,920	403,988	359,100	269,325	179,550	179,550	179,550	179,550											
Total revenue		0		9,545,580	11,199,353	12,871,080	14,560,763	16,268,400	16,358,175	16,447,950	16,447,950	16,447,950	16,447,950											
Investment input costs																								
Warehouse construction		0		1,800,000	0	0	0	0	0	0	0	0	0											
Dryers		0		3,850,000	0	0	0	0	0	0	0	0	0											
Conveyors for fruit sorting		0		400,000	0	0	0	0	0	0	0	0	0											
Cold freezing warehouse for post-preliminary processing products		0		900,000	0	0	0	0	0	0	0	0	0											
Cleaning equipment		0		600,000	0	0	0	0	0	0	0	0	0											
Miscellaneous		0		300,000	0	0	0	0	0	0	0	0	0											
Sub-total investment costs		0		7,850,000	0	0	0	0	0	0	0	0	0											
Operating input costs																								
Fresh red and green grape		0		1,755,000	2,047,500	2,340,000	2,632,500	2,925,000	2,925,000	2,925,000	2,925,000	2,925,000	2,925,000											
Fresh apple		0		1,080,000	1,260,000	1,440,000	1,620,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000											
Water cost for cleaning of grape and apple		0		62,100	72,450	82,800	93,150	103,500	103,500	103,500	103,500	103,500	103,500											
Packagings for fresh products (10Kg)		0		51,300	59,850	68,400	76,950	85,500	85,500	85,500	85,500	85,500	85,500											
Packagings for dried products (10Kg)		0		10,800	12,600	14,400	16,200	18,000	18,000	18,000	18,000	18,000	18,000											
Operating cost machinery		0		299,880	299,880	299,880	299,880	299,880	299,880	299,880	299,880	299,880	299,880											
O&M for machinery and building		0		0	78,500	78,500	78,500	78,500	78,500	78,500	78,500	78,500	78,500											
Transportation		0		32,292	37,674	43,056	48,438	53,820	53,820	53,820	53,820	53,820	53,820											
Tools/equipment		0		30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000											
Sub-total operating costs		0		3,321,372	3,898,454	4,397,036	4,895,618	5,394,200	5,394,200	5,394,200	5,394,200	5,394,200	5,394,200											
Labour costs																								
Skilled (paid) labour costs		0		2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000	2,016,000											
Administrative staff, managers, etc		0		960,000	960,000	960,000	960,000	960,000	960,000	960,000	960,000	960,000	960,000											
Sub-total labour costs		0		2,976,000	2,976,000	2,976,000	2,976,000	2,976,000	2,976,000	2,976,000	2,976,000	2,976,000	2,976,000											
Total production costs		0		14,147,372	16,874,454	17,373,036	17,871,618	18,370,200	18,370,200	18,370,200	18,370,200	18,370,200	18,370,200											
Gross income (after labour costs)		0		-4,601,792	4,324,899	5,498,044	6,689,145	7,898,200	7,987,975	8,077,750	8,077,750	8,077,750	8,077,750											
Income Taxes on entrepreneurial activities		0		0	432,490	549,804	668,914	789,820	798,798	807,775	807,775	807,775	807,775											
Social security contributions in private sector		0		535,680	535,680	535,680	535,680	535,680	535,680	535,680	535,680	535,680	535,680											
Net income (after labour costs)			2,976,000	-5,137,472	3,356,729	4,412,560	5,484,550	6,572,700	6,653,498	6,734,295	6,734,295	6,734,295	6,734,295											
Incremental net income				-8,113,472	380,729	1,436,560	2,508,550	3,596,700	3,677,498	3,758,295	3,758,295	3,758,295	3,758,295											
Net income (before labour costs)			0	-2,161,472	6,332,729	7,388,560	8,460,550	9,548,700	9,629,498	9,710,295	9,710,295	9,710,295	9,710,295											

Return to family labour*	200,614.53
*consider full development year family labour requirements	
Discount rate	12%
NPV ('000 VND) @ 0.12	5,563,205
IRR	25%
NPVb	62,079,686
NPVc	56,516,481
B/C ratio	1.10
Switching values Benefits	-9%
Switching values Costs	10%

Figura A 14: Project economic costs ('000 MDL)

		Economic Cost (Local '000)						
		2020	2021	2022	2023	2024	2025	Total
A. Resilient Economic Transformation								
1. Enhancing Climate Resilience								
	a. Climate resilient infrastructure	913	30,807	46,644	46,817	22,394	9,034	156,609
	b. On-Farm Adaptive Water Management	-	10,086	16,877	16,877	9,867	2,191	55,900
	Subtotal	913	40,893	63,521	63,695	32,261	11,225	212,508
2. Agribusiness Development								
	a. Strengthening Value chains for Producers Groups	8,529	16,278	22,493	15,491	15,158	879	78,828
	b. Strengthening MARDE Technical Capacity	210	490	420	420	70	-	1,611
	Subtotal	8,739	16,769	22,913	15,911	15,229	879	80,439
	Subtotal	9,652	57,661	86,435	79,605	47,490	12,104	292,947
B. Inclusive Entrepreneurship Finance								
	1. Affordable credit for youth and women	-	84,044	84,044	84,044	84,044	84,044	420,219
	2. Rural finance sector development	8,925	29,075	2,247	2,860	1,985	1,985	47,075
	Subtotal	8,925	113,118	86,291	86,903	86,028	86,028	467,294
C. Project Management		8,569	2,718	3,064	6,458	8,979	9,521	39,309
	total project cost	27,146	173,498	175,789	172,967	142,497	107,654	799,550
Costs not included in the EFA models	c1.1.1	913	9,625	14,871	15,045	7,264	2,982	50,700
	c1.1.2	0	3961.16	3752.49	3752.49	3523.66	2191	17180.8
	c1.2.1	2051	3323	3060	2535	2203	879	14052
	c1.2.2	210	490	420	420	70	-	1,611
	c2.1	-	-	-	-	-	-	-
	c2.2	8,925	29,075	2,247	2,860	1,985	1,985	47,075
	c3	8,569	2,718	3,064	6,458	8,979	9,521	39,309
	total project cost	20,669	49,192	27,415	31,070	24,024	17,558	169,927
INVESTMENT COST FOR FINAL AGGREGATION		20,669	49,192	27,415	31,070	24,024	17,558	

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 5: Social Environment and Climate Assessment (SECAP) Review Note

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Annex 5: Social Environment and Climate Assessment (SECAP) Review Note¹

1. Introduction

1. IFAD undertook a concept note mission in March 2018 and a design mission in April 2019 for the Talent Retention and Rural Transformation Project (TRTP). This project will be the eighth IFAD investment in the country and builds on previous IFAD experience and incorporates some innovative design arrangements that respond to key priorities that have been identified by the Government and potential beneficiaries. The missions held detailed meetings with the Consolidated Project Implementation Unit (CPIU) and met with the representatives of the Ministry of Agriculture, Regional Development and Environment, Ministry of Finance, the National Commission for Financial Markets, the Agency for Intervention and Payments in Agriculture (AIPA), the Organisation for Development of the SME Sector (ODIMM), selected partner banks, participating Savings and Credit Associations (SCA), World Bank, EU Delegation, service providers, members of SCAs, smallholder farmers, young entrepreneurs and women. The objective of the Review Note of the Social Environment and Climate Assessment Procedures (SECAP) is for the project to take into account social, environmental and climate change issues. The Review Note summarizes the development context, looks how the project might impact it with regards to IFAD's mainstreaming themes (gender, youth, nutrition, indigenous peoples, climate and environment) and makes specific recommendations how the project can mitigate risks and better include social and environmental concerns.

2. Situational analysis and potential project impacts

2.1. Socio-cultural Context

2. The Republic of Moldova, with a total area of 32,870 square kilometres, is a small, landlocked country between about 460 to 480 N latitude and 270 to 300 E longitude. The country shares borders with Ukraine to the north, east and south, and Romania to the west. The country is divided into 32 districts (raioane), 5 municipalities (muniten, which are cities with special status), and 2 autonomous territories - Găgăuzia and Transnistria - the latter being a region subject to political conflict, claiming for an unrecognized independent status. The capital of the country is Chisinau, with a population of about 786,000 people.

3. Moldova is a lower middle-income country with a gross domestic product (GDP) per capita (PPP) of USD 2,290 in 2018. It ranks 112 out of 189 in the global Human Development Index (HDI).² **Moldova is one of the poorest countries in the European neighbourhood region, but has also been one of the fastest growing. However, the country has made progress in reducing poverty.** The absolute national poverty rate fell from its peak of 73% in 1999 to 9.6% in 2015, and the extreme poverty rate declined from 59.7% to 0.2% in the same period. However large gaps remain between urban and rural areas. In 2018 growth reached 4.8% benefitting from strong domestic demand. The share of agricultural in the Gross Domestic Product was estimated to be 12 percent in 2017, with 17.88 percent being contributed by industry and 55.36 percent by the service sector.³ Together with agriculture, the processing industry represents more than 17 percent of the Gross Domestic Product and approximately 45 percent of total exports.⁴

4. **Poverty is particularly found among landless people, small and medium-scale farmers, entrepreneurs, and people engaged in agro-processing in rural areas and small towns.** In general, rural people are more vulnerable to poverty due to high (farm) income volatility and a strong dependence on remittances (World Bank & World Food Programme, 2015). The poor tend to live in larger households with higher

¹ SECAP: Social, Environmental and Climate Assessment Procedures.

² UNDP (2018) Human development report. <http://hdr.undp.org/en/2018-update>

³ <https://www.statista.com/statistics/513314/moldova-gdp-distribution-across-economic-sectors/>

⁴ Agriculture and Food Processing Republic of Moldova. 2014. <http://invest.gov.md/sites/default/>

dependency rates. In addition, their educational level is relatively low: many have not completed secondary education (Davalos & Meyer, 2015). The heads of almost 70 percent of all poor households are employed, yet their wages are too low to enable their households to leave the poverty zone. Poverty and food energy deficiency are particularly high among those who strongly depend on agriculture. In 2013, farmers and agricultural workers together account for 40 percent of Moldova's poor (World Bank, 2015b; World Bank & World Food Programme, 2015). In the current period of economic transition, the agricultural sector fulfils an important role of social support due to the fact that a large mass of migrants may return to agriculture because of the lack of better employment opportunities. In addition, agriculture further provides jobs and livelihoods for rural residents, thus mitigating considerably the adverse consequences of the aging population. In Moldova, the agriculture sector still accounts for 30 percent of employment, with an additional 24 percent engaged in low-intensity agricultural work. Also the agriculture fulfils an important social function by reducing the danger of increasing poverty and social exclusion in rural areas of Moldova.⁵

5. **Nutrition:** In 2013, 8 per cent of Moldovan households could be classified as having high food expenses (HFE), thus being vulnerable to food insecurity. This reflects a steady downward trend since 2006, when the HFE prevalence was 17 per cent. The concern is more on the calories intake, with roughly 20 per cent of households consuming less than recommended value (World Bank, 2015). In terms of nutrition, the country is in transition; undernutrition is decreasing but over-nutrition is on the increase. Currently, the country's food security and energy requirements are largely met. The Republic of Moldova has recently registered improvements across all categories of malnutrition and exhibits low overall malnutrition levels.⁶ Moldova's average level of per capita daily food energy consumption has been above the World Health Organization (WHO) recommended levels. The average level of per capita daily food energy consumption has consistently been above the values recommended by the World Health Organization, and this trend continues: the average daily consumption of around 2,400 Kcal in 2013 compared favourably with the recommended benchmark of 2,050 Kcal. Overall, the health status of young people has improved in recent years. In 2013, approximately 75% of youth aged 16-29 considered themselves in very good health, which is lower than the European Union (EU) average (92%). The youth mortality rate declined, from 91.0 per 100 000 in 2004 to 70.5 in 2014. Nevertheless, lack of awareness about youth-friendly services and lack of comprehensive knowledge about sexual and reproductive health (SRH) make youth vulnerable to health risks, such as HIV/AIDS. Young women were at risk of unwanted adolescent pregnancies. Alcohol and tobacco consumption was also high among youth, threatening their health.⁷

6. In the past decade, Moldova has made considerable progress in socio-economic and welfare development, attributed to a reduction in poverty and promotion of inclusive growth. However, there are some segments of the population who still face significant disadvantages, including smallholders, women and youth, main target group of the TRTP.

7. **Women still face discrimination and inequality in social, economic and political spheres and their representation in Moldovan politics and decision-making remains below international benchmarks.** Women in Moldova face specific education and labour market barriers due to persistent patriarchal attitudes that limit their educational choices and employment options. Women also face discriminatory practices. These include significant wage disparities, segregation into lower-paying occupations, unequal sharing of work and family responsibilities and limited access to childcare. Agriculture is an important employment sector for women in rural areas, where other jobs are not sufficiently developed. Women work more in low value added agricultural production sub sectors, operate on a smaller scale, and more likely to work as family

⁵ World Bank: Moldova Poverty Assessment, *Structural Transformation of Moldovan Smallholder Agriculture: Implications for Poverty and Shared Prosperity*, Report No. 105724-MD.

⁶ According to the Global Nutrition Report 2017 almost half of the population is overweight.

⁷ OECD Development Centre (2018), "Youth Well-being Policy Review of Moldova", EU-OECD Youth Inclusion Project, Paris.

workers. Around 36 per cent of landholders in Moldova are women, but these holdings account for only 19 per cent of agricultural lands (FAO, 2014). Land is a key agricultural resource, used for example as collateral to access credit and obtain membership of cooperatives.

8. Women entrepreneurs face barriers getting access to bank loans and to state-funded business and entrepreneurship development programmes.⁸ However, the Government and donors have initiated several initiatives targeted at women such as the Ministry of Economy's initiative to help women in business and the special initiatives for women to access AIPA resources. The EU-funded Business Academy for Women (BAW) assists women to start and manage their own businesses. The project implemented by the Organisation for Development of the SME Sector (ODIMM) has contributed to the formation of a community of entrepreneurs and the creation of a National Network of Women Mentors.

9. **Young women and men continue to face multiple and interconnected challenges.** The Youth Multi-dimensional Deprivation Indicator (Y-MDI)⁹ clearly shows that there are systematic gaps. Migration significantly affects Moldova's economy and demographics. In 2014, 24.6% of youth aged 15-29 lived abroad with a growing number leaving for economic reasons. Poverty, lack of decent employment opportunities, and low salaries were the main push factors for youth migration.¹⁰ While young people in Moldova enjoy high access to education, the quality of education is a challenge. Close to one-third of young people in Moldova are not in employment, education or training (NEET). Access to well-paid jobs and high skill employment is especially low as shown by increasing unemployment rates among youth with tertiary education.¹¹ In recent years, the employment rate of young people (15-29 years) has fluctuated between 28.4% and about 31-33.3%. The youth unemployment rate is about twice as high as in the total economically active population.¹² The share of young people among entrepreneurs remains relatively small i.e. 2.4% were aged up to 24 years and 20.3% were aged 25-34 years.¹³ Young men and women try and engage in agro-based enterprise development in rural areas of very diverse nature. The principal problem that the youth face is lack of access to systematic mentoring coaching and business plan development to identify feasible options, lack of access to capital and lack of collateral to access institutional credit, lack of technical knowledge, information and access to markets.

10. **Smallholder women and men farmers:** Despite their smaller share in the total land area, small family farms form an extremely important part of the agricultural sector, as they provide a fundamental contribution to the overall food production and food security. Smallholder farmers constitute 98 percent of farms, 30 per cent of the land and account for 71 percent of the agricultural production. A significant part of the production of corn, potatoes, vegetables, fruits and grapes are concentrated in the community of small-scale farmers that supply predominantly the local market. They not only produce as much as 71 percent of total agricultural output, but seem also to be more productive and more efficient than large farms. Therefore, the difference in productivity most likely originates from a more intense use of labor and a different production portfolio, featuring more high-value products like vegetables, wine and livestock by smallholder farms. This is explained also by the different production structure where the small-sized farms integrate crop and livestock production, while the large-sized farms are mostly specialized in crop production. These smallholders suffer from limited access to agricultural land and extreme fragmentation of land ownership. Agricultural policies especially target large farms and, to a lower degree, small farmers who aim at commercialization.

⁸ <http://eca.unwomen.org/en/where-we-are/moldova>

⁹ Which comprehensively measures whether the youth achieve the minimum levels of education, employment, health, civic participation and social inclusion to allow them to be protagonists of their own lives

¹⁰ OECD. 2018. Youth Well-being Policy Review of Moldova. https://pjp-eu.coe.int/documents/1017981/11168156/Youth_Well-being_Policy_Review_Moldova.pdf/46b60e8a-6ca9-9d21-6aeb-9099debd361c

¹¹ OECD. 2018. Youth Well-being Policy Review of Moldova.

¹² UNDP 2017: Youth on the Labour Market in the Republic of Moldova: Competences and Aspirations.

¹³ Centru Cercetări Demografice and UNFPA. 2015. Demographic Barometer Situation of Youth in Republic of Moldova: From Goals to Opportunities.

11. **Social inclusion in TRTP.** In-depth consultations were held with women, men and youth small-holder farmers and entrepreneurs in the Central, South and North region of Moldova. They highlighted the following as their key concerns: (i) marketing of produce (ii) lack of storage facilities (iii) lack of post-harvesting equipment (ii) lack of access to water (v) insufficient availability of labour for pruning & harvesting, especially skilled labour (vi) lack of access to affordable credit due to collateral requirements and high rates of interest (ii) lack of advice on market trends and crop diversification. The project is addressing all these concerns across its components and subcomponents (mainstreamed activities) with the exception of provision of skilled labour (see section on impacts and risk potential of the project). The Social Inclusion Measures by Component is detailed in the Annex 2 and is also reflected in the PIM.

2.2. Environment and climate context, trends and implications

2.2.1. Environmental assessment

12. The topography of Moldova is predominantly an undulating hilly plain sloping from the northwest to the southeast and having an average elevation of around 147 m above the sea level. The highest elevation is represented by Hill Balanesti (429.5 m) in Nisporeni district, an area with a very fragmented landscape where hilly terrain and deep valleys alternate. The parent rocks are mainly represented by sedimentary materials, such as limestone, chalk, gypsum, sand, sandstone, bentonite, tripoli, and diatomite, which can be used in construction, cement and glass production, food processing, chemical and metallurgical industries, etc.

13. **Soils.** About 75% of Moldova is covered by black soil, also called chernozem. In the northern hills, more clay-textured soils are found. In the south, red-earth soil is predominant. The soil becomes less fertile toward the south but can still support grape and sunflower production. The hills have woodland soils. The lower reaches of the Prut and Dniester rivers and the southern river valleys are saline marshes. Moldova has highly fertile and productive black soils, but these soils and other natural resources are under threat as a result of poor environmental practices.

14. **The natural vegetation** is mainly represented by forests, steppes, lakes and rivers, and covers about 15% of the territory. Forests and other wooded land in Moldova cover 13.7% of the territory (about 462,700 ha) in highly fragmented stands ranging from 5 to 1,500 ha. The steppes occupy 1.92% of the territory (about 65,000 ha) in fragments of 0.5-300 ha. The steppe flora is rich, with over 600 plant species, most of them belonging to the families Asteraceae, Fabaceae, Poaceae and Lamiaceae. Natural meadows remain only along the Prut and Nistru river basins, covering 3% of the territory (about 101,400 ha).

15. **Biodiversity.** The status of flora in steppe ecosystems is unsatisfactory throughout the republic due to the excessive and unorganized grazing and the reduction of lands with steppe vegetation. For example, the steppe zones in the southern and south-eastern regions (lower Nistru river terraces and Bugeac plains) are strongly impacted by human activities, but are still rich in typical plant communities characterized by grasses as well as oak forest groves. Rivers, lakes and other wetlands cover 2,8% of the country (95,000 ha). There are 34 dominant species of aquatic vegetation, and 83 associations, of which 37 are endangered.

3. **Water.** About 60% of the country waters drain into the Nistru river (1,352 km, including 657 km within the borders of the country), approximately 34% into the Prut river (tributary of the Danube, that flows along 695 km in the border with Romania), and the rest into a series of small rivers that directly pour into the Black Sea. Moldova has about 60 natural lakes and 3,000 reservoirs. The largest reservoirs are Costesti-Stinca (678 million m³) on the Prut river, jointly operated by Romania and Moldova, and Dubasari (235 million m³) on the Nistru river. Reservoirs in the northern and central regions play the role of seasonal regulation of water, while in the south they mainly serve for inter-annual distribution due to the region's greater water deficit.

16. The main groundwater reserves are located in deep confined aquifers. There are approximately 7,000 boreholes for groundwater withdrawal. The natural recharge capacity of the confined aquifers is limited, and there is a risk of overexploitation. The total available water resources in the country amount to 5.6 km³, including 4.3 km³ of surface water and 1.3 km³ of groundwater (including 0.7 km³ that comply with the national standards for drinking water).

17. The Prut and Nistru rivers are the main sources of irrigation water, although tributaries of these rivers are also important sources. No groundwater is used for irrigation because of the poor water quality. The Government, with TRTP aims to rehabilitate deteriorated infrastructure at priority irrigation schemes where irrigation has been found to be economically viable, and where farmers are committed to developing Water User Associations (WUAs) and utilizing irrigation facilities.

18. **Pollution.** Sources of pollution of surface water and groundwater are mainly due to households individual sanitation systems, poorly or non-treated municipal wastewater discharges from inadequate solid waste management sites and from power and industrial plants. The State Hydrometeorology Service carries out monitoring of surface water, through a network with 49 monitoring sections on 16 rivers, and 6 reservoirs. Lack of adequate sanitation systems and sanitary protection zones around groundwater sources means that 75 percent of the rural population is relying on groundwater of inadequate quality¹⁴. Investigations indicate a strong correlation between groundwater quality in unconfined aquifers and land use. Degradation of drinking water quality is also attributed to increased livestock growing by households. Due to the uncontrolled use of water from wells, the water table depth in these aquifers has increased drastically, leading to depletion of the aquifer in many regions of the country¹⁵.

19. **Agriculture** is a central pillar of the Moldovan national economy and the main source of livelihood in rural areas. It contributes close to 14 percent of the country's GDP (down from 20 percent in 2004), a figure that increases to 17 percent if the food processing industry is taken into account. Important crops are winter and spring grains, including wheat, barley and maize, as well as potatoes and other vegetables and horticultural crops and fruit. Approximately 75 percent of the population live in rural areas and depend on agriculture and related activities for their livelihoods. About 60 percent of the country's agricultural output is produced by individual farmers and household plots of 10 hectares or less.¹⁶ Agricultural output has been subject to high volatility and slow growth, driven by external weather-related factors and since 2000 agriculture has been showing much slower and unstable growth patterns than the rest of the economy. Climatic conditions have been the dominant factor with droughts becoming quite common in recent years. Crop production is particularly vulnerable to climate distress with the years of severe droughts in Moldova (2003, 2007, 2009 and 2012) have had a disastrous effect on general crop production. Agricultural ecosystems cover 75 percent of the country, but there are indications that 34 percent of agricultural lands are eroded to some degree. Intensive agricultural practices, such as overuse of pesticides, fertilizers, heavy machinery, and excessive irrigation have led to degradation, erosion, compaction of black soils and desertification is even starting in several parts of the country.

20. **Project approach.** To address those challenges, IFAD is adopting an integrating approach supported by the Adaptation Fund. The Project will specifically include the efficient use of water on-farm. It will incorporate the lessons learned and upscale a FAO pilot on the use of on-farm water efficient technologies. Farmers will be assisted be trained and supported in the use of techniques that inter alia help improve soil water storage, control erosion, improve soil structure, and boost nutrient management. It is expected that around 1300 households would benefit from these technologies (Sub-component 1.1.). Based on the FAO lessons learned the project will train and provide demand driven

¹⁴ Eptisa. 2012. Republic of Moldova's water supply and sanitation strategy.

¹⁵ Climate Adaptation. 2015. Fresh water resources Moldova. Present situation in Moldova

¹⁶ FAO. Moldova and FAO partnering to achieve sustainable food systems. <http://www.fao.org/3/a-az519e.pdf>

advisory services in irrigation systems, regimes and water quality; simple entry accounting and fiscal reporting; and in expenditures and revenues of improved irrigation systems.

21. The AF resources will also be used to address an important need identified by MARDE to help in the development of a national curricula for Conservation Agriculture and its introduction in some of the main universities in the country. The AF will also develop national capacity in CA by training Conservation Agriculture specialists and by undertaking a nationwide inventory of the extent and types of CA techniques that are being practised in the country. These are expected to help improve understanding regarding adoption rates of different CA technologies and techniques and in further refining and developing GoM policy in this regard.

2.2.2. Climate trends and impacts

22. Moldova is located in a temperate continental climate zone. The territory is characterized currently with dry or sub-humid climate ($0.50 \geq AI \leq 0.65$). Certain areas in the South-East have semi-arid climate with an Aridity Index (AI) of ≥ 0.48 , and Northern zone and the areas with altitudes above 350-400 meters above sea level have sub-humid and humid climate ($AI \geq 0.65$). Annual mean temperature averages 9.3 °C, ranging from 7.8 °C in the north to 9.9 °C in the south. Climatic seasons are a short and low-snow winter with the coldest month mean temperatures ranging from -2.8 °C to -5.3 °C – the coldest values can go down to -30 °C -, and a long summer with temperatures averaging 20 °C., temperatures can reach up to 30 °C, and in some years to 38-41 °C. Moldova has limited precipitation, ranging from around 600 mm in the northwest to 480 mm in the southeast.

23. Moldova can be divided into 3 major agro-climatic zones: (i) the Northern zone including the northern plateau along the Nistru river, the Transnistria highlands and the Balti rolling plain, with annual mean temperatures ranging from 6.3-9.7 °C, and annual precipitation between 550-600 mm; (ii) the central zone covering the Condrii highlands, where hilly terrain and deep valleys alternate, with annual mean temperature between 7.5-10 °C and annual precipitation from 500-550 mm, up to 60% falling during the crop vegetative period; and (iii) the southern zone including the hilly terrain interspersed with plains and large valleys of the Bugeac plain and the Tigech highlands, with annual mean temperature between 8.3-11.5 °C and annual precipitation of 450-550 mm. In all cases around half of precipitation falls during the crop vegetative period.

Climate change

24. Moldova ranks as the most climate vulnerable country in Europe¹⁷. Temperature and rainfall have increased in Moldova over the last century, and severe floods and droughts have been occurring with increasing regularity. During 1984-2006 period, Moldova's average annual economic losses due to natural disasters were about USD 61 million. This trend had changed significantly recently with the 2007 and 2012 droughts having caused losses estimated at about USD 1 billion¹⁸ and USD 290 million respectively. Moldova has also been significantly impacted by floods that in 2008 cost the country around USD120 million and in 2010 around USD 42 million in damages.¹⁹

¹⁷ According to the ND- GAIN1 vulnerability assessment methodology: <https://germanwatch.org/en/cr>

¹⁸ World Bank (2016) Moldova Climate Adaptation Investment Planning Technical Assistance.

¹⁹ Republic of Moldova 2020 Climate Change Strategy.

25. **Historical Trends.** The historical air temperature anomaly trends for the global and northern hemisphere baselines as well as for Moldova (figure 1^{20,21}) show that there has been an increase in temperature of more than 1 °C in Moldova over the past century, consistent with the global average (see Annex 1, three agro-climatic regions north, central and south). Past temperature trends depict a scenario that corroborates the near-term forecasts (2016-2035), namely that consistent increases

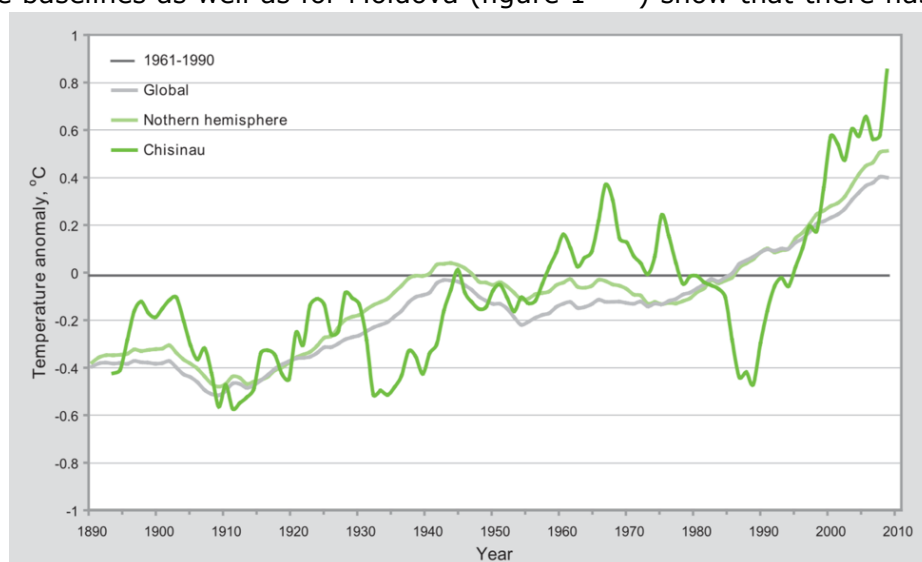


Figure 1: Anomalies to baseline on annual air temperatures

in temperature will continue. Also noteworthy is the increased incidence of torrential rainfalls across all regions of Moldova since 1981 (see figure X in Annex 1). The frequency of heavy rainfall events has nearly doubled over the period, consistent with the increased incidence of major floods. An analysis by agro-ecological zones (South, Central and North) was undertaken by IFAD²² and is presented in annex 1.

26. **Predictions.** Temperature climate model predictions have been made for the 2016-2035, 2046-2065 and 2081-2100 periods of the Representative Concentration Pathways (RCP). The RCP is a greenhouse gas concentration trajectory adopted by the IPCC for its Fifth Assessment Report (AR5)²³. The RCPs project similar mean annual air temperature increases in the short-term of between +0.9 and 1.1°C, significant changes begin to emerge from 2050 onwards. By the 2080's it is predicted that the rate of warming will be higher with an average +4.6°C under RCP8.5 (see figures 2 below)

²⁰ Smoothed with 11-year average

²¹ UNDP (2010) NHDR: Climate Change in Moldova.

²² Environment and Climate geo-referenced analysis, IFAD, 2019.

²³ The AR5 depicts four pathways have been selected for climate modelling and research. They describe different climate futures, all of which are considered possible depending on the extent of GHG emissions in the coming years. The RCPs are labelled after a possible range of radiative forcing values in the year 2100 relative to pre-industrial values (RCP +2.6, +4.5, +6.0, and +8.5 W/m²).

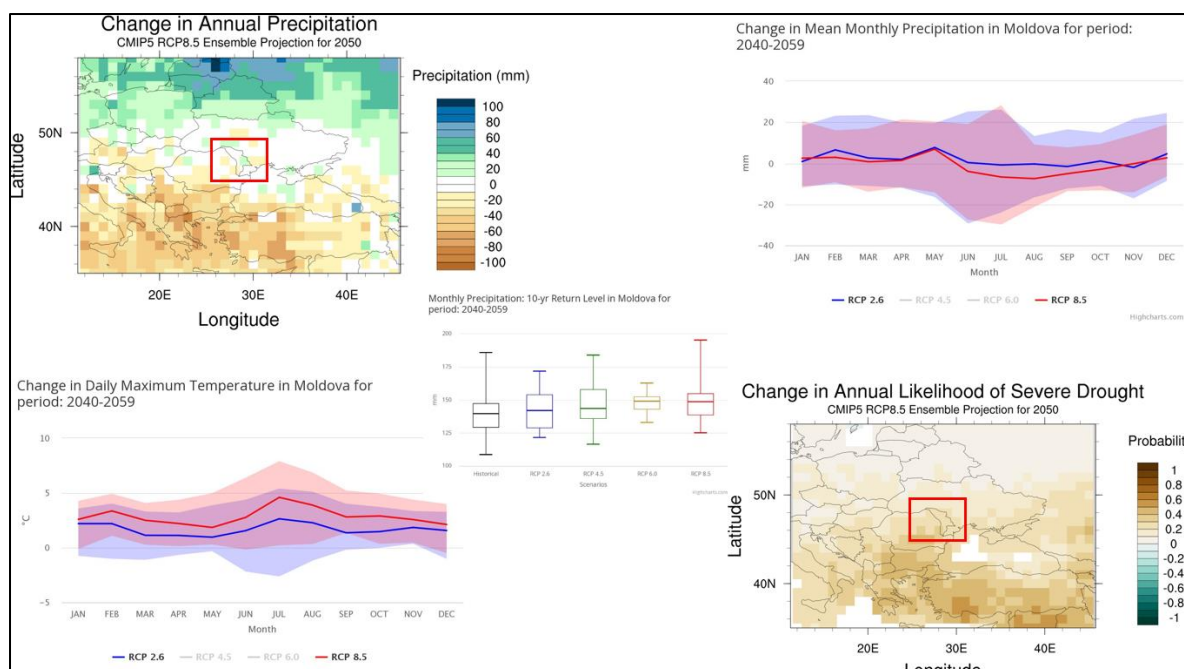


Figure 2: Change in annual precipitation (upper left), annual mean Temperature (upper right) and in Mean Monthly Precipitation (lower left) for 2050 compared to 1996-2005 baseline; Maximum Number of Consecutive Dry days (lower right) in Georgia (IPCC-CCKP).²⁴

27. **Winter temperatures** in 2100 are expected to increase across the board when compared to the 1986-2005 baseline with the greatest increases expected in the north and central areas of the country. The warming is expected to be higher during winter by up to +4.6°C in the northern agro-ecological zones (AEZs), compared to +4.2 in central and southern AEZs according to the RCP8.5 scenario.

28. **Summer temperature** increases are expected to be higher even than in winter, albeit with different spatial distribution patterns, with the highest rises occurring over the southern and central AEZs. The RCP8.5 scenario estimates that the most significant warming during summer will range from +5.9 in northern AEZs and +6.1°C over southern zones by 2100.

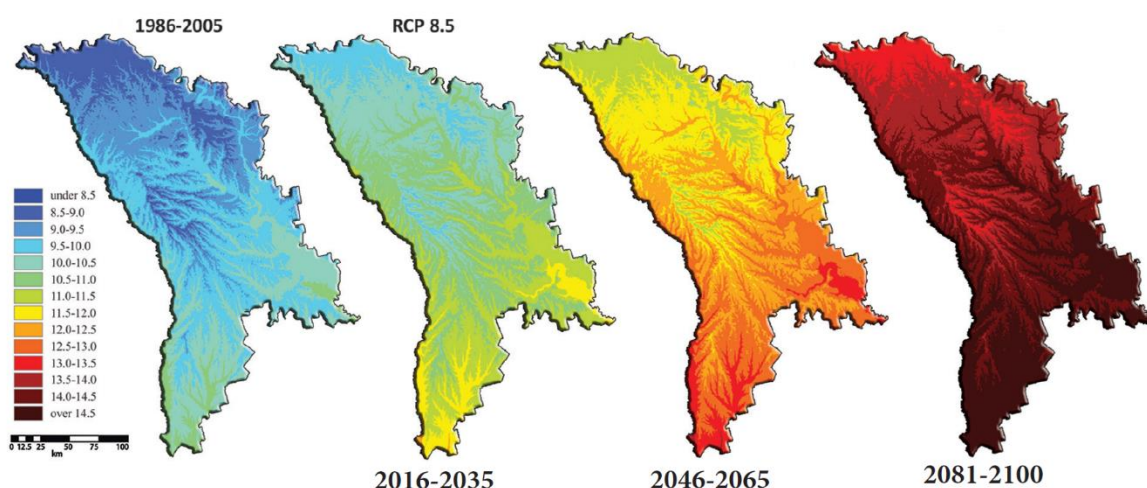


Figure 3 : Projected CMIP5 GCMs RCP 8.5 Mean Annual Air Temperature °C 2016-2035, 2046-2065, 2081-2100.

²⁴ World Bank Climate Portal: <http://sdwebx.worldbank.org/climateportal/>

29. **Annualised precipitation** climate models with RCP8.5 see uniform increases in precipitation of 0.6-2% in the near future. By the end of the century Moldova model predictions from the RCP8.5 scenario show general annual decreases in summer precipitation by 9.9% in the northern AEZs to 13.4% in the southern AEZs.

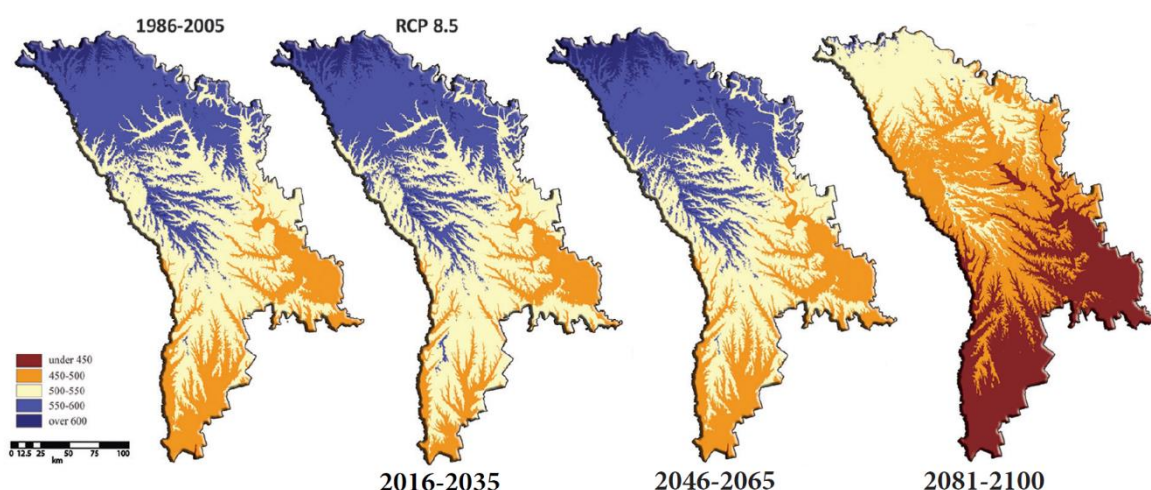


Figure 4: Projected CMIP5 21 GCMs RCP 8.5 Annual Precipitation, (mm) 2016-2035, 2046-2035, 2081-2100.

30. **Winter precipitation** climate models for RCP8.5 scenario show a general increase in rainfall during winter and spring months with the increase becoming more intense in the south during the 2016-2035 period. Multi-model projections from the RCP8.5 scenario show that Moldova would exhibit a moderate winter increase in precipitation varying over northern and southern areas. Conversely, in spring, increase in precipitation is projected to be more intense (4.9%) across northern and less intense (2.8%) across southern areas. Winters are estimated to be wetter by the end of the 21st century with projections showing the largest increases in precipitation up to 11.8% in winter over northern areas and the lowest to 7.4% in the central parts of the country by 2100.

31. **Summer precipitation.** The averages for the three RCP scenarios agree that the precipitation reduction will be much greater during summer and autumn, with all regions expected to experience increased levels of drought conditions. The RCP8.5 scenario predict the greatest summer rainfall reduction of up to 25.1% in central AEZs and 18.1% in northern AEZs.

32. **Aridity index.** In order to represent the humidity conditions, which are particularly critical for the agricultural sector, Potential Evaporation (PE) and Aridity Index (AI) are included. Projections of future changes in AI and PE place Moldova moving towards a dryer climate, from dry or sub-humid climate to dry sub-humid and semi-arid climate. For all three RCPs scenarios worsening of the humidity conditions throughout the territory is expected. Reduced rainfall in the summer and autumn period (not compensated by a slight increase in winter and spring precipitation) against a backdrop of rising temperatures will cause a strong moisture deficit and a sequential increase of the potential evaporation over the coming century. Potential evaporation is likely to increase by 7-11 percent during the growing season over the 2016-2035 period, and run up to 42-47 percent by the 2081-2100 period.

Impacts

33. Due to its overwhelming dependence on climate conditions, agriculture is the most vulnerable sector of the Moldovan economy to climate change. These agricultural ecosystems are vulnerable to droughts, floods, and extreme weather events. Climate change could undermine Moldova's food security, and is projected to negatively impact wheat and corn production, and will affect vineyards. These trends will drive more rural

families into poverty and further encourage the depopulation of rural areas. High temperatures and lower humidity will increase physiological stress and potentially affect animal growth.

Table 1: Extreme weather events impacts

Extreme Weather event	Impacts
<i>Heat waves</i>	Projections suggest that what were considered as extreme rare events for absolute maximum temperatures under the baseline climate will possibly become mean maximum summer temperatures; the frequency of hot days with temperatures above 30°C simulated by the HIRHAM4 model ²⁵ for the period 2071–2100 in Moldova, may reach 60 to 90 days a year, compared to 10 to 30 before the 1980s.
<i>Heavy rainfall and damage from hail storms</i>	The heaviest rainfall occurs in early summer and again in October, often in the form of heavy showers and thunderstorms causing erosion and river silting. Long droughts are frequent for example between 1990 and 2007 alone the country experienced 9 droughts that typically occur in late summer. When combined with high temperatures and hot continental winds these events can severely stress crops and pastures during critical stages in their growth cycle, the record drought of 2007 affected 75-80% of the country area with severe consequences for the national economy. On average, it will become (with 66% probability) more frequent, either in absolute terms or as a proportion of total precipitation – less number of rainy days with a higher proportion of heavy rain events. In summer, the frequency of wet days is projected to decrease, but the intensity of extreme events is projected to increase. These changes in heavy rainfall events have implications for crop damage through flash flooding, hail storms, urban drainage, water management, erosion, slope stability and ground water recharge.
<i>Drought</i>	The combination of higher temperatures and reduced mean summer precipitation is expected to increase the frequency and intensity of droughts, with increases in the number of consecutive dry days defined as those with precipitation below 1 mm. In southern European countries like Moldova, where the maximum number of dry days is likely to increase most substantially, the longest dry period within a year may be prolonged by one month by the end of the century. The National Hydro-meteorological Centre concluded that, based on records from 1834-2000, the probability of catastrophic droughts (less than 50% of mean rainfall) has increased significantly, from one event every nine years to almost one event every two years.

34. **The economy** is particularly vulnerable because of the limited capacity of its social and productive structures, and its heavy dependency on climate-sensitive sectors such as agriculture. Historical records show increasing temperature trends with 7 among the 10 warmest years in recorded history in Moldova have occurred in last 2 decades. Farmers are not properly prepared for the changes that are presented in the climate models, and the agricultural sector is particularly vulnerable to climate shocks. Past drought events have had a severe impact on agriculture in Moldova with the event of 2006/7 seeing yields of major crops like wheat, maize, and sunflowers being reduced by up to 50–75 percent. Droughts vary in duration from a few days to several months, however in the years (1990, 1992, 2003) the events have extended throughout the active growing season (April - September) causing particular negative agricultural impacts. The economy of Moldova already bears significant costs from climate extremes and foregoes potential benefits and these real and opportunity costs will continue to grow with a future changing climate. Potential savings from better protection against current harmful climate impacts are estimated to be substantial, amounting to more than USD 100 million per annum in total. These are mostly due to damages caused by flooding and a variety of weather impacts on

²⁵ The high resolution Hamburg regional climate model (HIRHAM4) estimates changes in maximum temperatures averaged over June– July–August (hereafter referred to as summer Tmax) for Central and South-East Europe of +4-6 °C in their mean values and of +6-8 °C – in their 99% quintiles.

agriculture, as well as the cost of climate-related health impacts (extreme heat mortality and food-borne disease). The present total cost of inaction on climate adaptation is estimated at around USD 600 million, equivalent to 6.5% of GDP. This value is expected to more than double in real terms by 2050 to around USD 1.3 billion.²⁶

35. **Water.** The most recent projections of climate change impacts on the water resource of Moldova are quite pessimistic, indicating that the 2 major basins of the country (Nistru and Prut) will experience 15.9%, 36% and 57.7% decline in available surface water resources for the 2020s, 2050s and 2080s respectively. Significant shifts in water demand and increased competition for water are likely to occur across all economic sectors in the coming decades. According to the water intensive target of national economic development, secure supply of surface waters for all water users will be threatened already in the 2020s, and groundwater supply as well by the 2030s. According to estimations, the surface water resources that are available could go down by 15-20 percent by 2020 (Eptisa, 2012, Tronza, 2014). Thus, secure supply for all water users will be threatened by climate-related change in water resources already in the 2020s (Climate Adaptation, 2015). Climate change will lead to an increase in the instability of annual flow and an increase in spring and early summer flash floods. Winter and especially transitional months will be the most affected by water temperature increases diminishing dissolved oxygen (DO) levels. Already by 2020s, water temperature increase in the Nistru river could exceed 65% in March, and the DO level could decrease by about 10% by the 2020s in the summer months. Such a change will lead to ecological changes and the degradation of the ecosystem services meaning that the agricultural sector needs to improve adaptive techniques such as mainstreaming CA and introducing climate smart water efficient technologies, both at the beneficiary but also at institutional levels.

Adaptive opportunities

36. The mid-term adaptation goal in Moldova is to reduce climate change vulnerability by 50% and facilitate adaptive capacity in six priority sectors (agriculture, water resources, forestry, human health, energy and transport) by 2020. The Action Plan on implementation of the Republic of Moldova's Climate Change Adaptation Strategy until 2020 is treated as the First National Adaptation Plan (NAP).

37. The adaptation opportunities of the country regarding agriculture are as followed:

- Implement sustainable soil management procedures, including agricultural lands and pastures.
- Ensure socio-economic conditions for profitable farming; identify new species.
- Develop hybrids and technologies that can help adapt to new climate conditions.
- Implement advanced systems for efficient use of rainfall.
- Implement agricultural systems that reduce soil erosion and degradation.

38. As presented in the PDR, the Project is mainstreaming climate adaptation throughout its components and is in line with national strategies. The Component 1.1 will focus on the sensitization and participatory analysis of the effects of Climate Variability and Change on productive activities and other means of life of families and identification of mitigation practices. The Project will pay attention to technical capacity building and training. It will carry out demonstrations and raise general environmental and climate change awareness and train farmers on the economic and environmental benefits for the adoption of systems and new technologies. The adaptive support provided through the Adaptation Fund are blended with productive inputs, which makes the package very attractive to farmers. In order to cope with water availability during the dry months, and the increase of number of storms and heavy precipitation events, the Project will support investments in infrastructures and smaller equipment and capacities for rain harvest management and complementary irrigation systems with high efficiency technologies in the use of water. To

²⁶ World Bank (2016) Moldova Climate Adaptation Investment Planning Technical Assistance.

ensure sustainability of investments, the Project will strengthen the Water User Associations and the formulation and implementation of maintenance and operation plans for rainwater harvesting and irrigation systems, avoiding waste of water.

39. **Conservation Agriculture (CA)** is an application of modern agricultural technologies to improve production while simultaneously protecting and enhancing the land resources on which production depends. The application of CA promotes the concept of optimising yields and profits while ensuring provision of local and global environmental benefits and services. CA is based on the principles of rebuilding the soil, optimising crop production inputs, including labour, and optimising profits. In deference to other approaches, conservation agriculture promotes a series of principles to achieve conservation objectives, rather than a particular technology. Through CA, farming communities become providers of more healthy living environments for the wider community through reduced use of fossil fuels, pesticides, and other pollutants, and through the conservation of environmental integrity and services.

40. CA promotes minimal disturbance of the soil by tillage (zero tillage and direct sowing), balanced application of chemical inputs, and careful management of residues and wastes. This reduces land and water pollution and soil erosion, reduces long-term dependency on external inputs, enhances environmental management, improves water quality and water use efficiency as well as the reduction of GHG emissions. CA provides good results at small and large-scale farming and it is adaptable to climate change related problems such as reduced rainfalls. CA allows for increasing soil productivity while requiring less labour than traditional methods. Higher outputs provide higher income; even if market access conditions or crop prices remain unvaried.

41. For the last 8 years all IFAD's projects in Moldova had several activities promoting CA. In the ongoing project the CA activities are focused on creating demo farms, training/capacity building and the provision of CA equipment. In the TRTP project with Adaptation Fund support, the project will consolidate IFAD's experience in this area and will move upstream to clear the bottlenecks in the regulatory and educational systems. MARDE is currently working with the State Agrarian University to develop the new action plan aimed to promote the new National Programme for Conservation Agriculture (NPCA). This strategy has not been published yet however key activities will be supported by the IFAD/Adaptation Fund. Field visits by the TRTP design team have shown that interest among farmers in CA is more widespread than is realised at institutional level. There have for example been instances where small as well as large-scale farmers with over 400ha of land, are fully dedicated to adopting CA principles mainly for the economic benefits in reduced overhead and operating costs; but how farmers large and small are interpreting the concept of CA, seems to be very much an ad-hoc affair with farmers doing their own research on the internet and through word of mouth, and is very inconsistent.

42. In support of the NPCA, the Adaptation Fund component will train of 40 professionals in the field of CA. These will be existing professionals both freelance as well as working for existing NGOs that function as open market service providers but also targeting university graduates specialised in CA and sustainable agriculture. The professionals will develop skills in CA specific advisory and service provision that is focused on smallholder farmers. The training will have a gender focus providing awareness as to the challenges women face in the agricultural sector and how to better address their needs.

43. The knowledge gap relating to the national overview of CA adoption levels among farmers will be filled through a national survey. A national convention and White Paper will contribute to formulating national policy and legislation with the main objective to develop a national curriculum on CA for higher-level university degrees and technical college diplomas. To this end the AF will support the translation and publication of textbooks and research papers into local language which currently is not available. Additionally, one female and one male student will be supported with scholarships to study CA in an international university. The TRTP-Adapt will also support the development of innovative

research into CA that will feed into the real economy through improved practices for farmers. The research grants will have a focus on smallholders and women in particular.

2.3. Target group profiles

44. **Target Group.** TRTP will benefit approximately 11,723 households. Forty percent of the beneficiaries will be women and forty percent will be youth. The number of beneficiaries for each sub-component is disaggregated by gender and age as specified in Table 1: TRTP Beneficiaries. In addition, through the sector level interventions in rural finance, 32,650 households are expected to benefit. The primary target group of TRTP is commercially-orientated small-holder farmers and youth entrepreneurs. The project will focus on women, youth and men small-holder farmers cultivating land up to 10 ha, engaged in horticulture and cultivation of high value crops. These women and men farmers face challenges in modernizing and commercializing their farming enterprise. Their constraints include challenges in increasing productivity due to limited access to finance, agricultural expertise, high quality inputs and productive infrastructure as well as uncertain climatic conditions. Their profitability is affected by lack of post-harvest facilities, quantities and quality of outputs and barriers to accessing export markets. TRTP will also focus on youth entrepreneurs, women and men from rural areas facing challenges in accessing finances and business development support to establish and expand their on and off-farm businesses. In addition, the project will engage with a range of actors such as agribusinesses, exporters, input suppliers, processors of agricultural goods, farmers with larger landholdings where they can function as aggregators, innovators and catalysts providing pathways for small-holder farmers to access national and international markets. In all project activities, there will be a strong focus on youth and women.

45. **The social inclusion strategy of TRTP** aims to empower vulnerable women, youth and men smallholder farmers and youth entrepreneurs by expanding their economic opportunities, access to credit, technical knowledge in agriculture, assets and productive infrastructure. It is expected that a minimum of 40 per cent of all project beneficiaries will be women, and 40 per cent will be youth. As the project is national in scope, the geographical targeting does not limit project interventions to a specific geographic area but prioritizes interventions in the more climate vulnerable and deprived areas throughout the country based on SADI (Small Area Deprivation Index) and data on climate vulnerability from the 4th National Communication of the Republic of Moldova on Climate Change (see "5.2. Targeting strategy" and maps in Annex 1).

46. **Targeting Approach:** Key lessons from previous IFAD experience in the country show that IFAD needs to sharpen its targeting approach with a clear focus and criterion to target smallholders, women and youth. The projects cannot rely exclusively on self-targeting if they want to reach intended beneficiaries. IFAD is also learning from its evaluation of its projects that reliance solely on providing support to the larger farmers and counting on the 'trickle down' effect to reach poor farmers or employment creation for poor people without specific strategies and proper tracking and monitoring is not an effective approach. The current design has therefore included very specific strategies to target the smallholders, youth and women by taking affirmative action, fixing criteria for selection and a strong strategy for outreach and resource allocation for specific target groups. The targeting will be supported by an awareness raising campaign to ensure free, prior and informed consent of rural communities through discussions on the project components, objectives, activities, application procedures and eligibility criteria. A more in-depth mobilization approach will be adopted for some of the *rayons* and *primarias* in the country. The selection criteria for these *primarias* will be (i) location in areas defined as most vulnerable in terms of climate vulnerability and poverty (refer to map developed for TRTP overlaying SADI with climate vulnerability in Targeting section of PIM) and (i) no previous investment in infrastructure from IFAD projects in the last 8 years. A team will be sent to hold meetings with small-holder farmers and local government to provide detailed information on the investment opportunity, explore and address barriers to application

47. Approach to training and c

48. The project will have the following targeting measures in place: sensitization of implementers and policy makers to the strategic interests and needs of smallholder farmers, women and youth; direct targeting through quotas to ensure participation in project-related activities for women, youth and smallholders; self-selection through the size of grants and choice of project activities; appropriate mobilization and operational measures to address specific constraints faced by women, youth and poorer smallholder farmers; geographical targeting through selection criteria which prioritize youth, women and small-holder farmers and entrepreneurs from climate vulnerable and poorer areas of Moldova; and empowerment of beneficiaries through business plan development, mentoring, producer associations and young entrepreneur networks. The M&E system will collect gender and age disaggregated area and monitor investments in high poverty and climate vulnerability rayons and primarias. The maps of the Small Area Deprivation Index (2014) for primarias and the climate vulnerability map will function as an important tool for targeting and tracking targeting (see Annex 8). Project management will be supported through including responsibility for implementing targeting methodologies and achieving targets in the TOR of managers and specialists in the CPIU. The targeting strategy will be discussed in the start-up workshop and supervision missions will include a poverty and social inclusion expert.

3. Institutional analysis

49. The analysis looks in the below table into the Institutions and Programmes in Moldova and the possible linkages with the Project.

Table 2: Institutions and Programmes in Moldova and possible linkages with TRTP

Institutions and Programmes	Linkage with IFAD project
The Ministry of Agriculture, Regional Development and Environment (MARDE) of the Republic of Moldova, is the result of the merging of the former Ministries of Agriculture and Food Industry (MAFI), Rural Development (MoRD), and that of Environment (MoE). It aims at strengthening the coordination and the synergies between three key and complementary sectors.	The consolidated Project Implementation Unit (CPIU) is embedded in MARDE and IFAD has a long and successful partnership with MAFI (now MARDE) that has been used for all IFAD projects. Overall responsibility for TRTP management and implementation will rest with the IFAD Programme Steering Committee (IPSC) that will be chaired by MARDE. Through the consolidation of the ministries into MARDE, IFAD is able to better streamline the environmental safeguard process of the project as the environmental permits required for the water related investments will need to be approved by MARDE and not a separate ministry. MARDE will also be represented on the Selection Committee that approves the grant proposals for sub-component 1.1.
Apele Moldovei is the State Water Administration Agency responsible for the planning and implementation of capital investments in the water supply and wastewater sectors. All applications for water related infrastructure are reviewed and approved by Apele Moldovei.	As with every IFAD project that involves water related investments, the State Water Administration Agency is a member of the Selection Committee and also gives opinions on the requests for Environment Permits. These will include on the location where the pumps are installed; the volume of water that can be used; and it approves the water limits that can be used by the applicants.
The State Agrarian University of Moldova is the only Higher Agricultural Education Institution in the Republic of Moldova. It hosts 8 faculties attended by 7000 students, and it has 25 Bachelor programs, 25 Master programs and 80 doctorates. It conducts applied research and practical work at different experimental farms subordinated to the university.	TRTP will be focused on targeting the youth, and through the Adaptation Fund, IFAD will be working closely with the University in supporting two gender-balanced Conservation Agriculture scholarships. The close collaboration will also result in the development of a Conservation Agriculture curriculum, and the translating of Conservation Agriculture text books and research papers into

	Moldovan language. TRTP will also develop the linkages between students and agrarian research institutes by promoting student cooperation with researchers and Conservation Agriculture farmers as part of their studies.
Research Institute of Field Crops "Selectia". The institute specializes in conducting long-term field experiments with different crop rotations, monoculture, different systems of soil tillage and soil fertilization in crop rotation, and irrigation in crop rotation. They have published more than 70 scientific articles and specialize in researching in long-term field experiments in crop rotations, monoculture, systems of soil tillage and fertilization in crop rotation, irrigation, weed control, soil organic matter.	IFAD could will partner with them by supporting research grants focused on Conservation Agriculture and creating links with the young university agricultural students to increase exposure and awareness about Conservation Agriculture research. Other areas of cooperation will be in the development of Conservation Agriculture demo plots, the procuring of Conservation Agriculture equipment and building soil laboratory testing capacity.
The National Agency for Rural Development (ACSA) is an agricultural non-governmental, not-for-profit organization that aims to achieve sustainable development of rural communities through the establishment and maintenance of a professional information network, consultancy and training service providers for farmers and rural entrepreneurs. ACSA claims to manage the biggest national agricultural network and the only one providing access to information, training and consultancy at local level. It manages an extension services network formed of 35 service providers, with a total of 430 consultants.	IFAD could potentially cooperate with ACSA, or other Service Providers like it, in the implementation of the Adaptation Funded activities for the developing the demo plots; the designing and implementation of the Training of Trainers (ToT) programme; and the training of extension workers and beneficiaries of on-farm water management activities. ACSA is assessed as being a highly capable organization with significant relevant experience in the areas required by the project - in providing training, specialist agricultural knowledge and operating a large extension services network.
Organization for SME Sector Development (ODIMM) is a public organization that develops and implements programs and tools to support SME sector in order to increase the performance and competitiveness of its contributing to the country's sustainable economic development and create new jobs. It has run special programmes for women and youth such as "National Program for Economic Empowerment of Youth" (2008), established The National Platform of Women in Moldova and has recently launched "START FOR YOUTH: A Sustainable Business at Home" The Main goal of the Program" to integrate young people into the economy by facilitating the launch and development of businesses through developing entrepreneurial knowledge and practical skills in evaluating and implementing the business idea, mentoring support and grants.	TRTP will help young entrepreneurs access ODIMM guarantees for collateral. TRTP will explore synergies with ODIMM for its youth proposal development and mentorship support. ODIMM has run successful programmes for women entrepreneurs. TRTP can benefit from ODIMM's experience and draw on expertise in mentoring used by ODIMM. It can also help women entrepreneurs link up with the ODIMM networks of women entrepreneurs.
The Agency of Interventions and Payments for Agriculture (AIPA) is an administrative body subordinated to the Ministry of Agriculture and Food Industry. The Agency's mission is to manage financial resources intended for supporting agricultural producers, to monitor the allocation of such resources and to evaluate the quantity and quality impact of the state's measures intended to support farmers. The agency carries out the following basic functions a) ensures the correct and legal management of the funds allocated for supporting the agricultural producers; b) examines the requests and applications submitted by the applicants, as well as their eligibility to benefit state-provided funds, according to the established	TRTP will facilitate young women and men entrepreneurs with developing proper proposals for subsidies from AIPA. Given that AIPA only provides upfront subsidies that are equivalent to 42% of the total investment costs, these will need to be matched with bank credit for those who do not have their own sources of funds and ODIMM loan guarantees in cases where the applicant does not have any collateral.

procedures and regulations; c) creates and keeps the Register of agricultural holdings; d) runs and internal control system with the aim to ensure the correctness of the applied procedures and systems, as well as to measure their performance.	
The Programme for the Development of Youth Centres for the years 2017-2022 approved by the Order of the Minister of Youth and Sports No. 65t of 6 April 2017 (PDCT 2022) this programme aims at extending the number of youth centres at national level by creating at least one (1) youth centre in each district to strengthen their institutional capacity that would allow the development and territorial expansion of youth services to assist young people in initiating and implementing their initiatives and projects.	TRTP can explore linkages with these Youth Centres if established for its own intervention with youth entrepreneurs.
United Nations Development Programme (UNDP). UNDP's 2018-2021 Strategic Plan aims to help countries achieve sustainable development by eradicating poverty in all its forms and dimensions, accelerating structural transformations for sustainable development and building resilience to crises and shocks. UNDP has around 17 ongoing projects in Moldova, it is also in the process of applying for Adaptation Fund funds for the "Enhancing Climate Resilience and Adaptive Capacities of Farming Communities by Augmenting Management with small scale water reservoirs" project.	IFAD will coordinate with UNDP to ensure that there is no overlap between the two projects, but also to explore synergies where smallholders benefitting from UNDP reservoirs are able to apply for IFAD/Adaptation Fund micro-irrigation grants.
UN Food and Agricultural Organisation (FAO). FAO partnership with the Government of Moldova is guided by four national priority areas: Alignment of agriculture and rural development policies with EU standards, through capacity development of institutions at the national and regional levels, technical assistance on international trade, sanitary and phytosanitary control systems, food safety, hygiene, food processing, and legislative harmonization; Conservation and management of natural resources; Mitigation of the impact of exceptional climatic events on agricultural production and rural livelihoods; Sustainable agriculture, with particular focus on Integrated Pest Management, the disposal of obsolete pesticides, and enabling conditions for food safety.	The Adaptation Fund project has upscaled and built on the lessons learned of a FAO pilot project "Increasing small scale farmers' resilience to drought by adopting best irrigation practices and modern technologies" (2015-2018). While the design of the IFAD project was based on interviews with project staff, at the time of IFAD project design, the FAO completion report was not finalised. IFAD will aim to coordinate with FAO to improve implementation by incorporating the completion report when available.

50. As presented in the COSOP (2018), the overall strategy 'Moldova 2020 - National Development Strategy for Economic Growth and Poverty Reduction' and at sector level the 'National Strategy on Agriculture & Rural Development' contain a number of priorities to which IFAD should align in its projects in Moldova among others: Support to adaptation and mitigation of climate challenges effects on agricultural production; Enhance investment in physical infrastructure and rural services, in particular water and roads (e.g. to access local and foreign markets); Support agricultural land and water management practices; Facilitate access to capital (e.g. by lowering collateral requirements for more investments); streamlining the guarantee terms for credits and loans; Support to young entrepreneur in the agri-food sector. Strategies identified are defined in the Annex 2 ESMP of the SECAP.

4. Environmental and social category

51. The Project is considered to be Category B (see annex 3). Overall, the Project is not expected to have any significant adverse environmental or social implications and though there may be some environmental risks associated with rural roads and irrigation schemes, these will have to be in accordance with the Moldovan national laws. Information regarding climate resilient infrastructure (C 1.1) can be found in Annex 8 - Project Implementation Manual.

52. Furthermore, through a participatory approach the project will ensure that appropriate and innovative water saving measures will be identified and adopted by climate vulnerable smallholders. The Project is designed to enhance sustainable and resilient business opportunities of vulnerable rural households through Agribusiness Development, matching grant to Young Entrepreneurs, credit to SCAs and climate-smart natural resource management promoting the territory and its environmental integrity as main driver of local economy.

53. The project is aligned to the National Environmental Strategy and will comply with national environmental standards. The design details the environmental screening that meets IFAD's requirements under the SECAP and how the project will address the ESA principles and presents an Environmental and Social Management Plan (SECAP annex 2).

5. Climate risk category

54. The Project's climate risk classification is: moderate (see annex 3). Based on assessments undertaken during preparation of the concept note and detailed design, the Project is expected to be moderately sensitive to climate risks, mainly due to the exposure of Moldova's agriculture sector to expected changes in temperature and rainfall. However, a key aim of the programme will be to reduce the vulnerability of the rural poor to those risks and Project's funds are allocated to ensure climate adaptation and resilience of both infrastructures and livelihood strategies of rural poor.

55. Climate adaptive and environmental benefits are at the basis of the Project, made possible through Adaptation Fund support that help mitigate the identified adverse environmental and climate risks from a changing climate - in terms of future water scarcity the impact this will have on agricultural production and food security. The Project will mitigate any negative environmental impacts through increasing awareness of climate change and the impact that start-up businesses may have on overall water consumption. It will help promote innovative water efficient solutions along the value chain but also specifically for climate vulnerable farmers. Solutions like water efficient drip irrigation have been shown to simultaneously reduce water consumption while also increasing agricultural productivity, with farmers recovering investments within a year. Reduced overall water consumption will ultimately reduce the stresses on the water supply and hence improve the resilience to climate shocks, with reduced financial impacts.

6. Recommended features of programme design and implementation

6.1. Mitigation of vulnerabilities

56. The programme is applying a resilience model to identify adaptation actions to be supported and develop a scorecard to monitor changes in resilience for programme targeted households. The population's future well-being in the Moldova depends on the resilience of communities, cities and eco-systems, and resilience provides a critical point of integration for adaptation strategies. Building resilience is about the suitable actions taken at present time so that the impact of inevitable shocks and stresses are minimized and the rebound accelerated. The resilience model is exposed in Annex 2.

57. The aim of the project is to build climate resilience into the agricultural value chain, while at the same time improve productivity, product quality, and food security and reduce poverty. It will do this through the development of Climate resilient infrastructure, the promotion of climate resilient agricultural techniques, water-efficient climate smart irrigation technologies, DRR approaches to mitigate against storms, capacity building, awareness raising and improving governance through policies, strategies, laws and

legislation that will benefit CA and sustainable water management (SWM) and the development of Entrepreneurship Finance. The Adaptation Fund will be fully integrated into the IFAD project. The targeting strategy have developed and criteria determined as detailed below.

Systematic monitoring of adaptation benefits and resilience

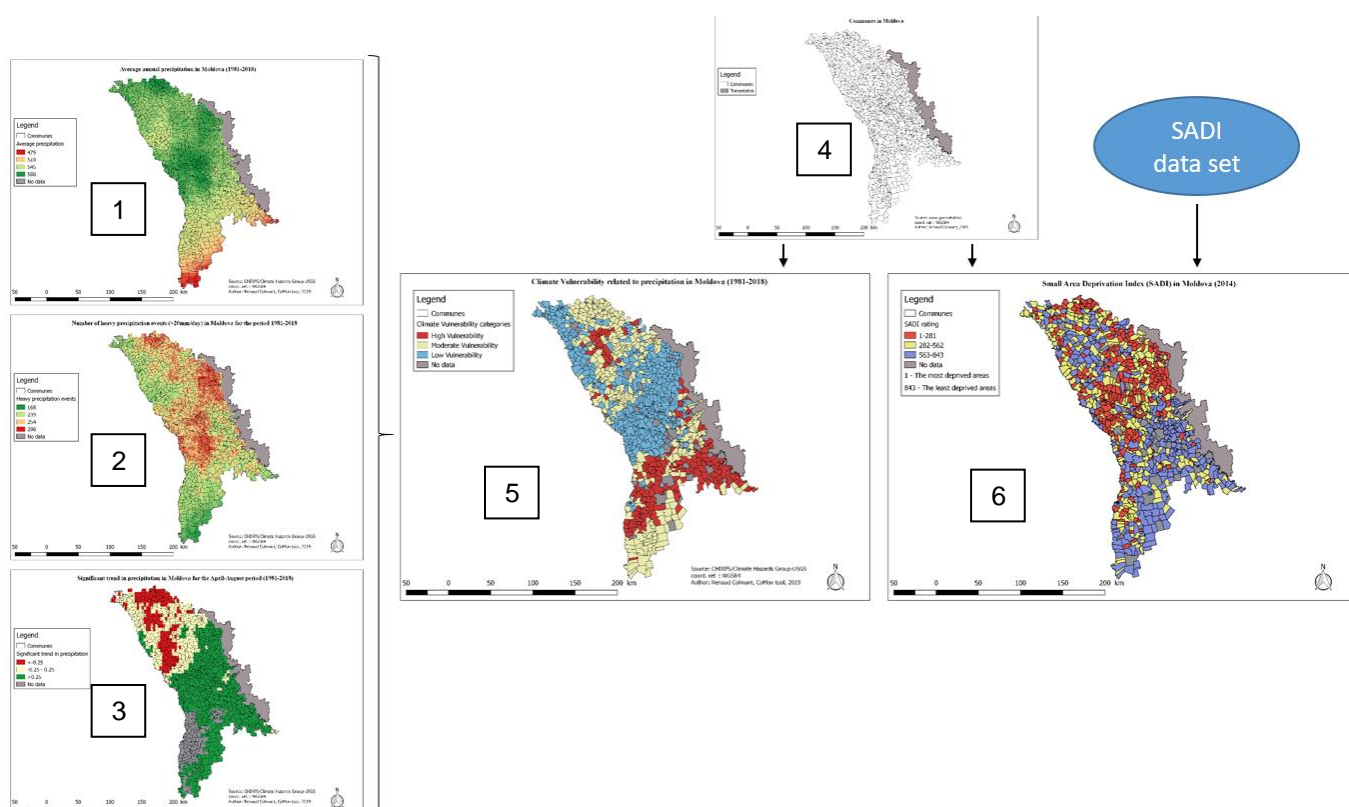
58. The planning will identify the interest of the farmers in participating in the demonstrations and monitoring of the production, economic and resilience benefits of the development approaches implemented. Results of the demonstration will be showcased and visits will be arranged for farmers and other stakeholders. Capacity building will also be provided to those demonstration farmers. The system aim to give more options to farmers and in doing so increase their resilience to market and climate variability²⁷.

59. The matrix in annex 2 identifies the risks and vulnerabilities of rural households, activities that may be included in small production, entrepreneurship development to address these (see section 8 below in this annex and the Monitoring and Evaluation appendix X in this PDR).

6.2. Targeting strategy

60. The SECAP and the targeting strategy of the Project includes two indicators in the scoring of the interventions at communal level (see Annex 8 – PIM – Selection - Qualification and ranking – Scoring for Irrigation, Feeder Road and On-farm Climate Adaptive Water Management Investment Proposals):

- Small Area Deprivation Index (SADI), from 12 indexes (see annex 3) and disaggregated at communal level (map created by IFAD, 2019).
- Climate Vulnerability based on the Annual Rainfall, the Heavy precipitation (>20mm/day) events and the Precipitation significant trend for the 1981-2018 period.



²⁷ For more details, kindly refer to the Appendix 8, component 1.1 and 1.2.

Figure 5: Methodology of conception of the Climate vulnerability (5) and Small Area Deprivation Index (SADI) (6) maps at communal level in Moldova. Climate vulnerability map is based on the Annual Rainfall (1), the Heavy precipitation events (2) and the Precipitation significant trend (3) for the 1981-2018 period. The SADI map is based on the SADI data set. Both indicators are aggregated at communal level (4).

61. As stated in the section "2.2.1. *Environmental assessment*", water is a limiting factor for agriculture in Moldova and the groundwater cannot be used for irrigation purposes. Actual precipitation and its trend are therefore precious indicators to evaluate climate vulnerability in the country (as done in the 4th National Communication of Moldova defining the *Contemporary mean climatic flow of water or water availability*, Figure 5-69, page 238). Likewise, heavy precipitation and storms are one of the main cause of erosion in Moldova (together with high winds) and a useful indicator to locate climatic vulnerable areas. Those three indicators were weighted and aggregated to produce the Climate vulnerability map.

62. Each locality will have a SADI and Climate Vulnerability score to be used in the Project Implementation Manual for scoring proposals of investment of the Project. The most vulnerable localities will benefit of such a methodology and will have a better chance to be selected.

7. Further studies needed

63. The TRTP will assist Government in making a nationwide inventory of conservation agriculture techniques and practices that are being followed and use this to further refine its approach. Furthermore, the baseline will include gathering data for the Women's Empowerment in Agriculture Index. The WEAI was developed to track the change in women's empowerment levels that occurs as a direct or indirect result of interventions. The Index aims to increase understanding of the connections between women's empowerment, food security, and agricultural growth. It measures the roles and extent of women's engagement in the agriculture sector in five domains: (1) decisions about agricultural production, (2) access to and decision-making power over productive resources, (3) control over use of income, (4) leadership in the community, and (5) time use. It also measures women's empowerment relative to men within their households²⁸.

8. Monitoring and Evaluation

64. **Project Monitoring and Evaluation (M&E)** will be under the oversight of the PMU, and led by the M&E officer who will work closely with the implementing partners. The M&E system should: (i) produce, organize and disseminate the information needed for the strategic management of the Project, (ii) document the results and lessons learned for internal use and for public dissemination on the achievements and (iii) respond to the information needs of Adaptation Fund, IFAD and the Government on the activities, immediate outcomes and impact of the Project. A monitoring and evaluation manual that will describe a simple and effective system for collecting, processing, analysing and disseminating data will be prepared in the first year of the Project.

65. A computerized database will be developed that will enable the generation of dashboards used in IFAD projects. The system will be regularly fed from data collected in the field by the implementing partners and the various studies carried out as part of the projects' implementation. The monitoring and evaluation system will be coupled with a geo-localized information system (GIS) that will allow mapping and spatio-temporal analyses. Trainings will be organized to strengthen the capacities of the various stakeholders involved in the monitoring and evaluation system.

66. Day to day monitoring of implementation progress will be the responsibility of the project team, based on the project's Annual Work Plan and its indicators. During the first months of the project, the project team will complete and fine-tune baseline data for each indicator, and will define and fine-tune performance. Specific targets for the first year of

²⁸ https://www.feedthefuture.gov/wp-content/uploads/2018/03/weai_brochure_2012.pdf

implementation, progress indicators, and their means of verification will be developed at the Start up Workshop.

Annex 1 – Environmental and Climate analysis by Agro-ecological zones.

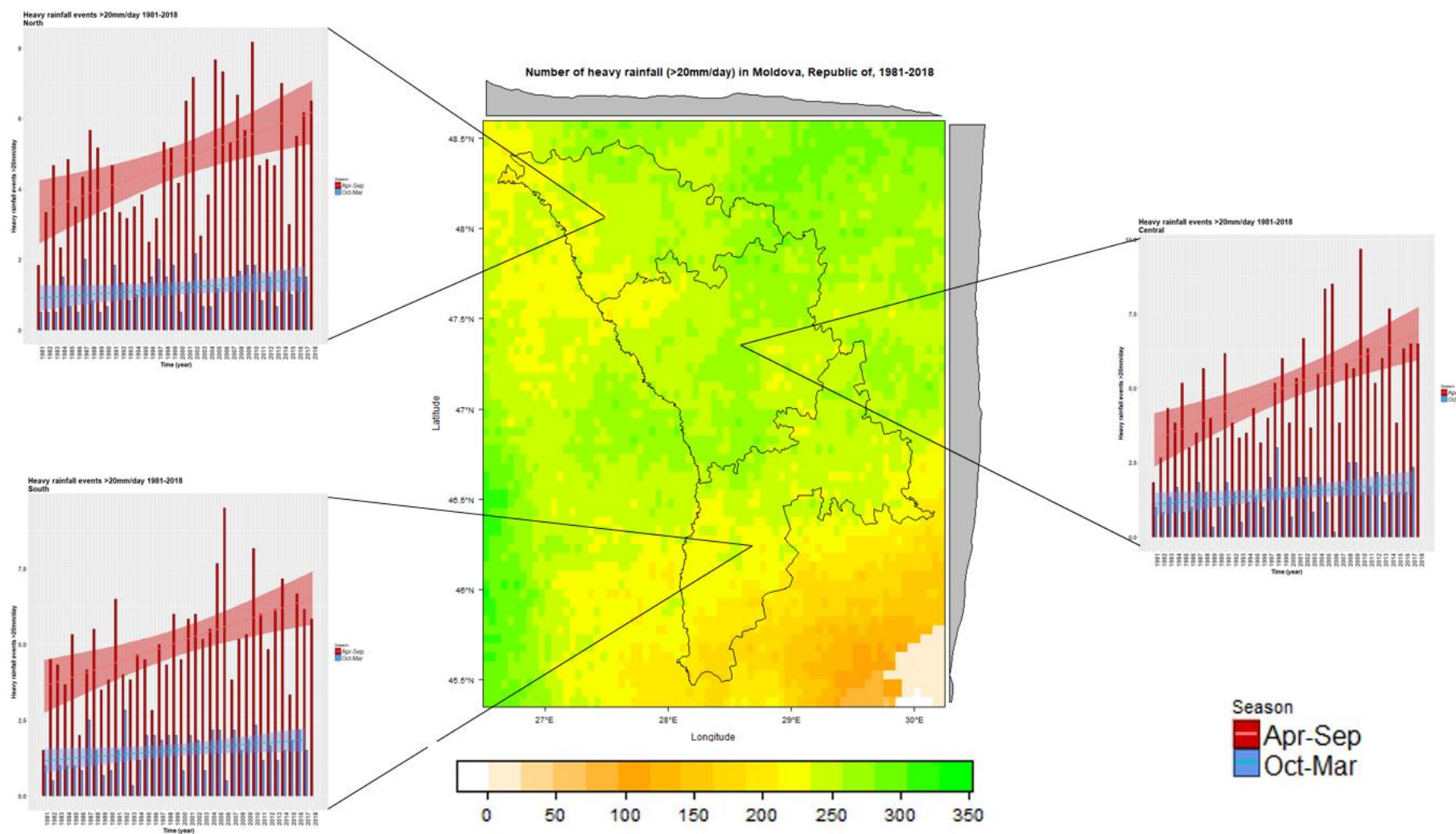
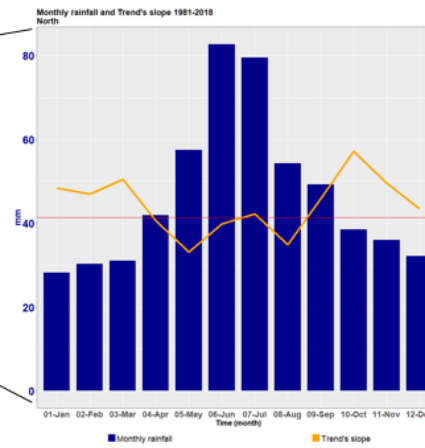
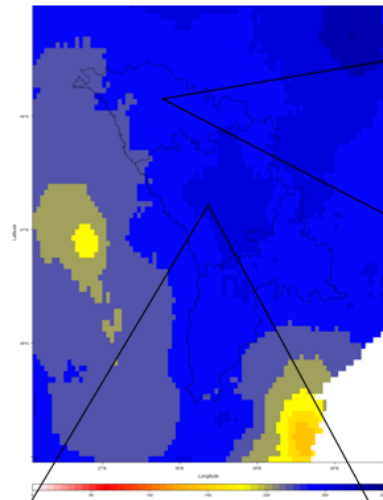
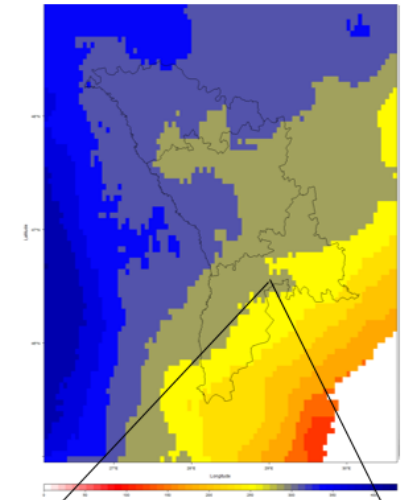


Figure 6: Number of heavy rainfall (>20mm/day) in Republic of Moldova by AEZ, 1981-2018. Source: CHIRPS. Prepared by IFAD

Precipitation average Sept-Mar, 1981-2018



Precipitation average Apr-Aug, 1981-2018



Precipitation Trend, Apr-Aug, 1981-2018

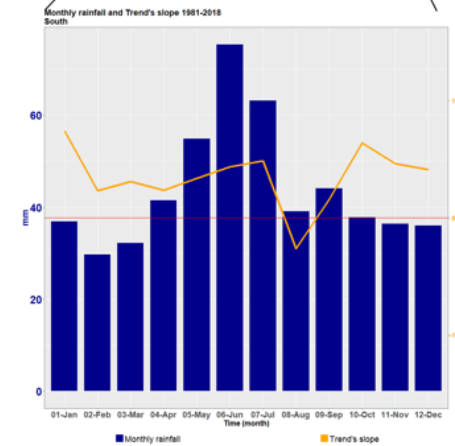
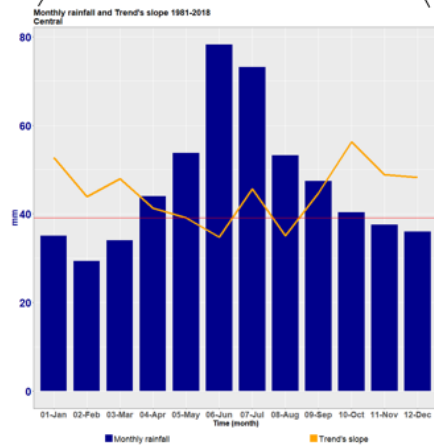
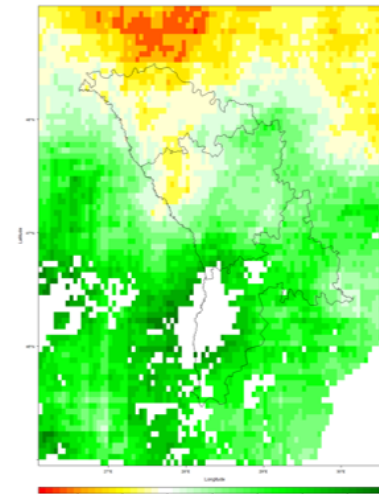
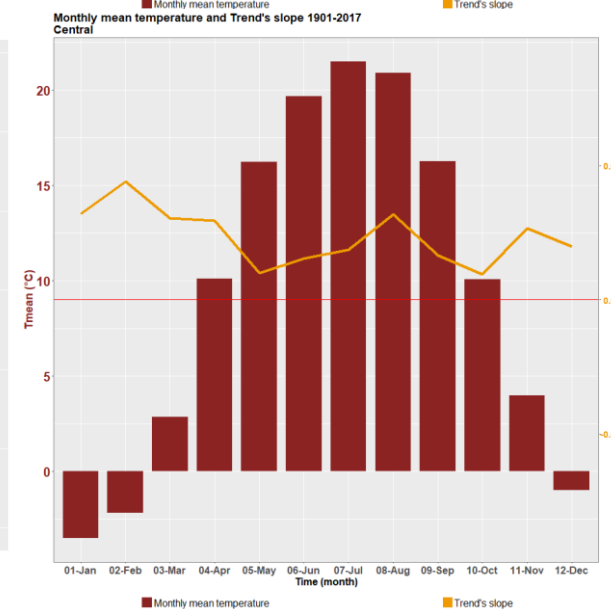
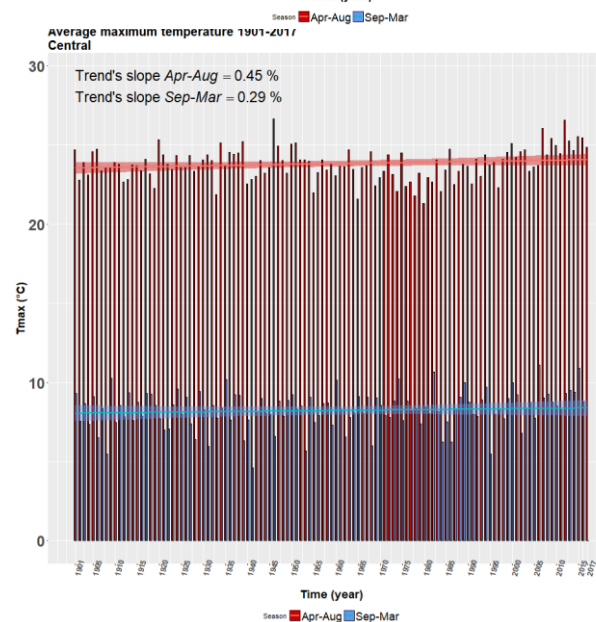
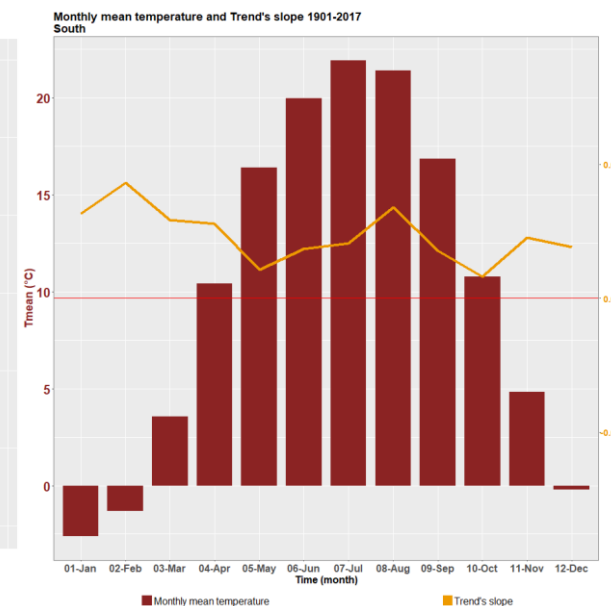
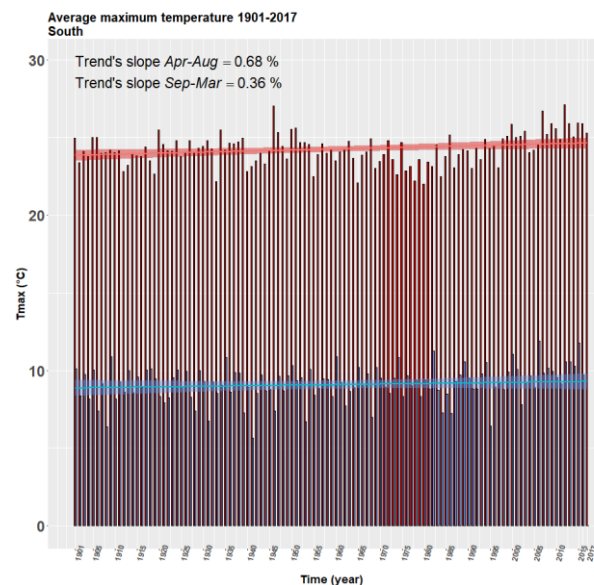


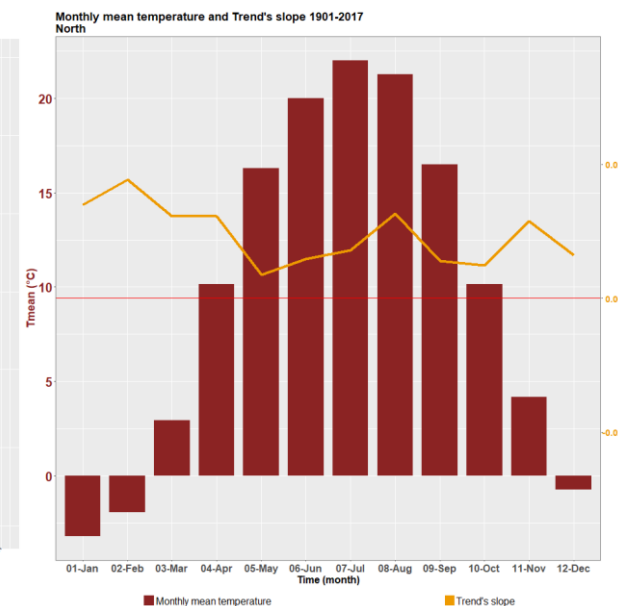
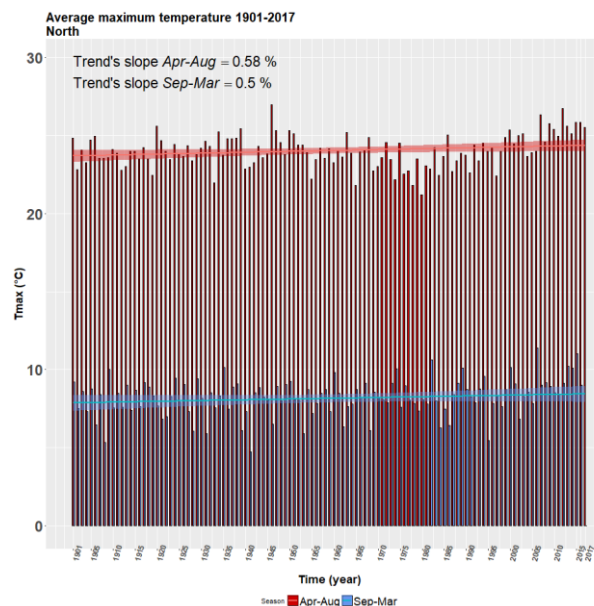
Figure 7: Precipitation averages and trends by AEZ in Moldova, 1981-2018. Source: CHIRPS. Prepared by IFAD.

South agro-climatic zone: The average temperature has increased since 1901, especially during January-February and August, with a steady increase of 0.68% for the average maximum temperature in Apr-Aug. According to the climate change scenarios for Moldova, predictions indicate that some parts of this agro-climatic zone will experience a new bio-climate ("semi-arid") that will gradually become predominant by the end of the century, while the water deficit will be exacerbated. Surface erosion and ravines highly affect the western part of this agro-climatic zone. This zone has the higher poverty percentage, and small households are very much dependent on livestock and grazing, which are severely affected by the more frequent and intense drought periods.

Central agro-climatic zone: The average temperature is increasing since 1901 for every months, particularly for the period Jan-Apr and in Aug. The Maximum temperature is increasing by 0.45% for the Apr-Aug period since 1901. CC predictions conclude that the southern agro-climatic zone dry sub-humid conditions will shift into most parts of the central zone (except for the highlands of the sub-zone, where insufficient wet conditions will shift to wet sub-humid); it is likely that semi-arid conditions will reach the south-eastern part of the zone in the Anenii Noi district, near Chisinau. This means that the chronic problems of water deficit from the southern region will spread into the central zone. Very high surface erosion and the risk of landslides already affect significant parts of this agro-climatic zone, and will be aggravated by the expected concentration of the annual rainfall in short events of heavy rain.



North agro-climatic zone: The average temperature is increasing since 1901 for every months, particularly for the period Jan-Apr and in Aug. The Maximum temperature is increasing by 0.58% for the Apr-Aug period since 1901. CC predictions for the project point out that the southern agro-climatic zone dry sub-humid conditions will shift into the sub-zone and the southern half of sub-zone; this will represent a major shift of bio-climate conditions with potential dramatic effects in terms of water deficit. In the northern extreme, insufficient wet bio-climate conditions will shift to wet sub-humid. High surface erosion and ravine formation already occur in the southern parts of the sub-zone, although laminar erosion affecting the humus horizon is widely spread in the whole agro-climatic zone.



Under climate change, there could be severe water shortages in the Raut basin in particular, but also the Upper and Lower Nistru basins. The United Nations Development Programme estimates that available surface water resources will diminish by 16 to 20 per cent already in the 2020's, threatening secure water supply for all users. Southern Transnistria and the Central region are the most vulnerable to the expected changes in water availability. The expected impact of diminishing water resources in the near future can be differentiated into three types of areas: traditionally water deficient zones, areas with vulnerable populations, and Central Moldova. Areas with vulnerable, mainly rural, populations, especially the southern Transnistria region, are already experiencing water shortages as well as decreasing water table depth in unconfined aquifers due to overexploitation. Central Moldova is exposed to the complex impact of likely diminishing water resources on both rural and urban populations.

Annex 5.2 – ESMP

1. Resilience is the ability to cope with adverse shocks and stresses, and to adapt and learn to live with changes and uncertainty. The 'ability to resist, recover from, or adapt to the effects of a shock or a change'²⁹. 'Resilience is a long-term approach, not only focussed on the ability to bounce back but also integrating adaptation and transformation while undergoing change'³⁰. Indeed, building resilience delivers near-term economic benefits and jobs, while making everyone better prepared when a shock hits. There may be upfront costs to get this done, but money will be saved later: It costs sometimes more to rebuild in the wake of a disaster than to build in a way that can withstand the shock. Resilience can be approached at different levels, such as at the level of agroecosystems or productive territories, countries, communities or families, and facing different crises and shocks.
2. To a great extent, increasing resilience can be achieved by reducing vulnerabilities and increasing adaptive capacity. This can be achieved by reducing exposure, reducing sensitivity and increasing adaptive capacity, for every type of risk. The programme uses a resilience model focused on vulnerable rural families. This model helps to define the strategies of programme interventions to support the vulnerable rural in improving the management of natural resources and adaptive capacities to climate change. The model followed in the Project is based on an identification and grouping of factors that contribute to the households' capacities to face climate related stresses and shocks, reducing their effects and to recover quickly avoiding persistent adverse effects. The model is explained in more detail in the following figure.

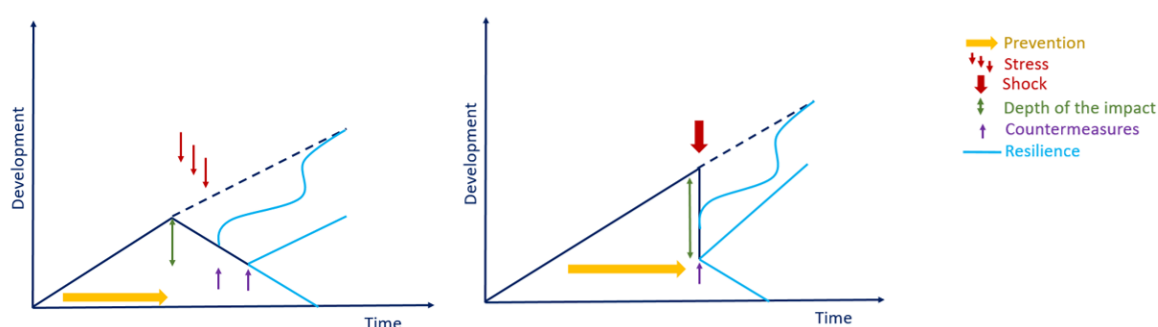


Figure 8: Impacts of shocks and stresses on development pathways depending on different levels of resilience

3. The previous figure illustrates how factors, prevention strategies and associated countermeasures contribute to the resilience of households based on their influence on them:
 - the depth of the impact (in green) that the shocks (graph on the right) and the stresses (graph on the left) have on households;
 - the ability of households to recover (in blue) after a shock (graph on the right) and stress (graph on the left).
4. The depth of the impact depends on factors such as: i) the management of natural resources; ii) diversification of crops, income and means of subsistence; iii) the quality of the diet (health); iv) access by road and transport and other services; v) the quality and location of the assets (infrastructure, fields and equipment); vi) the existence of an early warning system and prevention strategies; vii) membership in social networks and/or producer organizations; viii) the knowledge and skills necessary to understand climate trends, the risks and possible impacts on the means of production and subsistence, and the effectiveness of the available adaptation options.

²⁹ IDS, 2012 - Resilience: New Utopia or New Tyranny?

³⁰ BC3, 2011 – Multidisciplinary perspectives on urban resilience

5. On the other hand, the capacity and speed of recovery and adjustments depend on factors such as: i) savings; ii) access to credit; iii) insurance (where life, health, home insurance, etc. are generally more important than agricultural insurance); iv) the effectiveness of public (and private) response programs; v) access by road; vi) the ability to access new technologies and adopt them in subsistence activities; and, again, I saw) belonging to social networks and/or producer organizations.
6. In figure 8, the blue lines illustrate different impact and recovery scenarios depending on the presence or not of factors of resilience, preventions and countermeasures. When a stress or shock situation occurs, the depth of the impact can vary and recovery can take households to a different level of well-being compared to the initial state, depending on resilience factors and capacities. Finally, a systematic learning process after a crisis or shock, or as part of the evaluation of the effectiveness of the approaches applied to cope with increased tensions, is an additional factor to strengthen resilience in order to rebuild and adopt something better every time based on the lessons learned.
7. The environmental and social screening that has been presented in the table in Annex 3 has predominantly identified at the concept note and design level, for there to be no or low risks related to the Project. Based on the findings the project has been categorised as a category B project. The full design mission conducted public consultations at the ministerial levels, beneficiary as well as with donor and partner organisations, NGOs, civil society, academia and women and farmer associations operating in Moldova. Records was kept as evidence of all consultations.
8. The project has conducted gender-disaggregated data gathering exercises by the gender design specialist. This was conducted by incorporating IFAD gender guidelines as well including AF guidelines³¹. The social inclusions measures are presented in detail below by component and are compiled in the table 1 as a respond to specific risks.

Social Inclusion Measures by Component

Component 1: Resilient Economic Transformation.

9. 1.1.1 Climate Resilient Infrastructure (CRI): Investments in irrigation infrastructure will focus on micro and small irrigation schemes. Investment in rural roads improvements will be directed to rural feeder roads and ancillary structures that complement and strengthen project investments by assuring adequate access to production areas and facilitating marketing of smallholder farmers produce.
10. The information awareness campaign for this sub-component will be followed by a more in-depth mobilization approach for primarias located in areas with (i) high levels of climate vulnerability and poverty and (ii) with low levels of investment in infrastructure from IFAD projects in the last 8 years. A service provider will be contracted to hold meetings with small-holder farmers and local government to provided detailed information on the investment opportunity, explore barriers to application and support the application process.
11. The eligibility criteria for irrigation schemes requires that unless a minimum of thirty percent of the beneficiaries of the irrigation scheme are smallholder farmers with up to 10 ha of land, the irrigation scheme will be disqualified. Applications for feeder roads will only be considered if at least 50 households are benefiting. In addition, out of the 5 ranking criteria, for both roads and irrigation, three are focussed on targeting vulnerable smallholder farmers and account for 60% of the weightage: (i) Number of benefitting households (smallholder farmers with less than 10 ha land). (ii) Climate change vulnerability and (iii) Irrigation deprivation ranking extracted from the Small Area Deprivation Index) for irrigation and the ranking for roads for feeder roads.
12. 1.1.2 On-farm Climate Adaptive Water Management: Smallholder farmer's resilience to climate change by fostering the adoption of climate smart, water saving technologies and building smallholder awareness and capacity in climate adaptive agricultural practices. Grants up to \$2500 will be provided to support small-holder farmers. The project will train

³¹<https://www.adaptation-fund.org/document/guidance-document-implementing-entities-compliance-adaptation-fund-gender-policy-2/>

and provide demand driven advisory services in irrigation systems, regimes and water quality; simple entry accounting and fiscal reporting; and in expenditures and revenues of improved irrigation systems. Only those farmers with up to 10 ha of land (owned and cultivated) will be eligible for these grants. Application forms for these grants will be simplified to suit the needs of the target group. A minimum of thirty-five percent of the farmers benefiting from grants and training will be women and fifty percent will be youth.

13. The general information awareness campaign for this sub-component will be followed by in-depth mobilization of smallholder farmers through the service provider contracted for Sub-component 1.1. The mobilization will begin in the primarias that have been identified as highly climate vulnerable with high levels of deprivation (see Annex 1 for Climate Vulnerability and SADI maps). The mobilization will be informed by a youth-sensitive awareness campaign using channels such as Facebook, Instagram and universities.
14. In recognition of the fact that women and young persons can be actively managing farms without being registered as owners of the peasant farm, women and young persons managing farms will be eligible if they are administrators or even members of a peasant farm. In addition, applicants will not be required to submit financial statements of the previous years. Farmers who are not registered as peasant farmers can apply if they provide evidence of having initiated the registration process at the point of application. The option of opening a transitional commercial bank account will be available for farmers who do not have the resources to invest in the equipment up-front and be reimbursed later. The bank's fee for the transitional commercial bank account will be borne by the project.
15. The training will be organized by a competitively selected service provider and delivered at the primaria level. The service provider will prioritize primarias that are most vulnerable from the climate and poverty perspective using the specified criteria and the maps developed for TRTP (Figure 1). The training groups will comprise an average of 20 farmers of which a minimum of thirty-five percent will be women and 50 per cent will be youth. The eligibility criteria for the training is that the farmers have no more than 10 ha of land (owned and cultivated). The service provider will design and deliver the training keeping in mind the number of hours and timings preferred by smallholder farmers, especially women farmers. The benefits of climate adaptive water management for small-holder farmers will be highlighted by disseminating the impact and key lessons from the intervention through developing video-clips for sharing through multiple channels such as Facebook, TV, agroinform websites.
16. The Adaptation Fund resources will also be used to provide two competitively selected and gender-balanced scholarships to young Moldovan agronomists to specialise in Conservation Agriculture. It will be mandatory to involve young students as researchers under the research grants sponsored by the Adaptation Fund for conservation agriculture. At least one of the research grants will focus on the implications of conservation agriculture for smallholder farmers and explore international best practice. Each research will be required to address the gender dimension of the subject. The participation of women farmers, small-holder farmers and youth farmers will be ensured at conferences and consultations to be held to prepare for consensus on the definition of Conservation Agriculture. In the development of the national curricula for Conservation Agriculture there will be a focus, to the extent possible, on conservation practices that can be adopted by smallholder farmers. In the nationwide inventory of the extent and types of CA techniques that are being practised in the country, findings will be disaggregated by size of landholding cultivated (owned plus rented) by an entity.

Sub-Component 1.2 Agribusiness Development

17. 1.2.1 Strengthening Value Chain for Producer Groups: This sub-component will be focused on enhancing the potential for agri-processing and agribusiness in rural areas aimed at individual farmers willing to undertake agro-processing and agribusiness development through producer groups, farmer associations or cooperatives. It is expected that this component will benefit 10 producer groups (PG) with around 600 beneficiaries. A minimum of 70 percent of the members of these producer groups will be farmers cultivating land up

to 10 ha (owned and cultivated). Thirty percent of the beneficiaries will be women and forty percent youth.

18. The service provider engaged to identify potential value chains will use potential for smallholder farmer engagement (up to 10 ha), especially women and young farmers as critical selection criteria. In recognition of the fact that women and young persons can be actively managing farms without being registered as owners of the peasant farm, women and young persons managing farms will be eligible if they are administrators or even members of a peasant farm.
19. The project investments in the market infrastructure and processing facilities will represent an equity investment on behalf of the smallholder farmers who are members of the producer group, association or cooperative. It is envisaged that the project investment in the marketing infrastructure will be in a ratio of 80:20 with Producer Groups having 80% of the share with a private investor having 20% of the share. However, this ratio will be negotiated based on the capital invested by the Producer Group and the private sector partner. Thirty per cent of the directors on the board of the entity managing the group, association or cooperative will be women. The participating smallholders will, in addition, to getting a more secure market for their produce and a higher price also benefit from the dividends that are distributed annually to shareholders.
20. 1.2.2 Strengthening MARDE Technical Capacity: The project will strengthen the capacity of MARDE by providing it technical specialists for economic and market analysis. These specialists will be sensitized to the potential of engagement with smallholder youth, women and men farmers through exposure to the experience of TRTP in capacity building, organization of producer groups, and innovative arrangements in organizing the market facilitation meetings, partnership with private sector entities and the experience of PGs in the equity partnerships. This will help to identify any policy implications, modify and refine policy as required for supporting small-holder farmers.

Component 2. Entrepreneurship Finance

21. Subcomponent 2.1. Affordable credit for youth and women: This intervention enhances access to credit for women and men smallholder farmers, youth entrepreneurs (YE) and rural entrepreneurs. Smallholder farmers and rural entrepreneurs will be provided access to credit through providing a line of credit to SCAs, the financial institutions serving the rural poor. Forty percent of the beneficiaries will be women and 40 per cent will be youth. Young entrepreneurs will be provided with a loan plus matching grant (40 %) package of up to 150,000 USD for capital investment and working capital. The ceiling for these packages has been increased to 150,000 USD from the 100,000 USD under IFAD 7. This increase in amount is based on feedback from YEs requiring higher level of investments required for post-harvest and processing facilities. Ninety percent of the grant-loan packages are reserved for microenterprises (see Table 2: Definitions of Micro, Small & Medium Enterprises). Small enterprises will only be eligible for this package if they can prove that the investment will serve smallholder farmers, women and/or youth through providing employment, purchase of commodities or access to markets. Forty percent of the loans for YE will be reserved for women.

Table 1: Definitions of Micro, Small & Medium Enterprises

	Micro	Small	Medium
Number of employees	1-9 employees	10-49 employees	50-249 employees
Average annual revenues	< MDL 3 million (EUR 135 000)	< MDL 25 million (EUR 1.1 million)	< MDL 50 million (EUR 2.3 million)
Average annual total assets	< MDL 3 million (EUR 135 000)	< MDL 25 million (EUR 1.1 million)	< MDL 50 million (EUR 2.3 million)

Source: Republic of Moldova (2006), Law No. 206-VXI of 7 July 2006: On Supporting the SME Sector, Republic of Moldova.
Note: Exchange rates for EUR amounts as of 1 September 2016.

22. The information dissemination and awareness raising campaign will be informed by youth focussed strategies such as the inclusion of instagram, facebook, active engagement of successful young entrepreneurs in presentations in universities and primarias. In addition,

a mobilization campaign will target and support youth in primarias which are the most vulnerable in terms of climate and poverty and where previous participation of YE in IFAD projects has been negligible or low. The provision of support in developing proposals and mentoring under subcomponent 2.2 is designed to overcome any barriers that young women and men may face due to lower levels of education or exposure.

23. Subcomponent 2.2. Rural finance sector development: This sub-component is targeting the rural poor by strengthening the SCA sector that serves their financial needs. The project will make a pioneering contribution to consumer protection of the rural poor and their sustainable access to finance by providing the National Commission for Financial Markets (NCFM) with a stabilization fund for SCAs and a deposit insurance fund. The development of the necessary regulations for the implementation of the amendments to the SCA law will also be supported. The Stabilization Fund will indirectly benefit about 25,300 SCA members over the course of 5 years. The deposit fund will ensure 100% coverage for 89% of all SCA deposits. About 7,300 current depositors of SCAs will directly benefit through protection of their deposits. The SCAs will be further strengthened through support for the creation of the Central Association of SCAs, provision of software for reporting and accounting, calculation and disclosure of effective interest rates on SCA loans to customers and the provision of trainings to SCAs. The project will further strengthen the capacity of NCFM to regulate and supervise the SCA sector. TRTP through these interventions will have facilitated a pro-poor systemic change for the SCA sector.
24. Under this sub-component, the mentoring support from development of proposals to business mentoring provided to young entrepreneurs and women will be targeted by providing higher levels of support to women, start-ups and those diversifying into a new area or a new market. Forty percent of the beneficiaries of this support will be for women. The engagement of successful YEs in providing mentoring support to YEs under TRTP will be an integral part of the intervention. TRTP will support the creation of YE network for exchange of experiences and access to mentoring support.

Component 3: Project Management.

25. (i) The job descriptions of all the managers and specialists managing the components will include responsibility for implementing the social inclusion strategy of the project, identifying and taking corrective action to address any barriers in meeting targets. (ii) TORs and MOUs developed for service providers will specify the social inclusion measures for small-holder farmers, women and youth and hold the service providers accountable to implement them and achieve the specified targets (iii) The targeting strategy will be discussed in the start-up workshop and supervision missions will include a poverty and social inclusion expert.
26. The M&E system will collect gender and age disaggregated area and monitor investments in high poverty and climate vulnerability rayons and primarias. The maps of the Small Area Deprivation Index (2014) for primarias and the climate vulnerability map will function as an important tool for tracking targeting as beneficiaries of the project will be mapped on to these on an on-going basis. The progress report of TRTP will have a section reporting on progress against the targeting strategy of the project.

Table 2: ESMP table by component and subcomponent

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
Component 1: Resilient Economic Transformation					
1.1 Enhancing Climate Resilience 1.1.1 <i>Climate Resilient Infrastructure (CRI):</i>	Social: <ul style="list-style-type: none"> Smallholder farmers in poorer and more vulnerable primarias do not receive the information and /or lack the confidence and know-how to apply Smallholder farmers are not able to pay the beneficiary contribution Only better-off farmers with large holdings benefit from infrastructure grants Environmental/Climate: <ul style="list-style-type: none"> Lack of knowledge about risks and effects of the 	Social: <ul style="list-style-type: none"> In-depth mobilization for primarias located in areas with (i) high levels of climate vulnerability and poverty and (ii) with low levels of investment in infrastructure from IFAD projects in the last 8 years will be undertaken through a service provider. A service provider will be contracted to hold meetings with small-holder farmers and local government to provided detailed information on the investment opportunity, explore barriers to application and support the application process. Poverty and climate vulnerability criteria accounts for 60% of scoring of 	The project requirements are aligned with the National Development Strategy (NDS) 2020 . The NDS 2020 aims at ensuring the transition to a green economic development, which promotes sustainable development principles and contributes to poverty reduction. This includes ensuring better governance in sustainable development, through the integration and strengthening of environmental protection aspects in all socio-economic development areas of the country. This will be achieved through: (i) a rate of economic development that would allow an increasing financing of environmental protection measures, and (ii) a balanced regulation of the business environment,	CPIU Service Provider The project will submit semi-annual progress reports; the annual supervision reports to IFAD and the report on the implementation of the annual program to the Adaptation Fund; MTR and final evaluation and impact analysis	See Costab: <i>Consultancies services for awareness raising and mobilization/outreach (USD 169,000) & Feasibility study of investment proposals (USD 134,000)</i> + for all subcomponents see Costab DT3: <i>C. Workshops and studies (USD 433,000)</i>

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
	<p>Climate Variability and Change and options of adaptation practices</p> <ul style="list-style-type: none"> • Climatic shock: the main effect of climate change on weather patterns is the increased occurrence of extreme weather events: droughts, flooding, hail in particular. These weather shock can have a direct impact on crops and damage infrastructure. 	<p>applications for infrastructure schemes</p> <ul style="list-style-type: none"> • Well-off farmers with higher capacity to pay can be included among beneficiaries as long as 50% of the beneficiaries are smallholders for irrigation schemes and there are a minimum of 50 smallholder households benefiting from a feeder road. This will enable smallholder farmers who cannot pay the entire contribution to still benefit. <p>Environmental/Climate:</p> <ul style="list-style-type: none"> • Sensitization and participatory analysis of the effects of Climate Variability and Change on productive activities and other means of life of families and identification of mitigation practices. • Support of water availability with tertiary canal level schemes that will be linked either to independent small schemes with existing sources 	<p>both in terms of economic impact and environmental impact.</p> <p>The project through this sub-project is also aligned with the National Strategy on Adaptation to Climate Change (NSACC) 2020. The Strategy aims to ensure that the social and economic development of the Republic of Moldova becomes resilient to the future impacts of climate change. The Strategy also supports the achievement of the global objectives established by the United Nations Framework Convention on Climate Change (UNFCCC) to which the Republic of Moldova is a Party. The project is aligned in terms of promoting capacity development; improving the adaptive capacity of vulnerable smallholders to changing weather patterns; and promoting sustainable water</p>		

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
		<p>(pumping stations on rivers and natural reservoirs), or to larger functional secondary pipelines and supply systems.</p> <ul style="list-style-type: none"> The CRI will mainly concentrate in geographic locations prone to climate risk (see targeting strategy). 	<p>and soil use and conservation.</p> <p>All approved designs that are to be implemented are required to meet the provisions of the environmental legislation of the Republic of Moldova in accordance with the "Instructions for Environmental Assessment" approved by the Environmental Ministry of the Republic of Moldova (No. 188, 10.09.2002 with the latest changes). The environmental permit process is incorporated as part of the steering committee approval process together with MARDE and Apele Moldovei.</p>		
<i>1.1.2 On-farm Climate Adaptive Water Management</i>	<p>Social</p> <ul style="list-style-type: none"> Elite capture of grants Smallholders farmers, especially 	<p>Social</p> <ul style="list-style-type: none"> Poorer more vulnerable primarias will be targeted with an in-depth mobilization campaign focussing on 	The TRTP will be aligned to the NDS 2020 through facilitating agricultural development that is resilient to the negative impact of	CPIU State Water Administration Agency	See Costab: <i>On-farm Training and Implementation Support &</i>

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
	<p>women and youth, from poorer, more deprived priamarias are unaware of the opportunity or lack the knowledge and confidence to apply for grants</p> <ul style="list-style-type: none"> Poorer smallholder farmers inability to pay grant and co-finance up-front and be reimbursed later excludes them from receiving the grant. Youth and women get excluded from grants, training, research and knowledge opportunities Smallholder farmers invisible in research, knowledge management and policy on conservation agriculture 	<p>informing smallholder farmers, particularly women and youth and supporting their applications</p> <ul style="list-style-type: none"> Establishment of transitional commercial bank account with bank fee paid by The Adaptation Fund to ensure poorer beneficiaries are not excluded through the requirement to pay the full grant plus 30% co-finance upfront and then be reimbursed. Larger farmers will be excluded through the limit set for applicants not to own or rent more than 10ha of land. Forty-five percent of beneficiaries will be women and fifty percent youth Gender-balanced scholarships to young Moldovan agronomists to specialise in Conservation Agriculture. Mandatory to involve young students as researchers under the research grants sponsored by the Adaptation Fund for conservation agriculture. 	<p>climate change and helps mitigate future challenges in increasing water scarcity. The project will promote improved ENRM and human wellbeing whilst improving agricultural productivity. TRTP will be aligned with the National Strategy on Agriculture and Rural Development (NSARD) through the promotion of environmentally friendly and climate resilient water efficient technologies that will minimise water consumption while simultaneously improve product quality and yields, whilst also reducing labour costs in time and money. The Project will also raise awareness and build decision making capacity for the future upscaling of CA that also contributes to the reduction of labour costs, helps reduce negative agricultural environmental</p>	<p>Service Provider</p> <p>The project will submit semi-annual progress reports; the annual supervision reports to IFAD and the report on the implementation of the annual program to the Adaptation Fund; MTR and final evaluation and impact analysis</p>	<p><i>Develop curricula for Conservation Agriculture for University and College and training material</i></p>

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
	<p>Environmental/Climate:</p> <ul style="list-style-type: none"> • Climatic shock: the main effect of climate change on weather patterns is the increased occurrence of extreme weather events: droughts, flooding, hail, and out of season frosts in particular. These weather shocks can have a direct impact on crops and damage infrastructure. • Insufficient and / or insecure access to land and water for productive activities • Low interest and capacity of smallholders to adopt new climate smart approaches and technologies. 	<ul style="list-style-type: none"> • At least one of the research grants will focus on the implications of conservation agriculture for smallholder farmers and explore international best practice. • Each research will be required to address the gender dimension of the subject. • The participation of women farmers, small-holder farmers and youth farmers will be ensured at conferences and consultations to be held to prepare for consensus on the definition of Conservation Agriculture. • In the development of the national curricula for Conservation Agriculture there will be a focus, to the extent possible, on conservation practices that can be adopted by smallholder farmers. • In the nationwide inventory of the extent and types of CA techniques that are being practised in the country, findings will be disaggregated 	<p>impacts promote soil regeneration.</p> <p>The project is aligned in terms of promoting sustainable water consumption and land conservation through CA policy development through the National Environmental Strategy (NES) 2014-2023. The objective of the strategy is the creation of an efficient environmental management system, which would contribute to the increase in the environmental factors' quality and guarantee the right of the population for a clean, healthy and sustainable environment.</p> <p>Through the promotion of water conservation and soil conservation management, the project will help protect biodiversity by reducing soil erosion, reducing soil fertiliser nutrient leaching, and improving soil microbiomes in line with the</p>		

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
	<ul style="list-style-type: none"> • Low ministerial buy-in for modifying creating existing CA and sustainable water management sector policy, strategy. • Water is a scarce resource in Moldova. The project could risk to increase water insecurity through increased and unsustainable pressure on limited water resources. 	<p>by size of landholding cultivated (owned plus rented) by an entity.</p> <p>Environmental/Climate:</p> <ul style="list-style-type: none"> • Support investments in climate resilient and water efficient on-farm micro irrigation infrastructure and improved capacities for rain harvest management. • Climate change awareness raising and capacity building of poor smallholders. Farmers will be trained on low-cost climate adaptive agricultural techniques to adapt to both decreased and increased moisture levels; and how to better adapt to hotter and colder seasons, to reduce crop stress and improve yields. • Strengthen the Water User Associations and the formulation and implementation of maintenance and operation plans for rainwater harvesting and irrigation systems, avoiding waste of water. 	<p>National Strategy on Biodiversity (NSB) 2015-2020. The overall objective of this Strategy is to create conditions for improving the quality of the biodiversity components by strengthening the basis for the sustainable development of the country. The Strategy was designed to align with the provisions of the international treaties to which the Republic of Moldova is a Party. These are the Convention on Biological Diversity (CBD) Strategic Biodiversity Plan 2011-2020; the Aichi biodiversity objectives approved in Nagoya (Japan) at the CBD Conference of Parties (2010); and the European Union (EU) CBD Biodiversity targets 2020.</p> <p>The project is aligned to the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary</p>		

Project Intervention	Social/Environmental I/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
		<ul style="list-style-type: none"> Nationwide inventory of the extent and types of CA techniques that are being practised in the country. Development of a national curricula for Conservation Agriculture and its introduction in some of the main universities in the country. The project will be fully integrated into the national environmental safeguard framework. The Ministry of Environment is now merged into MARDE hereby better streamlining the compliance procedures in securing environmental permits. The grant Selection Committee (SC) will include representatives of the old Ministry of Environment who will approve all environmental permits related to the project. The National Water Administration Agency 'Apele Moldovei' will also be represented on the SC. Apele Moldovei gives opinions on the requests for Environment Permits and approves on the 	<p>Watercourses and International Lakes (1999) through the promotion of sustainable water management, and the protection of water systems through increased water efficiency. The objective of this Protocol is to promote the protection of human health and well-being, both individual and collective, within a framework of sustainable development, through improving water management, including the protection of water ecosystems, and through preventing, controlling and reducing water-related disease.</p> <p>The project is aligned with the Water Supply and Sanitation Strategy (WSSS) 2012-2027 objectives of providing access to information, education, and awareness raising about the need to save water and protect water resources; and</p>		

Project Intervention	Social/Environmental I/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
		location for water pumps; the volume of water that can be used with new irrigation infrastructure; and it sets the water limits that can be used by the applicants.	<p>contribute to achieving the 2015 Millennium Development Goals (MDG) targets for a safe water supply for 65 % of the population by 2020. The aim of the WSSS is to provide access to safe water and adequate sanitation for all localities and people in the Republic of Moldova, contributing to an improved health, dignity and quality of life, and enabling the economic development of the country.</p> <p>The project is aligned to the National Programme on Sound Management of Chemicals (NPSMC) 2009-2020 objectives of education, information and public awareness on the sound management of chemicals. TRTP is supporting farmer field school (FFS) training programme, IFAD promotes the sound management of chemicals used in agriculture. The main</p>		

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
			<p>purpose of the NPSMC is to implement the objectives of Strategic Approach for International Chemicals Management (SAICM) and promote the creation of adequate conditions for quality life of population and respect of citizens' right to a healthy environment as well as a sustainable form of development.</p> <p>While the project does not engage in household waste management and recycling, the project does however strive to promote a sustainable culture for waste minimisation through water recycling and spreading the concept of CA that promotes waste minimisation and sustainable development aligned with the National Waste Management Strategy (NWMS) 2013-2027. The strategy aims to promote a new way of household and production waste collection, recovery of</p>		

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
			re-usable materials, environment protection and realization of a programme of uniform street sanitation which would contribute to the decrease in the amount of the waste stored in the respective areas by establishing an adequate system that would treat each type of waste separately for the protection of the environment.		
Sub-Component 1.2 Agribusiness Development 1.2.1 Strengthening Value Chains for Producer Groups	Social <ul style="list-style-type: none"> Smallholders lack financial capacity to build or access storage, collection and grading centres to improve profitability Mistrust of associations and cooperatives due to experience with kolkhoz in Soviet era Lack of smallholder capacity to manage cooperatives and associations 	Social <ul style="list-style-type: none"> A minimum of 70 per cent of the members of these producer groups will be farmers cultivating land up to 10 ha (owned and cultivated). Thirty percent of the beneficiaries will be women and forty percent youth. In recognition of the fact that women and young persons can be actively managing farms without being registered as owners of the peasant farm, women and young persons managing farms will be eligible if they are administrators or 	National Strategy on Agriculture and Rural Development (NSARD) 2014-2020. The NSARD works towards ensuring that the agri-food sector contributes to the sustainable achievement of the national economic and social development goals. It also aims to raise the competitiveness of the agri-food sector through comprehensive restructuring and modernization and to improve living and working conditions in rural areas	CPIU The project will submit semi-annual progress reports; the annual supervision reports to IFAD and the report on the implementation of the annual program to the	See Costab: <i>Regional visits for information dissemination (USD 68,000) & Market Facilitation meetings (USD 68,000) & Diagnostic survey for value chains (USD 100,000)</i>

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
	<ul style="list-style-type: none"> • Elite capture • Exclusion of women and youth • Exclusion of women from decision-making 	<p>even members of a peasant farm.</p> <ul style="list-style-type: none"> • The project investment in behalf of smallholder farmers in the marketing infrastructure will be in a ratio of 80:20 with Producer Groups having 80% of the share with a private investor having 20% of the share. • Thirty per cent of board members of the group will be women • Private sector entity will manage the infrastructure and marketing • A service provider engaged to identify potential value chains will use potential for smallholder farmer engagement (up to 10 ha), especially women and young farmers as critical selection criteria. • A service provider will be engaged to mobilize smallholder farmers and 	<p>whilst achieving synergies between agri-food activities and the natural environment. TRTP will be aligned with the NSARD through the promotion of environmentally friendly and climate resilient water efficient technologies that will minimise water consumption while simultaneously improve product quality and yields, whilst also reducing labour costs in time and money.</p>	<p>Adaptation Fund; MTR and final evaluation and impact analysis</p>	

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
		mentor them to facilitate their participation in producer groups			
<i>1.2.2 Strengthening MARDE Technical Capacity</i>	Social <ul style="list-style-type: none"> Lack of focus on smallholder farmers, women and youth 	Social <ul style="list-style-type: none"> Specialists will be sensitized to the potential of engagement with smallholder youth, women and men farmers through exposure to the experience of TRTP in capacity building, organization of producer groups, and innovative arrangements in organizing the market facilitation meetings, partnership with private sector entities and the experience of PGs in the equity partnerships. 		CPIU The project will submit semi-annual progress reports; the annual supervision reports to IFAD and the report on the implementation of the annual program to the Adaptation Fund; MTR and final evaluation and impact analysis	See Costab: <i>Workshop and learning events</i> (USD 9,000)
Component 2: Entrepreneurship Finance					
Subcomponent 2.1 <i>Affordable</i>	Social	Social	The project is aligned to the Programme on the Promotion of Green	CPIU	See Costab

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
<i>Credit for Youth and Women</i>	<ul style="list-style-type: none"> • Inability to provide complementary finance for government grants excludes the poorer smallholder farmers, youth and women • Lack of collateral limits access to loans • Elite capture of matching grants • Lack of ability of poorer entrepreneurs or those with insufficient education or exposure to develop a good business plan • Elite capture • Exclusion of women 	<ul style="list-style-type: none"> • Ninety percent of matching grants reserved for microenterprises • 40 percent of matching grants for women • SCA beneficiaries of credit will be 40 percent will be youth and 40 percent women • Mobilization of youth using youth sensitive communication strategies and prioritizing poorer, climate vulnerable areas • Provision of complementary finance for young women and men to access IEPA loans 	Economy (PPGE) 2018 – 2020 with respect to the objectives to increase the level of knowledge about sustainable development among the youth and the general public by 30 percent by 2020; and to contribute to improving the institutional capacity potential in the field of green economy and increase the promotion of green economy in the field by 30 percent. The aim of the Programme is to promote the implementation of the green economy principles in the Republic of Moldova in harmony with economic and social welfare.	Saving and Credit Associations (SCA) Financial Institutions	
Subcomponent 2.2. Rural finance sector	Social <ul style="list-style-type: none"> • Instability of Saving and Credit Associations that serve the rural poor 	Social <ul style="list-style-type: none"> • TRTP will contribute to improving enabling framework conditions for Savings and Credit Associations (SCA), the most popular providers of 		CPIU Saving and Credit Associations (SCA)	See Costab: MSE information and mobilization (USD 10,000) & Training for

Project Intervention	Social/Environmental/ Climate Risk Factors	Mitigating Measure	Environmental and social standards requirements and procedures (+see <i>Compliance with the Law</i> below)	Institutional responsibilities and reporting	Cost
development	<ul style="list-style-type: none"> • Deposits of the rural poor unprotected • Rural youth entrepreneurs lack the skills and knowledge to establish and expand their business • Women entrepreneurs are more disadvantaged in terms of access to knowledge, skills and resources 	<p>financial services to the rural poor, to reach rural clients with appropriate products and services, and to protect rural poor people's savings and deposits.</p> <ul style="list-style-type: none"> • TRTP will strengthen and stabilize the SCA sector by making a pioneering contribution to consumer protection of the rural poor and their sustainable access to finance by providing the National Commission for Financial Markets (NCFM) with funding to cover the initial funding gap for a Stabilization Fund (a centralised short-term liquidity facility for SCAs) and the SCA Deposit Insurance Fund (aimed at protecting the customer deposits at SCAs in a similar way that banks' deposits are protected). • Mentoring support will be provided to entrepreneurs with higher level support to women, start-ups and those diversifying. 		<p>NCFM</p> <p>The project will submit semi-annual progress reports; the annual supervision reports to IFAD and the report on the implementation of the annual program to the Adaptation Fund; MTR and final evaluation and impact analysis</p>	<p>SCAs (USD 134,000) & Regulations and policy development (USD 31,000)</p>

Compliance with the Law

27. **Water Law (23 December 2011 No. 272)** This Law sets up a legal basis for efficient management, protection and conservation of surface water and groundwater; prevents the of deterioration of the state of water; establishes water rights; and ensures sufficient water supply of qualitative surface water and groundwater for sustainable, balanced and fair water management. This Law regulates: (a) prevention of flood, erosion, drought and desertification; and (b) water abstraction, water supply and effluent wastewater discharge. The TRTP project will ensure alignment with this law as one of the main applicable laws particularly in the extraction, transportation and use of water for irrigation purposes as well as providing smallholders with the capacity to fulfil legal requirements in preventing flooding, erosion, drought and desertification.
28. **Law on Equality of Opportunities for Men and Women (24 March 2006, No. 5-XVI).** The scope of this Law pertains to ensuring the exercise by women and men of their equal rights in the political, economic, social, cultural, and other spheres of life, rights guaranteed by the Constitution of the Republic of Moldova, with a view to preventing and eliminating all forms of discrimination based on the criterion of sex. The project will be based on giving men and women equal opportunities and also will mainstream measures to address the disadvantages that women face in the work place by virtue of their gender and the patriarchal social structure.
29. **Law on ecological agricultural production. (09 June 2005 - No. 115-XVI)** This Law regulates ecological agricultural production without utilization of chemical and synthetic means. Ecological agricultural production shall be based on the principles of: sustainable use of agro-ecosystems; use of eco-friendly processes; selection of plant varieties and stockbreeding methods complying with soil productivity; use of modern technologies; and increase of soil fertility. The project will ensure legal compliance when training and providing support services to farmers on organic production. The project is based on introducing eco-friendly processes, modern technologies and aims to increase soil fertility.
30. **Labour Code (28 March 2003, No. 154-XV).** The Labour Code covers the basic principles of regulating labour relations and other relations related directly to them; non restriction of labour rights and freedoms; the prohibition of forced labour; the prohibition of discrimination in the field of labour; articulated the Employees main rights and obligations; the normative contractual and labour relations; nullifies clauses from labour contracts that worsen the situation of employees; and establishes the priorities of treaties, conventions, agreements and other international documents. The project will be in full compliance with the Moldovan Labour Code as well as international labour standards both as a responsible employer of the core CPIU staff but also in the contracting of the Service Provider, consultants and anyone else otherwise employed for the implementation of the project.
31. **Law on Peasant Farm (November 2000 No.1353-XIV).** This Law establishes legal, organizational and socio-economic grounds for the institution, functioning and re-organization of peasant farms applicable inter-alia to smallholders. Peasant farm are considered individual enterprise based upon private ownership of agricultural land and individual work of household members for primary processing and trade of agricultural commodities. Peasant farms are authorized to inter-alia: carry out irrigation, drainage and land reclamation; to take part in cooperatives; and to take part in associations and other non-governmental entities. Peasant farm shall have the duty to among others obtain a licence for carrying out activities subject to licensing; and to prevent soil fertility reduction. Many smallholders are registered at all but the project will be supporting smallholders both registered and not registered (but legally allowed to practice agriculture) particularly in assisting in irrigation and drainage. The Project will further be fully aligned with national legal processes in obtaining the appropriate water permits.
32. **Law on Natural Resources (June 03, 1997 No.1102-XIII)** This Law regulates the use, management and protection of natural resources in the interest of ecological safety and economic development. It determines the rights of ownership of natural resources; provides for the basic principles and organizational structure for the management of

natural resources, including State cadastres, provisions for standards and licences for the exploitation of natural resources, economic and financial measures; fees/charges for the use of natural resources; administrative competencies; list of renewable and non-renewable resources; and list of national and local natural resources. The project will fully comply with the all legal requirements and particularly with those surrounding the extraction and utilisation of water as well as the sustainable management of agricultural land, prevent erosion, and improve the nutrient and water balances of agricultural land.

33. **Law on Environmental Protection (June 17, 1993 No.1515-XII).** This Law provides the basic legal framework for environmental protection, covering the principal environmental media (soil, inland waters, underground areas, atmosphere, natural heritage) as well as biological diversity, waste, toxic substances and plant protection. The project will ensure compliance with the Environmental Protection Law as its main objective is to improve environmental management, improve soil fertility, reduce risks of erosion, land degradation and other negative effects of drought and torrential rain particularly in relation to expected future climatic changes. It will ensure the sustainable and efficient use of water for irrigation purposes and comply with all relevant legal and procedural processes.
34. **Land Code (Dec 25, 1991, No.828-XII)** This Code embraces an extremely comprehensive range of issues relating to land use and management. These include: the rights and obligations of landowners; agricultural, residential and industrial land; lands with natural protections; woodlands; land under water basins, reserve land stock; land cadastre and land utilization systems; environmental preservation and protection of land; and land operations causing a negative impact on agricultural, forest and other areas. The project will ensure compliance with the land code particularly in the environmental preservation and protection of land in the framework of sustainable agricultural development, preventing of land degradation, promotion of Conservation Agriculture, promotion of sustainable and modern water efficient technologies. The project will strive to ensure that the project will not pose any negative impacts on agriculture, forests and any other areas.

ESMP compliance

a) Concern	b) Law Legislation	c) Enforcing Agencies	d) Enforced Regulation / Item
e) Unsustainable Water Use	f) Water Law 272 g) Law on Peasant Farm 1353	h) MARDE, i) Apele Moldovei	j) Established and MARDE endorsed project approval procedures as detailed above.
k) Pesticides and Fertilisers	l) Law on Environmental Protection	m) MARDE	n) Approval of permissible pesticides.
o) Wildlife Conservation and National Parks	p) Land Code 828	q) MARDE	r) Declaration of Ecologically critical areas s) Declaration of Protected areas.

t) Project activities contribute to risk of erosion, drought and desertification.	u) Water Law 272	v) MARDE	w) MARDE has established procedures to approve IFAD project activities.
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35. The steps taken by the proposed project to comply with the above legislation are the full integration with government authorities through the SC and water permit approval processes. The CPIU will review and make recommendations and the SC will approve the ESMP that will be developed for each activity to mitigate the risks identified and ensure all procedures are legally compliant. Monitoring will be conducted by national authorities through the water permit legislation, the CPIU and contractors.

**Procedures for sub-projects (screening, assessment, preparation) -
Application, evaluation and selection of proposals**

36. The implementation arrangement for the two subcomponents of the component 1 is derived from the established procedures and management arrangements that have been fine-tuned and proven effective since 2007 with the CPIU retaining a key role in the investment selection process, quality control assurance and monitoring of results, while services including information campaign, feasibility studies and supervision of civil works and specialized consultancies will be outsourced to qualified service providers.
37. All water extraction infrastructure, such as water pumps, off-farm tertiary canals or on-farm irrigation schemes need to comply with the provisions set out in the water and environmental protection laws. IFAD's CPIU team is an integral part of MARDE and has developed well-established procedures in since 2007 for water-related projects in Moldova that are government approved and ensure compliance with relevant national laws. As part of the TRTP design a detailed Project Implementation Manual (PIM) has also been developed and reviewed by the GoM as well as IFAD's project review and approval process.
38. As of August 2018, it is the MARDE that issues the permits for water related activities (e.g. pumps) and are valid for 12 years, however a number of other institutions also provide qualified opinions. These are Apele Moldovei, the Agency for Geology (if accessing underground water), and the National Centre for Public Health. The process is fairly straightforward and takes no more than 30 days; the information that is considered when making the decision to issue permits is the following:
- Review the pre-feasibility study presented by the applicant;
 - The location of where the infrastructure is installed;
 - The source of water to be used;
 - The number of households and farms already accessing a particular source of water; and
 - The maximum volume of water to be used (all water consumption is metered and monitored regularly by Apele Moldovei).
39. Water permit procedures in Moldova mean that activities for component 1 will follow similar permit approval processes that are proven to be in full compliance with the relevant laws.
40. The main bodies involved in execution of the subcomponents are:
- a) Selection Committee (SC) chaired by the representative of MARDE and comprised the following members:
 1. CPIU Director;
 2. CPIU Infrastructure Development Specialist;
 3. CPIU Irrigation Engineer;
 4. CPIU Financial Manager;
 5. CPIU Procurement Officer;
 6. Representative from Ministry of Economy and Infrastructure (MEI);
 7. Representative from Ministry of Finance (MoF);
 8. Representative from "Apele Moldovei" (State Water Administration Agency);
 - b) Consolidated Programme Implementation Unit-IFAD (CPIU)
 - c) And in the case of the On-farm grant Selection, the Service Provider.

Climate Resilient Infrastructure (CRI)

41. The selection criteria for the primarias will be (i) location in areas defined as most vulnerable in terms of climate vulnerability and poverty (refer to map developed for TRTP overlaying SADI with climate vulnerability in Targeting section of PIM) and (i) no previous investment in infrastructure from IFAD projects in the last 8 years. A team will be sent to hold meetings with small-holder farmers and local government to provide detailed information on the investment opportunity, explore and address barriers to application.

42. Request for funding from the CRI subcomponent may come from a variety of sources. Applicants may be small farmers' interest groups, Water Users Associations (WUA), formal village level agribusinesses and village councils (*Primaria*). All applications go through a two-step selection process of: (i) screening, pre-qualification; and (ii) qualification and ranking.
43. All the pre-qualified investment proposals will be ranked, based on the outcomes of the feasibility studies, using the scoring system described in the PIM and based on criteria developed during the design as part of the SECAP and the targeting strategy. The proposals will be ranked in descending order until all the available funds for a given year are allocated. The CPIU will submit the results of the ranking to the SC for final selection and inclusion of the investments in the following Annual Work Plan and Budget (AWPB).

On-Farm Grant Selection

44. The selection procedures will be the same as those for section CRI but with the only exception that only smallholder farmers will be eligible. The applications will undergo a desk review by the Applications Evaluation Committee (AEC) comprising of at least four CPIU staff members³², which is expected to check the general eligibility, verify the integrity of the file, and develop a first long list of pre-qualified applications. For pre-qualification, applications will be required to comply with the following compulsory criteria: (i) the proposal is presented by and is directly supportive of smallholder farmers; (ii) the proponents are committed to co-finance 30 percent in cash; and (iii) the proposal contains a feasible provision for operation and sustainable maintenance of the facility. Any proposal which does not satisfy these criteria will be rejected. After the screening stage, the CPIU, will review the actual situation in the field. Verification will be carried out to ascertain the eligibility of the applicant in terms of prioritized economic and climate resilience linkages, the feasibility of proposed works, size of landholdings, their legal status, and other relevant items. The field review will also assess whether the technical pre-conditions (i.e. there already is a source of water that can be legitimately used, location for rain-harvesting ponds etc.) have been correctly addressed in the proposal and will consolidate the initial cost estimate for the proposed works.
45. Following the field verification, the pre-qualified applicants will have to undertake the pre-feasibility check, executed by a specialized company from a shortlist of qualified professionals retained at the CPIU. This exercise will result in a document, which shall certify the technical feasibility for the proposed investment, present a preliminary design and budget for the expected investment and include all the necessary elements for ranking of the proposal in line with the relevant criteria. All the non-prequalified applicants will be formally notified by the CPIU with clear justifications and reasons for rejection.
46. The CPIU will submit the results of the ranking to the SC for final selection and inclusion of the grant disbursements in the following AWPB. At this stage, the CPIU will also consult with relevant institutions to ensure that there are no overlaps and duplication with other development plans in the same area. After technical approval by the SC, all proposals are to be sent to IFAD for review and no-objection prior to a final decision on awarding grants. After receipt of no-objection from IFAD, the CPIU will sign the agreements with the successful applicants for the procurement of the micro-irrigation infrastructure. Following the approval of the design from the State Enterprise, the CPIU will start the procurement process.

Agribusiness Development (ABD)

47. Technical support, capacity building and support for the development of feasibility and business plans and grants for equity investment awards to Producer Groups, Associations or Cooperatives will be based on a set of specific criteria that are specified in the PIM and in line with the targeting strategy.
48. As described above for the grants, all grant applications will go through a two-step selection process of: (i) screening, pre-qualification; and (ii) qualification and ranking. All

³² Programme Director; Infrastructure Development Specialist, Irrigation Engineer and Procurement specialist.

the pre-qualified investment proposals will be ranked, based on the outcomes of the feasibility studies, using the scoring system described in the PIM. The proposals will be ranked in descending order until all the available funds for a given year are allocated. Final selection. The CPIU will submit the results of the ranking to the SC for final selection and inclusion of the investments in the following Annual Work Plan and Budget (AWPB). The implementation of eligible investments in excess of the annual budget will be postponed to the following AWPB. After technical approval by the SC, all proposals are to be sent to IFAD for review and no-objection prior to a final decision on awarding grants. After receipt of no-objection from IFAD, the CPIU will sign investment agreement with the successful applicants as per the format used under the previous and on-going IFAD projects to proceed with the detailed designs.

Entrepreneurship Finance

49. The procedures and eligibility criteria for selecting participating financial institutions (PFIs) and grantees is described in details in the PIM. It is the responsibility of the PFIs (banks, MFOs and SCAs) to approve loans under TRTP within the agreed criteria. It is, as such, the PFI that will make decisions relating to loan sizes, repayment periods, security aspects etc. CPIU has the right to reject applications which fall outside the objectives, target group and criteria of TRTP

Environmental legislation

50. All approved designs that are to be implemented are required to meet the provisions of the environmental legislation of the Republic of Moldova in accordance with the "Instructions for Environmental Assessment" approved by the Environmental Ministry of the Republic of Moldova (No. 188, 10.09.2002 with the latest changes). The environmental permit process is incorporated as part of the steering committee approval process together with MARDE and Apele Moldovei.

Grievance and Redress Mechanism

51. The proposed project will utilise the existing IFAD's grievance mechanism to allow affected to raise concerns that the proposed project is not complying with its social and environmental policies or commitments. The consultative process with the community and beneficiaries aims to ensure prevention of grievances that might arise from the project activities. However, if at all, there are any grievances, the below redressal mechanism is proposed:

- Grievance redressal mechanism would be shared with the community during the project inception workshop and subsequent meetings with the beneficiaries
- As part of the grievance redress mechanism, the contact details of the project partners - Cluster Coordinator/ Project Manager would be made available to stakeholders including project beneficiaries and the community. Contact numbers would be displayed at common or predominant places along-with the project details. This is expected to promote social auditing of project implementation. The grievance mechanism will be available to the entire project intervention areas. However, the functionality of the mechanism rests with the beneficiaries considering that the project including the grievance mechanism is envisaged to be a bottom up approach.

52. IFAD may be contacted by e-mail at SECAPcomplaints@ifad.org or via its website. Grievances are aimed to be addressed at the field level by the project team which will be the first level of redressal mechanism. If the grievance is not resolved at the field level, it will be escalated to the CPIU and then to IFAD who will be responsible for addressing grievances related to violation of any of the provisions of Environmental and Social Policy of the Adaptation Fund. All grievances received and action taken on them will be put up before the CPIU and Steering committee meetings and will also be included in the progress reports to the NIE for reporting and monitoring purposes.

Annex 5.3 – Guiding questions for environment, social and climate risk screening

IFAD classifies all projects into one of three environmental and social categories (A, B or C) and one of three climate risk classifications (high, moderate and low). Where IFAD is jointly financing a project with other agencies, IFAD will cooperate with the partner agency and agree on a common approach for the assessment and the categorization of the project.

Determination of the category and classification will also depend on the national requirements and the existing national capacity to promote and implement environmental and social mitigation measures. The determination is informed by existing assessments of national frameworks and capacities.

A positive response to any question between 1 and 23 will categorize the project as A. Similarly, a positive response to question 24 to 40 will categorize the project as B. In case all answers are negative, the project will be categorized as C.

This list of questions can be used at different stages of the project design and should be used in conjunction with the respective guidance statements.

The checklists for environmental and social and climate risks will:

1. initially be filled in during concept development to help guide in the identification of opportunities and possible risks and activities that will need to be considered in the project design;
2. be attached to the SECAP review note; and
3. be reviewed during project design phases and updated as required.

Project title:	Talent Retention for Rural Transformation Project (TRTP)		
IFAD project no.:		Version of checklist:	
Country:	Moldova	Date of this version:	14-04-2019
Checklist prepared by (name, title and institution)	Renaud Colmant, Climate and environmental Specialist, IFAD		

In completing the checklist both short- and long-term impacts should be considered. This list of questions can be used at different stages of the project cycle and should be used in conjunction with the respective guidance statements. Capitalize on information based on reports and field visits during design. The details of the elaboration on issues that arise as a result of screening should be clearly articulated in the SECAP review note.

GUIDING QUESTIONS FOR ENVIRONMENT AND SOCIAL SCREENING	YES / No	COMMENTS/EXPLANATION
CATEGORY A – THE FOLLOWING MAY HAVE SIGNIFICANT AND OFTEN IRREVERSIBLE OR NOT READILY REMEDIED ADVERSE ENVIRONMENTAL AND/OR SOCIAL IMPLICATIONS.		
Project location		
1. Would the project develop any wetlands? (Guidance statement GS1)	No	
2. Would the project cause significant adverse impacts to habitats and/or ecosystems and their services (e.g. conversion of more than 50 hectares of natural forest, loss of habitat, erosion/other form of land degradation, fragmentation, and hydrological changes)? (GS 1, 2 and 5)	No	

3. Does the proposed project target area include ecologically sensitive areas, areas of global/national significance for biodiversity conservation and/or biodiversity-rich areas and habitats depended on by endangered species? (GS1)	No	National parks and natural reserves are not in the project area.
4. Is the project location subjected to major destruction as a result geophysical hazards (tsunamis, landslides, earthquakes, volcanic eruptions)?	No	
Natural resources		
5. Would the project lead to unsustainable natural resource management practices (fisheries, forestry, livestock) and/or result in exceeding carrying capacity. For example, is their development happening in areas where little up-to-date information exists on sustainable yield/carrying capacity? (GS 4, 5 and 6)	No	
6. Would the project develop large-scale aquaculture or mariculture projects, or where their development involves significant alteration of ecologically sensitive areas?	No	
7. Would the project result in significant use of agrochemicals which may lead to life-threatening illness and long-term public health and safety concerns? (GS 14)	No	
8. Does the project rely on water-based (ground and/or surface) development where there is reason to believe that significant depletion and/or reduced flow has occurred from the effects of climate change or from overutilization? (GS7)	No	Water from river is well controlled by the Environmental Agency, water law, quotas and permits prevent from depletion and overutilization.
9. Does the project pose a risk of introducing potentially invasive species or GMOs which might alter genetic traits of indigenous species or have an adverse effect on local biodiversity? (GS1)	No	
10. Does the project make use of wastewater (e.g. industrial, mining, sewage effluent)? (GS7)	No	
Infrastructure development		
11. Does the project include the construction/ rehabilitation/upgrade of dam(s)/reservoir(s) meeting at least one of the following criteria? (GS8) more than 15 metre high wall or, more than 500 metre long crest or , more than 3 million m ³ reservoir capacity or, incoming flood of more than 2,000 m ³ /s	No	
12. Does the project involve large-scale irrigation schemes rehabilitation/development (above 100 hectares per scheme)? (GS7)	No	No more than 100 ha rehabilitation/development of irrigation schemes. Size above 100ha will not be contiguous (up to 200ha maximum, see Annex 8 PIM).
13. Does the project include construction/rehabilitation/upgrade of roads that entail a total area being cleared above 10 km long, or any farmer with more than 10 per cent of his or her private land taken? (GS10)	No	
14. Does the project include drainage or correction of natural water bodies (e.g. river training)? (GS7)	No	
15. Does the project involve significant extraction/diversion/containment of surface water, leaving the river flow below 20 per cent environmental flow plus downstream user requirements? (GS7)	No	Water from river is well controlled by the Environmental Agency, water law, quotas and permits prevent from depletion and overutilization.
Social		
16. Would the project result in economic displacement ³³ or physical resettlement of more than 20 people, or impacting more than 10 per cent of an individual household's assets? (GS13)	No	
17. Would the project result in conversion and/or loss of physical cultural resources? (GS9)	No	
18. Would the project generate significant social adverse impacts to local communities (including disadvantaged and vulnerable groups and indigenous people) or other project-affected parties? (GS13)	No	
Other		

³³ Economic displacement implies the loss of land, assets, access to assets, income sources or means of livelihoods (guidance statement 13).

19. Does the project include manufacture and transportation of hazardous and toxic materials which may affect the environment? (GS2)	No	
20. Does the project include the construction of a large or medium-scale industrial plant?	No	
21. Does the project include the development of large-scale production forestry? (GS5)	No	
Rural finance		
22. Does the project support any of the above (Q1 to Q22) through the provision of a line of credit to financial service providers? (GS12)	No	
CATEGORY B – THE FOLLOWING MAY HAVE SOME ADVERSE ENVIRONMENTAL AND/OR SOCIAL IMPLICATIONS WHICH CAN BE READILY REMEDIED.		
Location		
23. Does the project involve agricultural intensification and/or expansion of cropping area in non-sensitive areas that may have adverse impacts on habitats, ecosystems and/or livelihoods? (GS1, 2 and 12)	No	
Natural resource management		
24. Do the project activities include rangeland and livestock development? (GS6)	No	
25. Does the project involve fisheries where there is information on stocks, fishing effort and sustainable yield? Is there any risk of overfishing, habitat damage and knowledge of fishing zones and seasons? (GS4)	No	
26. Would the project activities include aquaculture and/or agriculture in newly introduced or intensively practiced areas? Do project activities include conversion of wetlands and clearing of coastal vegetation, change in hydrology or introduction of exotic species? (GS4)	No	The project will support farmers to have access to water and have more efficient use of water in their existing farm lands.
27. Do the project activities include natural resources-based value chain development? (GS 1, 6 and 12)	Yes	
28. Do the project activities include watershed management or rehabilitation?	No	
29. Does the project include large-scale soil and water conservation measures? (GS 1 and 5)	No	Conservation agriculture at farm level and demonstration plots.
Infrastructure		
30. Does the project include small-scale irrigation and drainage, and small and medium (capacity < 3 million m3) dam subprojects? (GS 7 and 8)	Yes	The project includes small-scale irrigation.
31. Does the project include small and microenterprise development subprojects? (GS 12 and 13)	Yes	The project will support in the component 2 Young Entrepreneurs to develop small and microenterprises.
32. Does the project include the development of agro processing facilities? (GS 2, 6 and 12)	Yes	Through the component 2, the Young entrepreneurs could develop agro processing facilities.
33. Would the construction or operation of the project cause an increase in traffic on rural roads? (GS10)	No	
Social		
34. Would any of the project activities have minor adverse impacts on physical cultural resources? (GS9)	No	
35. Would the project result in physical resettlement of less than 20 people, or impacting less than 10 per cent of an individual household's assets (GS13)?	No	
36. Would the project result in short-term public health and safety concerns? (GS14)	No	
37. Would the project require a migrant workforce or seasonal workers (for construction, planting and/or harvesting)? (GS13)	No	The project will support local farmers and the roads will be built by local enterprise.
Rural finance		
38. Does the project support any of the above (Q24 to Q37) through the provision of a line of credit to financial service providers?(GS12)	Yes	Component 2 will work through provision of a line of credit to financial service providers

Guidance for categorization:

"Yes" response to any questions between 1 and 22	Environmental and social category is A	<p>Environmental and Social Impact Assessment or an Environmental and Social Management Framework (full or specific) is required depending on availability of information.</p> <p>Also some specific questions would require the below specific actions:</p> <ul style="list-style-type: none"> • Yes to Q16 – A Resettlement Action Plan or a Resettlement Action Framework is required depending on availability of information. • Yes to Q17 – A Physical Cultural Resources Management Plan is required that includes provisions for managing chance finds at implementation. • Yes to Q18 – Free, prior and informed consent should be obtained/Free, Prior and Informed Consent Implementation Plan is required depending on whether the affected communities are identifiable. In instances where indigenous peoples are affected an Indigenous Peoples Plan is required. A Social Impact Assessment is required. • Yes to Q8 and/or Q15 – A water resources management plan for the project is required. • Yes to Q7, Q9 and/or Q19 – A Pest Management Plan is required.
"No" responses to all Q1-Q22 and "Yes" response to any questions between 23 and 38	Environmental and social category is B	An environmental and social analysis to develop an Environmental and Social Management Plan (ESMP) is required.
"No" response to all questions between 1 and 38	Environmental and social category is C	No further analysis is required.

In case projects fall under both Category A and B, the highest category will be taken as reference. The determination of the project category and classification will depend on the magnitude of impacts and would depend on the scale of such activities; a cautious approach to the concern of cumulative impacts is considered essential. In such cases, the necessary environmental and social analysis and associated budget should be incorporated into project design. Such projects may be considered for Category B.

Determining the environmental and social Category A, including the extent of assessments and studies to be conducted, will also take into account available information, i.e. recent studies and assessments, including other initiatives in the country, to the extent these are relevant to the proposed project. Declassification (from A to B or from B to C) may also be possible in case negative externalities are being addressed by other projects or activities implemented by third parties.

Guiding questions for climate risk screening

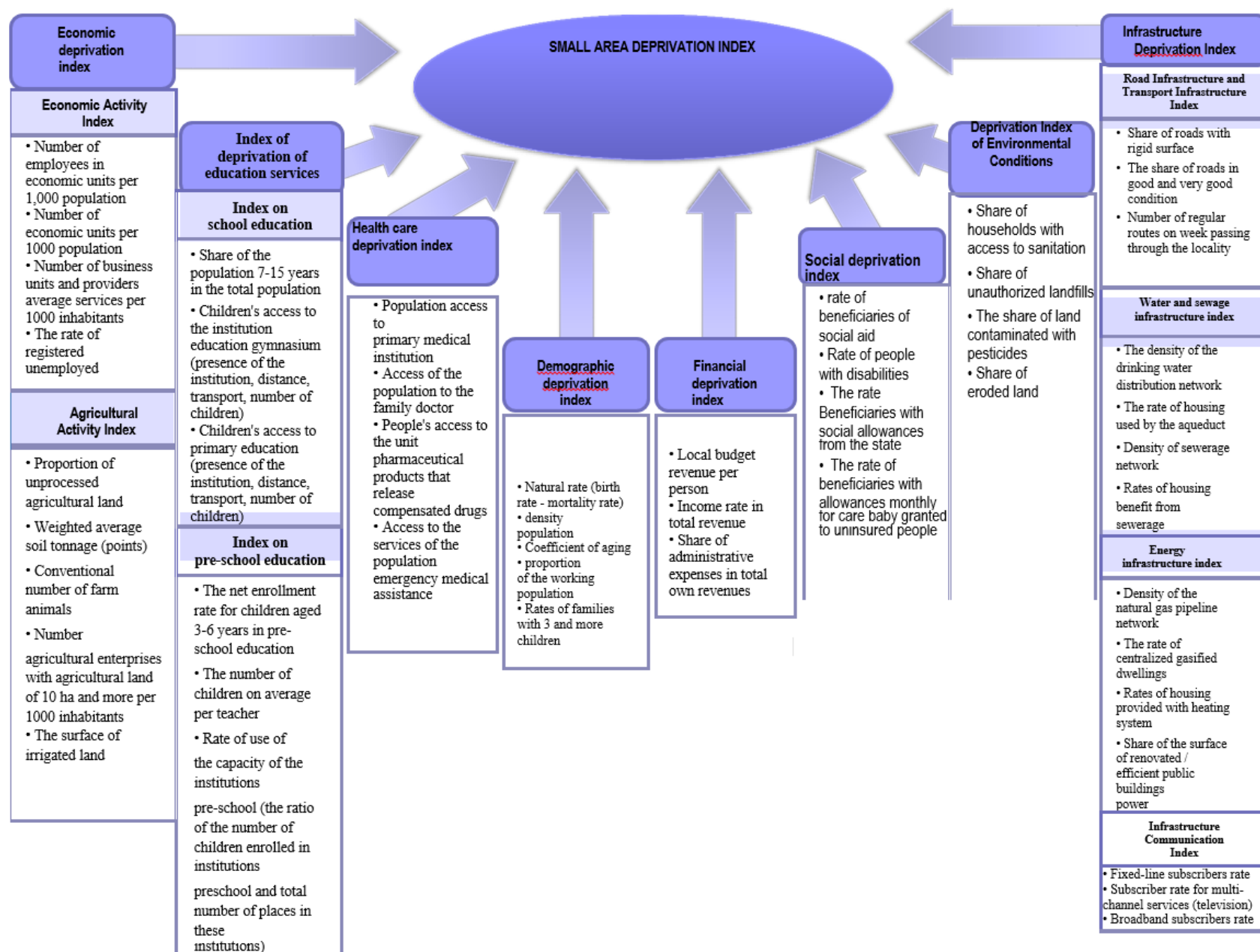
GUIDING QUESTIONS FOR CLIMATE RISK SCREENING	YES	NO	ADDITIONAL EXPLANATION OF "YES" RESPONSE*
1. Is the project area subject to extreme climatic events such as flooding, drought, tropical storms or heat waves?		No	
2. Do climate scenarios for the project area foresee changes in temperature, rainfall or extreme weather that will adversely affect the project impact, sustainability or cost over its lifetime?		No	The project aim at increasing the efficiency in the use of water.
3. Would the project make investments in low-lying coastal areas/zones exposed to tropical storms?		No	
4. Would the project make investments in glacial areas and mountains zones?		No	
5. Would the project promote agricultural activity in marginal and/or highly degraded areas that have increased sensitivity to climatic events (such as on hillsides, deforested slopes or floodplains)?		No	
6. Is the project located in areas where rural development projects have experienced significant weather-related losses and damages in the past?		No	
7. Would the project develop/install infrastructure in areas with a track record of extreme weather events?		No	
8. Is the project target group entirely dependent on natural resources (such as seasonal crops, rainfed agricultural plots, migratory fish stocks) that have been affected by in the last decade by climate trends or specific climatic events?	Yes		Rainfed agriculture.
9. Would climate variability likely affect agricultural productivity (crops/livestock/fisheries), access to markets and/or the associated incidence of pests and diseases for the project target groups?	Yes		More frequent drought, storms and higher temperature may affect agricultural productivity.
10. Would weather-related risks or climatic extremes likely adversely impact upon key stages of identified value chains in the project (from production to markets)?	Yes		Access to market and production.
11. Is the project investing in climate-sensitive livelihoods that are diversified?	Yes		
12. Is the project investing in infrastructure that is exposed to infrequent extreme weather events?	Yes		
13. Is the project investing in institutional development and capacity-building for rural institutions (such as farmer groups, cooperatives) in climatically heterogeneous areas?	Yes		
14. Does the project have the potential to become more resilient through the adoption of green technologies at a reasonable cost?	Yes		
15. Does the project intervention have opportunities to strengthen indigenous climate risk management capabilities?	Yes		
16. Does the project have opportunities to integrate climate resilience aspects through policy dialogue to improve agricultural sector strategies and policies?	Yes		
17. Does the project have potential to integrate climate resilience measures without extensive additional costs (e.g. improved building codes, capacity-building, or including climate risk issues in policy processes)?	Yes		
18. Based on the information available would the project benefit from a more thorough climate risk and vulnerability		No	

analysis to identify the most vulnerable rural population, improve targeting and identify additional complementary investment actions to manage climate risks?			
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Guidance for classification:

Yes response to any of the questions 1 to 7	The climate risk classification is high	A detailed analysis is required
Yes response to any of the questions 8 to 17	The climate risk classification is moderate	A basic analysis is required
Yes response to question 18	GHG assessment	For example, EX ACT tool
No response to almost all questions	The climate risk classification is low	No further analysis is required, but voluntary measures can be incorporated

Annexe 4 – Geographic Targeting Indexes



Small Area Deprivation Index (SADI) in Moldova (2014)

Legend

□ Communes

SADI rating

■ 1-281

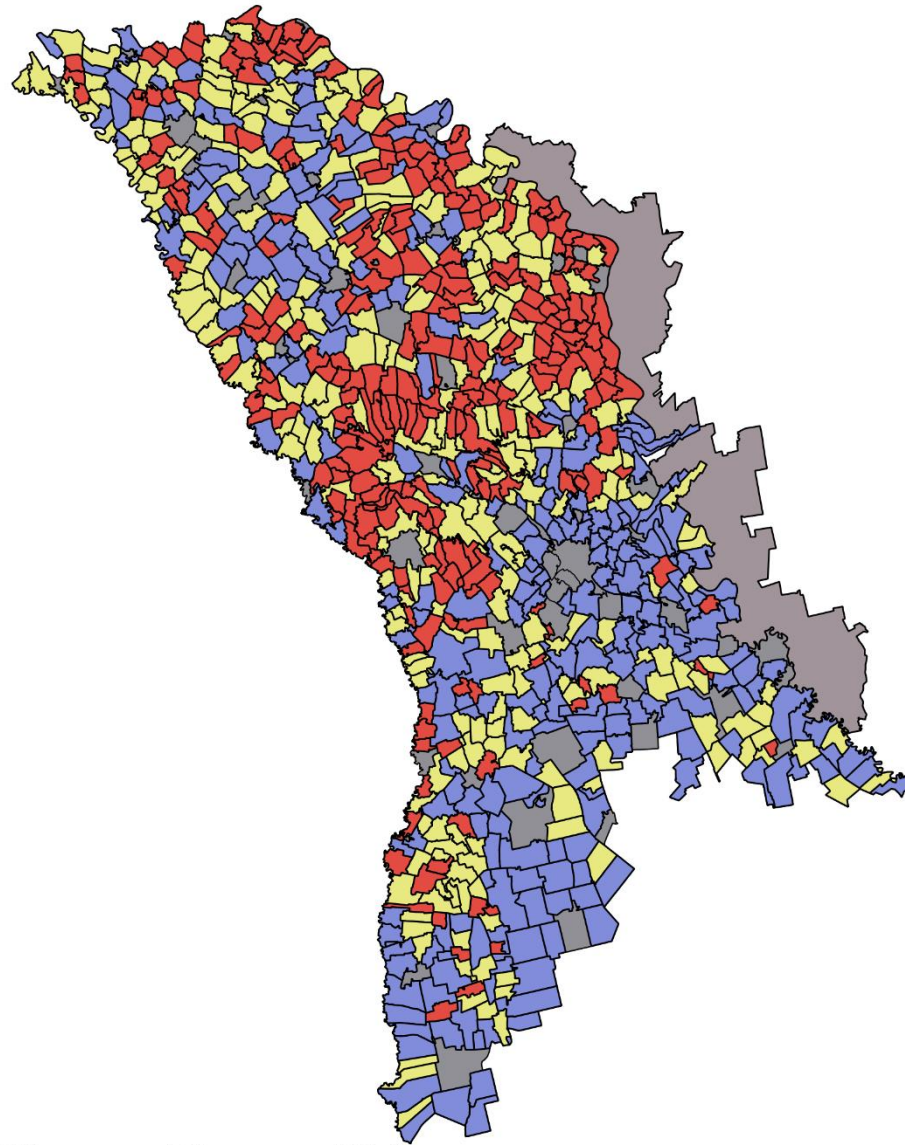
■ 282-562

■ 563-843

■ No data

1 - The most deprived areas

843 - The least deprived areas



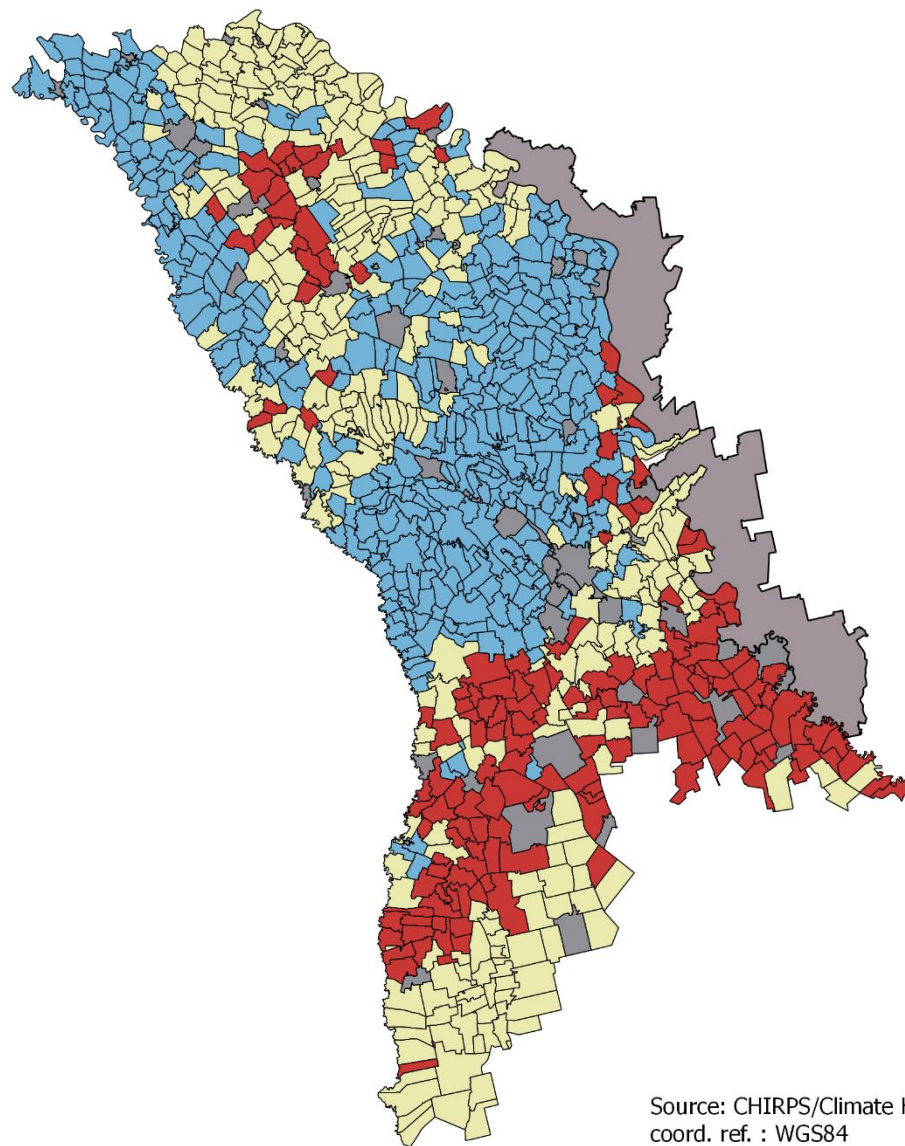
50 0 50 100 150 200 km



Climate Vulnerability related to precipitation in Moldova (1981-2018)

Legend

- Communes
- Climate Vulnerability categories
 - High Vulnerability
 - Moderate Vulnerability
 - Low Vulnerability
 - No data

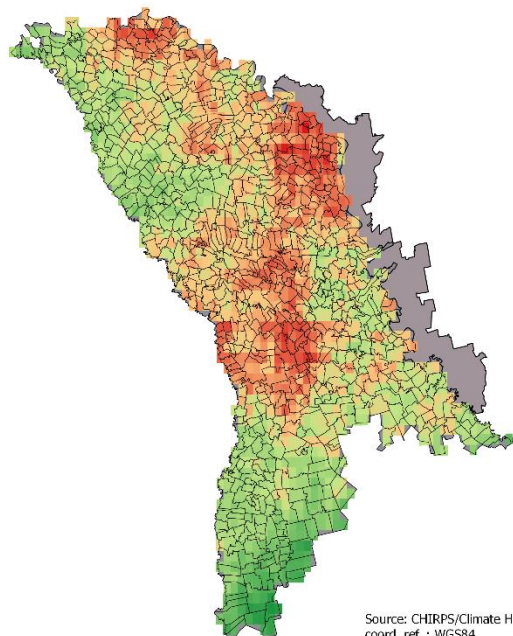
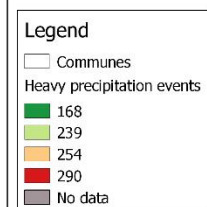


50 0 50 100 150 200 km

Source: CHIRPS/Climate Hazards Group-USGS
coord. ref. : WGS84
Author: Renaud Colmant, CoMon tool, 2019



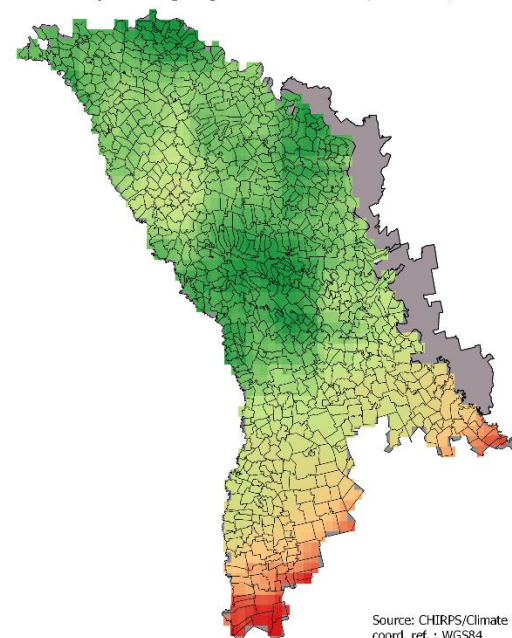
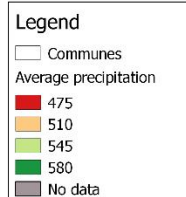
Number of heavy precipitation events (>20mm/day) in Moldova for the period 1981-2018



Source: CHIRPS/Climate Hazards Group-USGS
coord. ref. : WGS84
Author: Renaud Colmant, CoMon tool, 2019



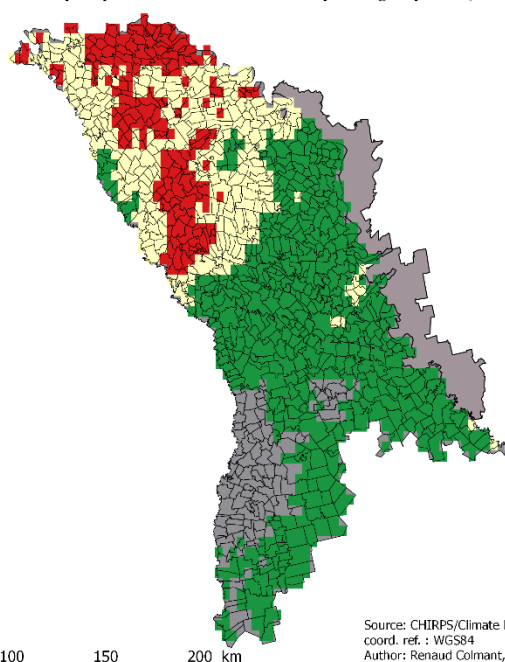
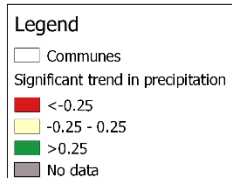
Average annual precipitation in Moldova (1981-2018)



Source: CHIRPS/Climate Hazards Group-USGS
coord. ref. : WGS84
Author: Renaud Colmant, CoMon tool, 2019



Significant trend in precipitation in Moldova for the April-August period (1981-2018)



Source: CHIRPS/Climate Hazards Group-USGS
coord. ref. : WGS84
Author: Renaud Colmant, CoMon tool, 2019



Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 6: First Annual Work Plan and Budget (AWPB)

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Annex 6: First Annual Work Plan and Budget (AWPB)

Subcomponent 1.1: Climate Resilient Infrastructure (CRI)

1. The first seven-eight months will start with information campaign for publicizing of availability of infrastructure investment grants, development of application forms and receipt of applications. The CPIU will start reviewing the first batch of applications for funding from the infrastructure component after seven-eight months of operation. It is expected that the first disbursement of the fund can be made only after some eleven-twelve months after starting the subcomponent implementation.
2. Consequently, the budget requirements in the first year will be limited, as it will take at least eight months to execute the necessary preparation for infrastructure investments. The main indicative budget allocations will be in the second, third, fourth and fifth years. It is estimated that some 20% of total funds will be disbursed in the second year and 75% in the third, fourth and fifth years (30% in the third year, 30% in the fourth year and some 15% in the fifth year). The remaining 5% is estimated for the sixth year only for completion of on-going works in case of implementation delay. This progression of financing is reflected in the detailed cost tables.
3. It is assumed that the TRTP will be declared effective in mid 2020. Thus, the main activities in 2020 in the framework of CRI will include awareness-raising campaign, call for application, and evaluation and qualification of proposals. Estimated start of works implementation of about 7 infrastructure contracts is July-August 2021.

1.1.2 On-farm Climate Adaptive Water Management

4. There is expected to be a delay in the approval and receipt of the grant from the Adaptation Fund. It is expected that these funds will be available in the second year of the TRTP. However, the baseline survey for the TRTP which is being partially financed from the AF funds to assess the climate change vulnerability and identify key indicators to gauge water vulnerability will be outsourced in the first year of the project. This will be retroactively financed from the AF grant. It is expected to cost around USD 30,000 to 40,000. In addition, the AF will also share the costs with IFAD of the mobilization of the smallholders for irrigation infrastructure schemes and the on-farm irrigation and water saving technologies. It is expected that AF will contribute around USD 20,000 to this in the first year. This will also be retroactively reimbursed when AF funds are received.

Sub-Component 1.2 Agribusiness Development

1.2.1 Strengthening Value Chain for Producer Groups

In the first year the two main activities under this component would be the recruitment of an Agribusiness Specialist by the CPIU to help coordinate the implementation of this sub-component. The second major activity would be the competitive procurement of the technical consultant (TC) which could be a consulting firm or an NGO which has the requisite skills to disseminate the information regarding the various types of support provided under the component and provide the technical support which is required from time to time. The selected agency will be hired as soon as possible after project effectiveness. A draft of the terms of reference for the service provider is included in the PIM.

Soon after the selection of the TC, the initial regional meetings to identify the value chains with the potential for value addition and smallholder engagement will be initiated. The selected agency will hold diagnostic surveys at the village or Rayon level to identify opportunities for agribusiness development by groups. Concurrently the service provider will identify private sector entities and market drivers engaged in the trade of the selected value chains in the domestic or export market. The project will host meetings between the producers and market drivers to assess the potential for collaboration. The potential beneficiaries will be provided opportunities to engage with multi-stakeholder forums which include representatives from all main actors of the selected value chains such as producers, intermediary agents, traders, processors, input suppliers, transporters, and retailers. Some of these meetings will be held in the first year to identify the opportunities and constraints that hinder partnership and guide the way forward. The project will work closely with the Producer Groups and private sector entities to develop proper feasibilities and business plans for collaboration.

It is expected that in the first year the selected TC will design and disseminate a preliminary communication campaign and hold regional meetings to inform people about the activities under the component. In addition, the TC will hold 4 diagnostic surveys to identify agribusiness opportunities, and host at least four multi-stakeholders forums and examine at least 10 different types of business ideas in different value chains and provide mentoring support to 2 Producer Groups. However, it is not expected that any proposals will be submitted in the first year of the project for consideration of grants. The service provider will mentor and coach the PGs until the private sector partners and PGs demonstrate that they are eligible and ready for grant financing which is expected to begin in the first year.

1.2.2 Strengthening MARDE Technical Capacity

The project will assist MARDE build its capacity by providing it technical specialists for economic and market analysis in the first year. These specialists will be kept informed of the experience of the project in undertaking some of the innovative arrangements in organizing the market facilitation meetings, partnership with private sector entities and the experience of PGs in the equity partnerships. This will help to identify any policy implications and modify and refine policy as required. The project will also organize opportunities for learning and experience sharing for MARDE staff and PGs in subsequent years. The CPIU capacity to deal with this component will be strengthened through the recruitment of an Agribusiness Specialist who will interact closely with the Ministry.

Subcomponent 2.1. Affordable credit for youth and women

2.1.1. Financing packages for MSE. In the first year, efforts will be focused on conducting an information and awareness campaign (see details below). No disbursement of matching grants is expected in Year 1.

2.1.2. Credit line for MEs through SCAs. Similarly, no disbursement of credit line is expected in the first year as it will be devoted to strengthening the SCA sector through the establishment of the SCA Stabilization Fund, to ensure better stability of the sector and to improve its creditworthiness.

Subcomponent 2.2. Rural finance sector development

2.2.1. SCA sector strengthening. This activity includes funding for the inception of the SCA Stabilization Fund (USD 1 m) and SCA Deposit Insurance Fund (USD 0.85 m).

The funding for the SCA Stabilization Fund will be provided by the government as a credit to NCFM for a period of 10 years, in two equal tranches, at an interest rate determined by the government. In the first year, a tranche of USD 0.5 m is expected to be transferred to NCFM to start the activities of the SCA Stabilization Fund.

The SCA Deposit Insurance Fund will be established only after the SCA Stabilization Fund is in place and the government has sufficient assurance of the increased stability of the SCA sector.

Under this Subcomponent, the project will provide the following **technical assistance**:

2.2.2. SCA capacity building. This will consist of further support to the development of reporting and accounting software to SCAs (previously, IFAD funded the development of unified, electronic system for regular SCA reporting to NCFM); the development of software for calculation and disclosure of effective interest rates on SCA loans to customers; and a software module for SCA reporting the credit bureau. Additionally, the project will support the creation of the Central Association of SCAs and the provision of necessary trainings to SCAs (e.g. accounting, reporting, financial analysis, loan analysis, delinquency management, human resources management, legal issues, use of software etc.). This technical assistance will benefit the entire SCA sector (about 267 SCAs as of 2018).

The activity will start in Year 2 of the project.

2.2.3. NCFM capacity building. The project will further strengthen the capacity of NCFM to regulate and supervise the SCA sector. Specifically, the project will support the development of the deposit insurance monitoring system necessary to launch and run the SCA Deposit Insurance Fund; the development of the necessary regulations supporting the implementation of the amendments to the SCA law; and a study visit abroad.

The activity will start in Year 2 of the project.

2.2.4. MSE mentoring support. This will include the support in forming the investment/working capital packages mentioned above, first through information and awareness campaign and then through hiring service providers to mobilize and select beneficiaries, assess their needs in training and mentoring support, and finally provide the necessary support. About 50% of the financing package beneficiaries are expected to benefit from full mentoring packages (such as start-up businesses or businesses diversifying or expanding their activities to new areas or sectors; others with more experience will receive support based on their identified unmet needs).

In the first year of the project, efforts will be focused on conducting an information and awareness campaign through the CPIU website, Facebook page, participation in relevant events and workshops including festivals in primarias. Printed material will be developed to support the information campaign. In addition, some specific strategies will be introduced to target the youth. These will include the introduction of Instagram as an outreach tool, presentations at universities in the three regions led by successful young entrepreneurs supported by previous IFAD projects. Opportunities for broadcasting information in TV and radio programs for youth or popular with youth will be identified at the regional and national level.

The costs of the initial information and awareness campaign are expected to be about USD 10,000 in the first year. The provision of mentoring packages will start in Year 2 of the project.

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 7: Procurement Plan for first 18 months

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Annex 7: Procurement Plan TRTP

Project Title: Talent Retention for Rural Transformation (TRTP) Project IFAD Loan #: ____; IFAD Grant ____; Adaptation Fund #: ____ Procurement Plan: June 2020 - November 2021 (incl. AF January 2021- November 2021) 25th of April, 2019					
Plan vs./ Actual	Type of Cost	Name of Assignment/Contract	Note #	Estimated Cost (USD)	Actual (USD)
1	2	3	4	5	6
1	CW and Goods			25 000.00	0.00
2	Consulting Services			0.00	0.00
3	Grants to Small Farmers & Youth Grants*			0.00	0.00
4	Component III. Project Management			231 750.00	0.00
	Total:			256 750.00	0.00
Price Conversion Rate, Date and Source:					
		USD/MDL:	17.8712		
		25th of April, 2019	https://www.bnm.md/en/content/official-exchange-rates		
Disbursement Categories:					
I. consultancies, studies, TA, workshops					
II. Credit					
III. equipment/material, goods/services					
IV. grant and subsidies					
V. works					
VI. salaries and allowances					
VII. operating costs					

Procurement Method	Procurement	Prior Review
Thresholds for Procurement of Goods and Works :		
1 - Goods		
ICB	>US\$200,000	All Prior
NCB	≤ US\$200,000	>\$50,000
SH	<\$25,000	All Post
DC		All Prior
2- Works		
ICB	>US\$1,000,000	>\$100,000
NCB	≤ US\$1,000,000	>\$100,000
SH	<\$25,000	All Post
DC		All Prior
Thresholds for Selection and Employment of Consultants:		
3 - Consulting Services Firms		
QCBS	>US\$100,000;	All Prior
QBS		As agreed in PP
FBS		As agreed in PP
LCS		As agreed in PP
CQS	≤ US\$100,000	>\$50,000
SSS		All Prior
4 - Consulting Services Individuals		
IC	≤ US\$200,000	As agreed in PP
SSS		All Prior
5 - Trainings/Meetings		
AP (applicable procurement)		As agreed in PP
Thresholds for Non-Consulting Services:		
ICB	>US\$200,000	All Prior
NCB	≤ US\$200,000	>\$50,000
SH	<\$25,000	All Post
DC		All Prior

<div> <div>Project Title:</div> <div>Talent Retention for Rural Transformation (TRTP) Project</div> <div>IFAD Loan #: ____; IFAD Grant ____; Adaptation Fund #: ____</div> <div>Procurement Plan: June 2020 - November 2021 (incl. AF January 2021- November 2021)</div> </div>																							
25th of April, 2019																							
	BASIC DATA											Bid Documents		Bidding Period		Bid evaluation Report		Contact Finalization					
	Description		Expenditure Category	# of lots	Financial Source	Responsible Agency	Issue # of Invitation for Bids	Estimated Amount in US	Procurement Method	Pre- or Post Qualification	Pre- or Post Review	Date Proposed	Date No-Objection	Bid Invitation Date	Bid Closing-Opening	Bid evaluation Report	No-Objection	Contact Amount in US	Contact Amount in US per Date	Name of the Consultant/Contractor	Date contract Award	Date Contract Signature	Date of Contract Completion
	Component I. Resilient Economic Transformation																						
	Subcomponent 1.1: Climate Resilient Infrastructure Development (CRID)																						
1	Irrigation Infrastructure (could be combined geographically)																						
1.1	Irrigation #1	Actual Planned	V	1	IFAD Loan/AF	CPIU	TRTP/CW/NCB-01	260 000	NCB	Post	Prior	1-Apr-21	N/A	1-Apr-21	2-May-21	16-May-21	31-May-21				2-Jun-21	30-Jun-21	30-Mar-22
1.2	Irrigation #2	Actual Planned	V	1	IFAD Loan/AF	CPIU	TRTP/CW/NCB-02	260 000	NCB	Post	Prior	1-Apr-21	N/A	1-Apr-21	2-May-21	16-May-21	31-May-21				2-Jun-21	30-Jun-21	30-Mar-22
1.3	Irrigation #3	Actual Planned	V	1	IFAD Loan/AF	CPIU	TRTP/CW/NCB-03	260 000	NCB	Post	Prior	1-Apr-21	N/A	1-Apr-21	2-May-21	16-May-21	31-May-21				2-Jun-21	30-Jun-21	30-Mar-22
1.4	Irrigation #4	Actual Planned	V	1	IFAD Loan/AF	CPIU	TRTP/CW/NCB-04	260 000	NCB	Post	Prior	1-Apr-21	N/A	1-Apr-21	2-May-21	16-May-21	31-May-21				2-Jun-21	30-Jun-21	30-Mar-22
2	Roads Infrastructure (could be combined geographically)																						
2.1	Road #1	Actual Planned	V	1	IFAD Loan	CPIU	TRTP/CW/NCB-05	290 000	NCB	Post	Prior	1-Apr-21	N/A	1-Apr-21	2-May-21	16-May-21	31-May-21				2-Jun-21	30-Jun-21	28-Dec-21
2.2	Road #2	Actual Planned	V	1	IFAD Loan	CPIU	TRTP/CW/NCB-06	290 000	NCB	Post	Prior	1-Apr-21	N/A	1-Apr-21	2-May-21	16-May-21	31-May-21				2-Jun-21	30-Jun-21	28-Dec-21
2.3	Road #3	Actual Planned	V	1	IFAD Loan	CPIU	TRTP/CW/NCB-07	290 000	NCB	Post	Prior	1-Apr-21	N/A	1-Apr-21	2-May-21	16-May-21	31-May-21				2-Jun-21	30-Jun-21	28-Dec-21
	Subcomponent 1.2: Agribusiness Development																						
	Subcomponent 1.2.1: Strengthening Value Chains for Producer Groups																						
3	Equity investment for agroprocessing for 1st year (several packages)	Actual Planned	III	5	IFAD Loan	CPIU	TRTP/CW/NCB-08	400 000	NCB	Post	Post	15-Aug-20	N/A	15-Aug-20	15-Sep-20	5-Oct-20	N/A				7-Oct-20	4-Nov-20	4-Nov-21
	Component III. Project management																						
4	Computers and printers for project staff	Actual Planned	III	1	IFAD Loan	CPIU	TRTP/CW/NCB-09	10 300	SH	Post	Post	N/A	N/A	20-May-20	3-Jun-20	17-Jun-20	N/A				17-Jun-20	19-Jun-20	3-Jul-20
5	Furniture and desks for new staff	Actual Planned	III	1	IFAD Loan	CPIU	TRTP/CW/NCB-09	25 000	SH	Post	Post	N/A	N/A	20-May-20	3-Jun-20	17-Jun-20	N/A				17-Jun-20	19-Jun-20	3-Jul-20
	Total Goods and Works							2 345 300										-	-				

Project Title: Talent Retention for Rural Transformation (TRTP) Project IFAD Loan #: __; IFAD Grant __; Adaptation Fund #: __ Procurement Plan: June 2020 - November 2021 (incl. AF January 2021- November 2021)																								
25th of April, 2019																								
BASIC DATA										Bid Documents		Bidding Period		Bid evaluation Report		Contact Finalization								
	Description	Expenditure Category	# of lots	Financial Source	Responsible Agency	Issue # of invitation for Bids	Estimated Amount in US	Procurement Method	Pre- or Post Qualification	Prior or Post Review	Date Proposed	Date No-Objection	Bid Invitation Date	Bid Closing-Opening	Bid evaluation Report	No-Objection	Contact Amount in USD	Contact Amount in US/per date	Name of the Consultant/Contractor	Date contract Award	Date Contract Signature	Date of Contract Completion		
	Component I. Resilient Economic Transformation																							
	Subcomponent 1.1.1: Climate Resilient Infrastructure Development																							
1	Awareness raising and mobilization/targeting outreach to collect application for 1st year	Actual	I	1	IFAD Loan AF Grant	CPIU	TRTP/CS/CQ5-01	38 000	CQS	Post	Post													
		Planned										04-Apr-20	18-Apr-20	20-Apr-20	04-May-20	18-May-20	N/A							
2	Awareness raising and mobilization/targeting outreach to collect application fo 2nd year	Actual	I	1	IFAD Loan	CPIU	TRTP/CS/CQ5-02	38 000	CQS	Post	Post													
		Planned										04-Apr-21	N/A	18-Apr-21	02-May-21	16-May-21	N/A							
3	Feasibility study of investment proposals for 1st year	Actual	I	1	IFAD Loan	CPIU	TRTP/CS/CQ5-03	23 000	CQS	Post	Post													
		Planned										04-Oct-20	18-Oct-20	18-Oct-20	01-Nov-20	15-Nov-20	N/A							
4	Supervision of Roads and infrastructure projects (about 6 individual engineers) for the 1st year	Actual	I	6	IFAD Loan	CPIU	TRTP/CS/CS-04	21 000	ICS	Post	Post													
		Planned										27-Apr-21	N/A	11-May-21	25-May-21	14-Jun-21	N/A							
	Subcomponent 1.1.2: On-farm Climate Adaptive Water Management																							
5	On-farm Training and Implementation Support (selecting and development of Demo Plots, providing ToT and Training to Extension workers and Farmers)	Actual	I	1	AF Grant	CPIU	TRTP/CS/QCBS-05	380 000	QSBS	Post	Prior													
		Planned										15-Aug-20	29-Aug-20	31-Aug-20	30-Sep-20	27-Nov-20	11-Dec-20							
6	Conservation Agriculture National Inventory survey	Actual	I	1	AF Grant	CPIU	TRTP/CS/CQ5-06	50 000	CQS	Post	Prior													
		Planned										20-Dec-20	03-Jan-21	05-Jan-21	19-Jan-21	02-Feb-21	16-Feb-21							
7	Develop curricula for Conservation Agriculture for University and College, training materials and training of trainers	Actual	I	1	AF Grant	CPIU	TRTP/CS/QCBS-07	170 000	QSBS	Post	Prior													
		Planned										04-Jul-21	18-Jul-21	20-Jul-21	19-Aug-21	16-Oct-21	30-Oct-21							
	Subcomponent 1.2: Agribusiness Development																							
	Subcomponent 1.2.1: Strengthening Value Chains for Producer Groups																							
8	Regional visits for information dissemination to identify VCs / Diagnostic Survey of selected VCs / Market Facilitation meetings	Actual	I	1	IFAD Loan	CPIU	TRTP/CS/QCBS-08	223 000	QSBS	Post	Prior													
		Planned										10-Jan-20	24-Jan-20	26-Jan-20	25-Feb-20	23-Apr-20	07-May-20							
9	Business planning / Producer Groups coaching and mentoring (several packages)	Actual	I	5	IFAD Loan	CPIU	TRTP/CS/CQ5-09	320 000	CQS	Post	Prior													
		Planned										04-Jun-20	18-Jun-20	18-Jun-20	02-Jul-20	16-Jul-20	30-Jul-20							
10	Marketing and Branding investment for agroprocessing for 1st year (several packages)	Actual	I	5	IFAD Loan	CPIU	TRTP/CS/CQ5-10	50 000	CQS	Post	Post													
		Planned										15-Aug-20	29-Aug-20	29-Aug-20	12-Sep-20	26-Sep-20	N/A							
	Subcomponent 1.2.2: Strengthening MARDE Technical Capacity																							
11	Strengthening of MARDE for economic analysis - learning and experience sharing for MARDE staff and PGs (several packages)	Actual	I	4	IFAD Loan	CPIU		42 000	AP	Post	Post													
		Planned										20-Jul-20	03-Aug-20	N/A	N/A	N/A	N/A							
12	Strengthening of MARDE for market analysis - learning and experience sharing for MARDE staff and PGs (several packages)	Actual	I	4	IFAD Loan	CPIU		42 000	AP	Post	Post													
		Planned										20-Jul-20	03-Aug-20	N/A	N/A	N/A	N/A							
	Component II. Entrepreneurship Finance																							
	Subcomponent 2.2: Rural finance sector development																							
13	MSE information and awareness campaign (several packages)	Actual	I	2	IFAD Loan	CPIU		10 000	AP	Post	Post													
		Planned										20-Jun-20	04-Jul-20	N/A	N/A	N/A	N/A							
14	YOUTH/Women information/mobilization/selection of Grant applicants (meetings with grant audience, support in developing proposals for subsidies from AIPA)	Actual	I	1	IFAD Loan	CPIU	TRTP/CS/QCBS-11	105 000	QSBS	Post	Prior													
		Planned										20-May-20	03-Jun-20	05-Jun-20	19-Jun-20	16-Aug-20	30-Aug-20							
15	Business plans development and post-financing mentoring support to Youth/Women (several packages)	Actual	I	5	IFAD Loan	CPIU	TRTP/CS/CQ5-12	337 000	CQS	Post	Prior													
		Planned										13-Sep-20	27-Sep-20	29-Sep-20	13-Oct-20	27-Oct-20	10-Nov-20							
16	Software development (accounting and reporting) for SCA	Actual	I	1	IFAD Loan	CPIU	TRTP/CS/CQ5-13	30 000	CQS	Post	Post													
		Planned										20-Nov-20	04-Dec-20	06-Dec-20	20-Dec-20	03-Jan-21	N/A							
17	Training for SCAs	Actual	I	1	IFAD Loan	CPIU	TRTP/CS/SSS-14	125 000	SSS	Post	Prior													
		Planned										20-Nov-20	04-Dec-20	N/A	N/A	N/A	N/A							
18	Software development (deposit insurance monitoring system development) for NCFM	Actual	I	1	IFAD Loan	CPIU	TRTP/CS/CQ5-15	113 000	CQS	Post	Prior													
		Planned										20-Nov-20	04-Dec-20	06-Dec-20	20-Dec-20	03-Jan-21	N/A							
19	Study visits for NCFM staff	Actual	I	2	IFAD Loan	CPIU		25 000	AP	Post	Post													
		Planned										20-Apr-21	04-May-21	N/A	N/A	N/A	N/A							
20	Regulations and policy development for SCA law	Actual	I	1	IFAD Loan	CPIU	TRTP/CS/CQ5-16	30 000	CQS	Post	Post													
		Planned										03-Jun-21	17-Jun-21	19-Jun-21	03-Jul-21	17-Jul-21	N/A							
Total Components I and II							2 172 000																	

25th of April, 2019

/a 1-15 items will be financed from TRTP after completion of IFAD VII Project - 30 Sep 2023

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 8: Project Implementation Manual (PIM)

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

ANNEX 8: PROJECT IMPLEMENTATION MANUAL (PIM)

**MINISTRY OF AGRICULTURE, REGIONAL DEVELOPMENT AND
ENVIRONMENT OF THE REPUBLIC OF MOLDOVA
INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT**

Talent Retention and Rural Transformation Project (TRTP)

OPERATIONS MANUAL

This Operations Manual is subject to periodical review and amendment in consultation with IFAD, as the relevant legislation of the Republic of Moldova and Loan Documents may be amended from time to time

July 5, 2019

CHISINAU

Abbreviations and Acronyms

ACSA	Agency for Consultations and Studies in Agriculture
AF	Adaptation Fund
AIPA	Agency for Intervention and Payments in Agriculture
ASAP	Adaptation for Smallholder Agriculture Programme
AWPB	Annual work plan and budget
CA	conservation agriculture
CASCA	Central Association of SCAs
CC	climate change
CIS	Commonwealth of Independent States
CLD	Credit Line Directorate
COSOP	Country Strategic Opportunities Programme
CPE	Country Programme Evaluation
CPIU	Consolidated Programme Implementation Unit
CPE	Country Programme Evaluation
CUSCA	Central Union of SCAs
DCFTA	Deep and Comprehensive Free Trade Agreement
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
EU	European Union
GoM	Government of Moldova
IFAD	International Fund for Agricultural Development
IPSC	IFAD Programme Steering Committee
IRECRP	Inclusive Rural Economic and Climate Resilience Programme
IRR	internal rate of return
LVI	Livelihood Vulnerability Index
M&E	monitoring and evaluation
MARDE	Ministry of Agriculture Regional Development & Environment
MCGF	Moldova Credit Guarantee Fund
MFOs	microfinance Organizations
MoF	Ministry of Finance
MSEs	Micro and small enterprises
NBM	National Bank of Moldova
NBS	National Bureau of Statistics
NCFM	National Commission for Financial Markets
NDSA	National Dispute Settlement Agency
NEET	not in employment, education or training
NGOs	non-governmental organizations
NPV	net present value
ODIMM	Organization for Development of SMEs
O&M	operations & maintenance

PAR	portfolio at risk
PCR	project completion report
PFI	Partner Finance Institutions
PIM	Project Implementation Manual
PPA	Public Procurement Agency
PPL	Public Procurement Law
RIMS	Results and Impact Management System
SADI	Small Area Deprivation Index
SCAs	saving and credit associations
SECAP	Environmental and Climate Assessment Procedures
TRTP	Talent Retention for Rural Transformation Project
VAT	value-added tax
WHO	World Health Organization

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I. Component 1: Resilient economic transformation

Sub-component 1.1: Enhancing Climate Resilience

1.1.1 Climate-Resilient Infrastructure (CRI)

Glossary of Technical Terms

Micro irrigation schemes	
Small irrigation schemes	
Village feeder roads	Outside of the village road which connects the village with production areas of the farms co-financing construction of the road
Field crops	Cereals, technical crops
Ancillary structures	bridges, drainage and erosion protection facilities

Overview

- The sub-component 1.1 Climate-resilient infrastructure (CRI) is designed to support investments in productive rural infrastructure enhancing resilient rural economic transformation by: (i) removing infrastructure bottlenecks and consolidation of competitive smallholder farmers and village-based agribusiness; and (ii) fostering the adoption of climate smart technologies.
- Overall, the subcomponent will scale up the activities undertaken in previous IFAD-supported projects both on rural infrastructure and on climate change adaptation and will introduce relevant innovations with envisaged potential for scaling up, both by farmers themselves and under future IFAD operations. The design of the subcomponent is built on experiences gained and lessons learned, leading to the identification of adjusted targeting criteria for each type of investment.
- The main types of infrastructure that will be eligible under the CRI subcomponent will include public infrastructure such as economic/productive irrigation infrastructure and village feeder roads (connecting the village with production areas and farms) including small bridges and ancillary structures.
- Adaptation Fund co-financed investments in irrigation infrastructure will focus on micro and small irrigation schemes, in close alignment with Adaptation Fund climate resilient and water efficient on-farm micro irrigation activities. The systems financed under the CRI will be typically at the tertiary network level linked either to independent small schemes with existing sources (pumping stations on rivers and natural reservoirs), or to larger functional secondary pipelines and supply systems such as the recently completed rehabilitation of Centralized Irrigation Systems under the MCA operated by

the state agency “Appele Moldova”. Investment in micro and small irrigation could include pumping station, water harvesting ponds lined with polypropylene protective geotextile with a storage capacity up to 15,000 cubic metre, tertiary pipeline network, providing the necessary conditions for supplementary or full irrigation and the uptake of water saving irrigation practices (e.g. drip, micro sprinklers or subsurface drip irrigation) in farm areas up to 200 ha. The CRI will explicitly not support the development of irrigation facilities for field crops and will mainly concentrate in geographic locations prone to climate risk¹². For irrigation activities, the project will encourage the use of solar pumps and maximize the use of green technology options wherever appropriate.

- Investment in rural roads improvements will be directed in rural feeder roads and ancillary structures that complement and strengthen project investments by assuring adequate access to production areas and facilitating marketing of smallholders produce. Eligible investments will include also road ancillaries such as small bridges, drainage facilities and erosion protection work to ensure climate resilience of the rehabilitated roads. Typically, these will be 4-6 m wide road sections with an average of 2.5 km length with hard or stabilized gravel surfacing. While complying with the national technical standards for pavement design and road construction, for hard surfacing the CRI will replicate the successful experience of applying vibrated concrete paving piloted under the ongoing IFAD financed IRECR and RRP. This technical option is a valid and cheaper alternative to asphalt paving and, if properly built requires relatively less routine maintenance.
- The subcomponent will be implemented throughout rural areas of Moldova, with no specific geographic focus/limitation. However, the priorities will be given to proposals from geographic locations more prone to climate risk and to target areas showing a relative higher concentration of poverty, based on the Small Areas Deprivation Index (SADI) indicators³. Cumulative impact assessment will be considered as an integral part of the feasibility studies for all infrastructure.
- No fixed pre-allocation of funds per geographical location or village will be undertaken for CRI investments. The award of competitive contributory grants would be on a voluntary, demand-driven basis for eligible investment proposals. The competitive grant provided by the CRI will be limited to USD 200,000 per qualified proposal excluding beneficiary contribution and VAT.
- Under the CRI the required level of beneficiary contribution for investments in micro and small irrigation schemes will be set to 10% of the total cost of civil works, VAT excluded. The beneficiary contribution for road investments it will be set to 25% of civil works, VAT excluded. Of these, at least 25 per cent will have to be mandatorily mobilized from private resources, i.e. from the benefitting smallholders or agribusinesses while the balance may be provided through public funding, i.e. from local municipality (*primaria*) budget. Moreover, on top of this, the beneficiaries will be responsible for procurement of the design and author’s supervision services from licenced design companies to be submitted to state expertise for approval. This is an

¹ Detailed mapping of climate vulnerability is financed by the GEF under the ongoing IRECR.

² This will be the first activity of the TRTP-Adapt. TRTP-Adapt will be effective in PY2

³ Computed by the Ministry of Economy of the Republic of Moldova.

additional contribution by beneficiaries estimated at about 6% of total investment cost. Operation and maintenance cost of rehabilitated/constructed assets during the project live is estimated of about USD 0.29 million and also considered as a beneficiary contribution.

- The Government contribution will be in the form of VAT exemption for the works to be implemented in the framework of CRI.
- The total budget for CRI activities is USD 11.7 million of which USD 5.97 million from the IFAD Loan, USD 1.8 million from AF Grant only for irrigation proposals, USD 1.7 million beneficiary contributions and USD 2.4 million from the GoM as forgone VAT. The main emphasis of the subcomponent will be on micro and small irrigation schemes, with an indicative budget of about 75% of total allocated funds. In addition to works, activities funded in the framework of CRI will include annual information campaign, feasibility studies for pre-qualified proposals and supervision of works. Estimated cost of these activities is about 5% of total investment cost, including 1% for information campaign, 2% for supervision of works and 2% for feasibility studies.

Budget allocation for each activity

- **Irrigation infrastructure.** A total amount of USD 7.97 million allocated to this activity including USD 4.5 million (about 55%) from IFAD loan, USD 1.8 million (about 23%) from Adaptation Fund grant, beneficiaries' cash contribution of about USD 0.53 million (10% of investment cost before VAT), and government contribution of about USD 1.17 million in the form of VAT exemption. Project fund allocation for each irrigation works contract will consist of 70% of funds from IFAD loan and 30% of Adaptation Fund grant, before adding beneficiary contribution and VAT.
- **Rural feeder roads.** A total amount of USD 2.7 million allocated to this activity including USD 2.0 million (about 74%) from IFAD loan funds, beneficiaries' cash contribution of about USD 0.4 million (25% of investment cost before VAT), and government contribution of about USD 0.3 million in the form of VAT exemption. Project fund allocation for each road works contract will consist of 100% of funds from IFAD, before adding beneficiary contribution and VAT.
- **Annual awareness raising campaign.** A total of USD 169,000 from IFAD loan fund allocated for this activity. There will be four contracts (one per project year one, two, three and four) before the call for applications to sensitise project area communities about the CRI subcomponent activities, procedures and funding mechanisms.
- **Feasibility studies of pre-qualified proposals.** A total of USD 134,000 from IFAD loan fund allocated for this activity. There will be four contracts (one per project year one, two, three and four) for feasibility studies of pre-qualified proposals.
- **Supervision of works.** A total of USD 127,000 from IFAD loan fund allocated for individual consultants and/or firms for supervision of civil works.
- Contribution of beneficiaries for development of engineering designs and operation and maintenance of the rehabilitated/constructed assets during the project live are also counted and estimated at the level of USD 0.36 million and USD 0.29 million respectively.

CRI Implementation Arrangement

- The implementation arrangement for the CRI subcomponent is derived from the established procedures and management arrangements that have been fine-tuned and proven effective since 2007 with the CPIU retaining a key role in the investment selection process, quality control assurance and monitoring of results, while services including information campaign, feasibility studies and supervision of civil works and specialized consultancies will be outsourced to qualified service providers.
- All water extraction infrastructure, such as water pumps, off-farm tertiary canals or on-farm irrigation schemes need to comply with the provisions set out in the water and environmental protection laws **and should follow those** procedures for water-related projects in Moldova **as they** are government approved and ensure compliance **with relevant national laws**.
- As of August 2018, it is the MARDE that issues the permits for water related activities (e.g. pumps) and are valid for 12 years, however a number of other institutions also provide qualified opinions. These are Apele Moldovei, the Agency for Geology (if accessing underground water), and the National Centre for Public Health. The process is fairly straightforward and takes no more than 30 days; the information that is considered when making the decision to issue permits is the following:
 - Review the pre-feasibility study presented by the applicant;
 - The location of where the infrastructure is installed;
 - The source of water to be used;
 - The number of households and farms already accessing a particular source of water; and
 - The maximum volume of water to be used (all water consumption is metered and monitored regularly by Apele Moldovei).
- Water permit procedures in Moldova mean that activities for component 1 will follow similar permit approval processes that are proven to be in full compliance with the relevant laws.
- Two main bodies involved in execution of the CRI subcomponent are:
- Selection Committee (SC); and
- Consolidated Programme Implementation Unit-IFAD (CPIU).
- **Selection Committee.** The SC is a responsible body for approval of competitive grant award under the CRI subcomponent and established by the decree of the Ministry of Agriculture, Regional Development and Environment (MARDE).
- The SC is chaired by the representative of MARDE and comprised of the following members:
 - CPIU Director;
 - CPIU Infrastructure Development Specialist;
 - CPIU Irrigation Engineer;
 - CPIU Financial Manager;
 - CPIU Procurement Officer;

- Representative from Ministry of Economy and Infrastructure (MEI);
- Representative from Ministry of Finance (MoF);
- Representative from "Apele Moldovei" (State Water Administration Agency).
- To ensure competitiveness and comparativeness the SC meetings will be held at least once per each project year to review and approve proposals for the next year's grants award. The number of grants for each year would depend on the size of each investment proposal and budget allocation for any particular year. This would also allow the CPIU to carry out the bidding procedures in the winter season (not favorable for civil works in Moldovan rural areas) and to implement civil works during the more favorable seasons.
- The SC makes its decisions on a basis of review of the evaluation report and recommendations prepared by the CPIU. The SC ensures that the infrastructure investment selection procedure is in line with the policies and criteria agreed with IFAD and further described in this manual.
- The CPIU shall provide the evaluation report and recommendations to the SC members at least 5 days before the agreed SC meeting date. Decisions in SC sessions are made on a basis of simple majority of vote. The decisions could be made if at least 2/3 of SC members are participating on meeting.

CPIU. The CPIU is an executive body and responsible for implementation of the CRI subcomponent.

- The role of the CPIU is to review applications for competitive grants for infrastructure investment, provide recommendations for approval to the SC for the applications which are meeting CRI subcomponent eligibility criteria and subsequently to instigate and oversee the engineering design and construction.
- In terms of the CRI subcomponent the CPIU has the following main tasks:
 - Raise awareness about the availability of the competitive grants award scheme for infrastructure rehabilitation in the project area (media campaign will be coordinated with those needed by other components of the TRTP, annual awareness-raising campaign by contracted consultant);
 - review and evaluate grant applications in accordance with the guidelines and mechanisms described;
 - assist to interested groups of farmers in application preparation, provide information on relevant technologies and innovations;
 - undertake preliminary review of investment proposals and pre-qualify the eligible proposals, including site visit and discussion with interested groups;
 - procure consultancy services for feasibility studies of pre-qualified investment proposals;
 - conduct final qualification and ranking of proposals for SC decision making;
 - review and comment on technical design documents for selected proposals provided by the interested groups;
 - conduct procurement of services, goods and works;
 - monitor and carry out supervision of civil works implementation of investment projects by contractors;
 - assist in training of client groups in operation and maintenance issues of rehabilitated infrastructure; and
 - periodically assess the impact of infrastructure investments according to the indicators described in the M&E section of the PIM.

Application, evaluation and selection of proposals

Information and Awareness Campaign

- The decision-making procedure to be followed for the award of competitive grants is guided by the principles of transparency, demand-driven allocation, efficiency and cost sharing.
- Competitive grants award will be based on a set of specific criteria that will ensure that TRTP/CRI resources reach the intended target groups and will start with information and awareness campaigns. Information and awareness campaign will be undertaken by the CPIU staff through workshops and seminars organized in regions within three months after the TRTP effectiveness, and would include local authorities, rural entrepreneurs, agro-processors, producer groups, and smallholder (up to 10 ha) farmers. At least three information workshops would be conducted, one in each main zone (North, Center, South). The workshops would be followed by regular messages on the radio and television broadcast and through printed media to sensitize rural communities about the subcomponent, its objectives, application procedure and eligibility criteria. In addition to this, provisions are made for contracted service providers to support CPIU in an enhanced outreach and annual information process during the course of TRTP implementation. A more in-depth mobilization approach will be adopted for some of the *rayons* and *primarias* in the country. The selection criteria for these *primarias* will be (i) location in areas defined as most vulnerable in terms of climate vulnerability and poverty (refer to map developed for TRTP overlaying SADI with climate vulnerability in Targeting section of PIM) and (i) no previous investment in infrastructure from IFAD projects in the last 8 years. A team will be sent to hold meetings with small-holder farmers and local government to provide detailed information on the investment opportunity, explore and address barriers to application.

- **Application**

- Request for funding from the CRI subcomponent may come from a variety of sources. Applicants may be small farmers' interest groups, Water Users Associations (WUA), formal village level agribusinesses and village councils (*Primaria*). The application will be done in writing and should consist of the required information and data as per the application form used by CPIU under the on-going RRP and adjusted to meet the selection criteria for type of infrastructure eligible to be funded under the CRI. The application shall include formal letter of endorsement from relevant authorities to re-value the proposed infrastructure (fixed assets) on their balance sheet and make a provision for adequate operation and maintenance. For micro/small irrigation and feeder roads it shall be the local authority (*Primaria*), while for the tertiaries connecting to centralized irrigation systems it shall be "*Apele Moldovei*" and WUA operating the entire centralized irrigation system. All applications will need to be endorsed by the *Primaria*.

- **Selection**

- All applications go through a two-step selection process of: (i) screening, pre-qualification; and (ii) qualification and ranking.

- **Screening, pre-qualification.** The applications will undergo a desk review by the Applications Evaluation Committee (AEC) comprising of at least four CPIU staff members⁴, which is expected to check the general eligibility, verify the integrity of the file, and develop a first long list of pre-qualified applications. For pre-qualification, applications will be required to comply with the following compulsory criteria: (i) the proposal is presented by and is directly supportive of small agribusinesses and smallholder farmers; (ii) the proponents (including concerned municipalities, agribusinesses and farmers) are committed to invest the minimum required amount (depending on the type of infrastructure) of the total cost of the investment from their own resources; (iii) the proposal contains a feasible provision for operation and sustainable maintenance of the facility; and (iv) the proposed infrastructure is eligible for investment in the framework of CRI. Any proposal which does not satisfy these criteria will be rejected.
- After the screening stage, the CPIU, supported by technical consultants if required, will review the actual situation in the field. Verification is to be done of the state of infrastructure, prioritized economic and climate resilience linkages, feasibility of proposed works, potential number of beneficiaries, landholdings, their legal status, and other relevant items. In other words, in this stage, the link between the proposed investment, the expected benefits and the commercial justification will be researched. The field review will also assess whether the technical pre-conditions (i.e. the status of any existing structure connected to the proposed investment) have been correctly addressed in the proposal and will consolidate the initial cost estimate for the proposed works. Only investment proposals requiring CRI contribution of less than US\$200,000 (excluding beneficiary contribution and VAT) will be considered for further processing.
- Following the field verification, the pre-qualified applicants will have to undertake the pre-feasibility check, executed by a specialized company from a shortlist of qualified professionals retained at the CPIU. This exercise will result into a document, which shall certify the technical feasibility for the proposed investment, present a preliminary design and budget for the expected investment and include all the necessary elements for ranking of the proposal in line with the relevant criteria, including but not limited to the calculation of the investment IRR. A minimum cut-off level for the IRR will be applied at this step of the selection process. Proposals showing an IRR lower than 10% will be rejected.
- All the non-prequalified applicants will be formally notified by the CPIU with clear justifications and reasons for rejection.
- **Qualification and ranking.** All the pre-qualified investment proposals will be ranked, based on the outcomes of the feasibility studies, using the scoring system described below. The decision-making procedure to be followed is guided by a scoring system which prioritizes smallholder farmers from the poorest and most climate vulnerable areas of the country, the principles of transparency, demand-driven allocation, efficiency, cost sharing and cumulative impact. The proposals will be ranked in descending order until all the available funds for a given year are allocated. Unless a minimum of 50

⁴ Programme Director; Infrastructure Development Specialist, Irrigation Engineer and Procurement specialist.

smallholder farmers are benefitting from roads the proposal will be disqualified. Unless a minimum of thirty percent of the beneficiaries of the irrigation scheme are smallholder farmers, the irrigation scheme will be disqualified.

Scoring for Irrigation Investment Proposals

	Value	Reference Points	Score
Estimated per hectare Investment Cost (VAT excluded)			
Over USD 2,500		10	
Between USD 2,000 and 2,500		15	
Less than USD 2,000		20	
Internal Rate of Return (IRR)			
Less than 15%		0	
15-20%		5	
More than 20%		10	
Number of benefitting households (smallholder farmers with upto 10 ha land)			
Less than 5		0	
Between 5 and 10		15	
More than 10		30	
Climate change vulnerability (based on vulnerability map)			
From low vulnerable geographic area		0	
From moderate vulnerable geographic area		10	
From highly vulnerable geographic area		15	
Deprivation (SADI indicator for irrigation)			
Low (564-843)		0	
Middle (282-563)		10	
High (1-281)		15	
O&M is properly described and arranged			
Management institution to be established		0	
Will be transferred to already established institution (WUA)		5	
Already is operated by management institution (WUA)		10	
TOTAL (max. 100)			

Scoring for Feeder Road Investment Proposals

	Value	Reference Points	Score
Estimated per km Investment Cost (VAT excluded)			
Between > USD 80,000 and 90,000		10	
Between USD 60,000 and 80,000		15	
Less than USD 60,000		20	
Internal Rate of Return (IRR)			
10-15%		0	
16-20%		5	
More than 20%		10	
Number of benefitting households (smallholder farmers with upto than 10 ha land))			

Less than 50	0
Between 50 and 100	15
More than 100	30
Climate change vulnerability (based on vulnerability map)	
From low vulnerable geographic area	0
From moderate vulnerable geographic area	10
From highly vulnerable geographic area	15
Deprivation (SADI indicator for roads)	
Low (564-843)	0
Middle (282-563)	10
High (1-281)	15
O&M is properly described and arranged (assessed by the CPIU engineers based on primaria annual budget allocation for roads maintenance and management arrangement)	
Unsatisfactory if no allocations are made or maintenance works conducted during the last 3 years)	0
Moderately Satisfactory (if allocations are made but not sufficiently maintenance conducted)	5
Satisfactory	10
TOTAL (max. 100)	

- **Final selection.** The CPIU will submit the results of the ranking to the SC for final selection and inclusion of the investments in the following Annual Work Plan and Budget (AWPB). The implementation of eligible investments in excess of the annual budget will be postponed to the following AWPB. At this stage, the CPIU will also consult with relevant institutions to ensure that phasing of the works is consistent with other development plans in the same area. After technical approval by the SC, all proposals are to be sent to IFAD for review and no-objection prior to a final decision on awarding grants. After receipt of no-objection from IFAD, the CPIU will sign investment agreement with the successful applicants as per the format used under the previous and ongoing IFAD projects to proceed with the detailed designs. Following the upgrading/climate proofing and approval of the design from the State Expertise, the CPIU will start the procurement process for civil works.
 - All approved designs that are to be implemented through the subcomponent are required to meet the provisions of the environmental legislation of the Republic of Moldova in accordance with the "Instructions for Environmental Assessment" approved by the Environmental Ministry of the Republic of Moldova (No. 188, 10.09.2002 with the latest changes). The existing legislation requires Environmental Assessment of detailed designs by the State Environmental Inspection.
- **Procurement**
- The CPIU will be responsible for procurement of services (consultancy services for awareness-raising campaign, proposals feasibility study and supervision of works) and civil works. Details on procurement methods, thresholds, standard bidding documents, and bidding procedures are provided in the relevant section of the PIM and/or LTB. The CPIU will ensure that all service providers follow sound labour management practices which adhere to principles of non-discrimination, equal opportunity and follow health and

safety procedures, etc. with emphasis on fair treatment of all project workers in a manner consistent with ILO principles and national law.

- **Supervision of Works**

- Supervision of civil works will be carried out by the CPIU through short term contracted daily site-supervisors for the duration of each contract as per the procedure and forms for works supervision and contract management developed under the previous IFAD funded infrastructure interventions.

- **CRI Staff**

- The main staff involved in CRI subcomponent implementation will consist of a CPIU Infrastructure Development Specialist and an Irrigation Engineer. Sample Term of References are provided in the Appendix 1.

- **Monitoring and Evaluation of the CRI activities**

- The CPIU Monitoring and Evaluation Officer will be responsible to facilitate and coordinate monitoring and evaluation activities under the CRI component. Details on CRI M&E activities, data collection, evaluation methodologies and reporting are provided in the relevant section of the PIM.

SAMPLE TERMS OF REFERENCES

CPIU Infrastructure Development Specialist

Responsible to: CPIU Director

Qualifications and Experience

1. A higher degree or an equivalent qualification in Civil Engineering with sound knowledge of contemporary issues in the rural infrastructure of Moldova in particular. A minimum of five years working experience with projects for infrastructure rehabilitation including design and construction supervision with proven ability to work in a multi-disciplinary team and with rural population. Familiarity with engineering design requirements and construction supervision procedures of the Republic of Moldova, as well as with the procurement procedures applicable under foreign donors' funded projects. Fluent English, both spoken and written is preferable. Computer literate. The selected candidate will have a pragmatic, creative and energetic approach to problem solving and decision-making and the capacity to operate effectively with contractors and village population.

Job Description

2. Under the direct supervision of the CPIU Director the Infrastructure Development Specialist will be responsible for overall guidance and management of the infrastructure investment related activities under the CRI subcomponent in accordance with CPIU regulations and approved procedures for supervision of design and civil works. The Infrastructure Development Specialist will be responsible for supervising and guiding activities of daily Site Supervisors (contracted and paid by CRI) that due regard is given to the quality and quantity of works to be implemented throughout CPIU operations in the framework of the CRI. Within this overall role, the following tasks would be the specific responsibility of the Irrigation Engineer.

- In cooperation with the CPIU relevant staff to participate in information Workshops and sensitize rural communities about the subcomponent, its objectives and eligibility criteria, application and selection procedure.
- Review and assess proposals for feeder roads rehabilitation or new works with regard to their technical feasibility and preliminary cost estimation.
- Assess whether the proposed civil works are required or whether other, more appropriate structures may be more suitable.
- Review proposed works in relation to other possible alternatives.
- Evaluate and rank the proposals as per the agreed selection criteria and procedure.
- Review detailed engineering design solutions in terms of sound technical soundness, quality and identified scope and volumes of works.
- Participate in Bid Opening and Evaluation Committee in evaluation of bids for civil works implementation.
- Participate and contribute in discussions with applicant, design company and other interested parties in decision making during the construction stage.
- Supervise the implementation of civil works and coordinate activities of site supervisors in accordance with agreed procedure and standard formats.
- As a member of the CPIU Management Team, provide reports and information on infrastructure investment operations as necessary to the CPIU Management and contribute to progress reports.

SAMPLE TERMS OF REFERENCES

CPIU Irrigation Engineer

Responsible to: CPIU Infrastructure Development Specialist

Qualifications and Experience

1. A higher degree or an equivalent qualification in Irrigation Engineering with sound knowledge of contemporary issues in the irrigation infrastructure of Moldova in particular. A minimum of three years working experience with projects for infrastructure rehabilitation including design and construction supervision with proven ability to work in a multi-disciplinary team and with rural population. Familiarity with engineering design requirements and construction supervision procedures of the Republic of Moldova, as well as with the procurement procedures applicable under foreign donors' funded projects. Fluent English, both spoken and written is preferable. Computer literate. The selected candidate will have a pragmatic, creative and energetic approach to problem solving and decision-making and the capacity to operate effectively with contractors and village population.

Job Description

2. Under the direct supervision of the CPIU Infrastructure Development Specialist the Irrigation Engineer will be responsible for overall guidance and management of the irrigation investment related activities under the CRI subcomponent in accordance with CPIU regulations and approved procedures for supervision of design and civil works. The Irrigation Engineer will be responsible for supervising and guiding activities of daily Site Supervisors (contracted and paid by CRI) that due regard is given to the quality and quantity of works to be implemented throughout CPIU operations in the framework of the CRI. Within this overall role, the following tasks would be the specific responsibility of the Irrigation Engineer.

- In cooperation with the CPIU relevant staff to participate in information Workshops and sensitize rural communities about the subcomponent, its objectives and eligibility criteria, application and selection procedure.
- Review and assess proposals for irrigation infrastructure rehabilitation or new works with regard to their technical feasibility and preliminary cost estimation.
- Assess whether the proposed civil works are required or whether other, more appropriate structures may be more suitable.
- Review proposed works in relation to other possible alternatives.
- Evaluate and rank the proposals as per the agreed selection criteria and procedure.
- Consult and assist applicants in application development and inform about the latest irrigation techniques and water saving technologies.
- Review detailed engineering design solutions in terms of sound technical soundness, quality and identified scope and volumes of works.
- Participate in Bid Opening and Evaluation Committee in evaluation of bids for civil works implementation.
- Participate and contribute in discussions with applicant, design company and other interested parties in decision making during the construction stage.
- Supervise the implementation of civil works and coordinate activities of site supervisors in accordance with agreed procedure and standard formats.

- As a member of the CPIU Management Team, provide reports and information on infrastructure investment operations as necessary to the CPIU Management and contribute to progress reports.

1.1.2 On-farm Climate Adaptive Water Management

Overview

- Around USD 2.2 million from the Adaptation Fund grant will be used to build smallholder farmer's resilience to climate change by fostering the adoption of climate smart, water saving technologies and building smallholder awareness and capacity in climate adaptive agricultural practices. This will be implemented through a service provider responsible for developing demo plots, ToT programmes and provide extension support services. The project will incorporate the lessons learned and upscale a FAO pilot on the use of on-farm water efficient technologies. Farmers will be assisted in installing water efficient technologies; they will also be trained and supported in the use of climate adaptive techniques that inter alia help improve soil water storage, control erosion, improve soil structure, and boost nutrient management. It is expected that depending on demand between 400 and 800 households would benefit from on-farm irrigation and training and around 4600 from climate adaptive techniques. Based on the FAO lessons learned the project will train and provide demand driven advisory services in irrigation systems, regimes and water quality; simple entry accounting and fiscal reporting; and in expenditures and revenues of improved irrigation systems.
- The AF resources will also be used to address an important need identified by MARDE to help in understanding the types of conservation farming practices adopted in the country and to enhance capacity through assisting with the development of a national curriculum for Conservation Agriculture. The project will assist with the development of a national survey of CA in Moldova to provide a national overview of the adoption of CA in the country and a white paper on CA recommendations and the development of a framework for a CA curriculum. The mainstreaming of CA into the higher educational system will be further supported with the translating of textbooks and research papers into the local language.
- Funds will also be provided to support CA research in an agricultural research institute by procuring CA equipment, research grants, capacity building in soil lab analyses and establishing demonstration plots. The research institute will also build youth capacity with the involvement of young university students to support the work of the researchers in CA. The project will allocate resources to support the training of professionals in CA who in future be able to provide professional services in CA in Moldova including to smallholders.
- Knowledge management is one of the key elements of the Adaptation Fund. Consequently, the project will have a considerable knowledge management programme. The project will dedicate around USD 50,000 to ensure that project results are being adequately recorded and the findings disseminated. This will also include gathering lessons learned and positive experiences from farmers through videos clips and short accompanying educational programmes related to the core areas of water scarcity, climate change, the benefits of drip irrigation and other simple and accessible adaptive techniques. The knowledge management programme will also ensure that adequate studies are being conducted to quantitatively measure the improvements in crop quality and yield. These scientific studies will be published and also converted into knowledge

products that will be easily understood by the general public and broadcast on TV, radio, social media and in print.

- Project Goal
- Adaptation Fund financing is to enhance the adaptive capacity of farmers through climate resilient techniques and water efficient technologies.

- **Project Objective**

- The objective is to enhance climate change adaptation and food security through i) facilitating farmer access to climate resilient on-farm techniques and technologies; ii) facilitate access to financing through component 2; and iii) mainstreaming Conservation Agriculture into the national educational system.

- **Introduction**

- The Adaptation Fund project promotes sustainable water management and conservation agriculture that together form the Integrated Water Resource Management (IWRM) approach of the TRTP-Adapt USD 6 million project. The TRTP-Adapt is fully integrated into sections 1.1.1 and 1.1.2 of sub-component 1.1 of the TRTP, but also component 2, and as such implementation needs to be based on both the guidelines in the PIM but also the standalone TRTP-Adapt project document. The TRTP-Adapt project document addresses the need for Conservation Agriculture (CA) and climate smart, water efficient agricultural technologies for adoption by smallholder farmers through a detailed explanation of the climate risks that the agricultural sector in Moldova is facing. In essence and in view of the risks posed by an increasingly variable climate on the largely rainfed smallholder agricultural sector, better environmental and natural resource management (ENRM) is needed to reduce the effects of water scarcity and improve Disaster Risk Reduction (DRR).
- The AF resources will also be used to address an important need identified by MARDE to help in understanding the types of conservation farming practices adopted in the country and to enhance capacity through assisting with the development of a national curriculum for Conservation Agriculture. The project will assist with the development of a national survey of CA in Moldova to provide a national overview of the adoption of CA in the country and a white paper on CA recommendations and the development of a framework for a CA curriculum. The mainstreaming of CA into the higher educational system will be further supported with the translating of textbooks and research papers into the local language.
- In order to successfully implement section 1.1.2 the TRTP will do the following:
 - a) **Demo.** Set up demonstration plots (demo plots) demonstrating irrigation technologies as well as climate adaptive agricultural techniques. Willing farmers will receive equipment for a maximum of USD 7,500 for on-farm water-efficient irrigation equipment and maintenance costs for demo plots and have access to the matching grants and AIPA loans through TRTP. Farmers will be expected to make in-kind contributions in the form of farm running costs. The demo farms will have control sites to demonstrate the benefits of using the proposed technologies and techniques.
 - b) **On-farm water management.** At least 400 beneficiaries will receive USD 2500 grants for water-efficient irrigation⁵, each farmer will be asked to

⁵ It is accepted to increase the number of irrigation grants depending on demand.

contribute 30 percent in cash. Further financing will be available for young and women farmers through the TRTP matching grant scheme and under the AIPA programme for adult males (under component 2), should they wish to maximise this opportunity for efficient irrigation technology. The project will target a further 4600 beneficiaries with climate adaptive on-farm training. The tools and equipment needed will be supported by the remaining USD 1.2 million grant money and for which the beneficiaries will make 50% in-kind contributions. In case of weak demand, flexibility is built into the design making the same USD 1.2 million also accessible for an eventual extension of the USD 2500 grants scheme and the 30% cash co-financing⁶ mechanism - including for hail nets, anti-frost machines etc. The aforementioned matching grants and AIPA facilitated loans will be available to support demand-driven climate adaptive technologies for all beneficiaries interested in the grant scheme.

- c) **Scholarships.** Two competitively selected conservation agriculture master students (one male and one female) will receive one-year scholarships to study Conservation Agriculture in a European University or a qualified institution with reasonable fees (for example not including the USA).
- d) **CA Curriculum.** The project will conduct a nationwide survey / situation analysis of the extent of CA adoption by all farmers and the types of techniques being used (correctly or incorrectly). The study will also write a white paper recommending the appropriate CA techniques to be used in Moldova with the aim to provide some direction for the convention for a CA curriculum.
- e) Based on the findings of the CA study, the programme will support a national convention on CA with the objective to develop a framework for a CA curriculum for adaption by all relevant educational institutions. The curriculum will be supported by the translation of leading CA textbooks and research papers into Moldovan language.
- f) **Research Institution.** The TRTP-Adapt will support the agricultural research institute of field crops 'Selectia' in Bălți with CA research demo plots and CA equipment. The research institute will also receive research grants for CA that to the extent possible will be focused on smallholders and gender; a gender-balanced number of agriculture students will be made to assist the researchers as part of their courses for practical CA exposure; and the research institute will also receive support in soil testing capacity for the duration of the project.
- g) **Training of CA professionals.** In order to address the concerns raised by MARDE that one of the key constraints facing the country is a lack of professional capacity, the project will also support the training of professionals in the field of CA with the objective to promote CA related advisory services.
- h) **Knowledge Management.** Knowledge management is an important aspect for the Adaptation Fund. The project will therefore dedicate sufficient resources to ensure that project results are being adequately recorded and the findings disseminated. This will be in terms of the normal M&E framework but significantly, also through gathering lessons learned and positive experiences from farmers through videos clips and short accompanying educational programmes related to the core areas of water scarcity, climate change, the benefits of drip irrigation and other simple and accessible adaptive techniques. The knowledge management programme will also ensure

⁶ Farms are not allowed to receive two USD 2,500 grants.

that adequate studies are being conducted to quantitatively measure the improvements in crop quality and yield. These scientific studies will be published and also converted into knowledge products that will be easily understood by the general public and broadcast on TV, radio, social media and in print.

A. AF Budget (Including Contingencies)

- **Baseline.** The Adaptation Fund will contribute USD 20,000 to the IFAD baseline. The combined IFAD / AF baseline will help ensure that climate change vulnerability is mainstreamed and that a general picture is obtained that reflects an understanding of the extent of water vulnerability (reliance on rainfall and limited irrigation) and the percentage of the annual income smallholder farmers are paying for water.
- **Annual awareness raising campaign.** The AF will contribute a total of USD 80,000 to the combined IFAD-AF mobilisation / outreach campaign, because 30 percent of the micro-irrigation infrastructure activity under section 1.1.1 will be allocated to smallholder beneficiaries using drip-irrigation and co-financed by the Adaptation Fund USD 2,500 grants (with 30 percent co-financing). The mobilisation campaign will also cover all of the 4600 beneficiaries (see section on 'Awareness Raising Campaign' below).
- **Off-farm irrigation.** In order to support improved access to water for smallholders, the Adaptation Fund will contribute USD 1.7 million to the irrigation infrastructure activity under section 1.1.1⁷. 30 percent of beneficiaries receiving micro-irrigation as a result of this activity will be smallholder farmers – and all of who will need to also agree to use on-farm water efficient and climate adaptive drip irrigation infrastructure. Should they need it they can access the USD 2,500 grants under the Adaptation Fund for this purpose (see hereunder).
- **On-farm water management.** This activity will allocate USD 404,000 for a capable and experienced service provider that will be responsible for the identification and training of ToT experts; the development of training curriculums; and the development of training and support manuals. They will train the extension workers and beneficiaries; establish the demo plots; and activate their existing extension services network as implementation support for the USD 2,500 on-farm water management grants; and provide limited technical support for the 4,600 beneficiaries receiving agro-adaptive training.
- A minimum of USD 1 million of the grant money will be dedicated to the USD 2,500 grants for on-farm drip irrigation and will not be tied to any specific crop type; the beneficiary will need to agree to a 30% cash contribution. The remaining USD 1.2 million will be allocated to support the adaptive agricultural techniques (see types of investments under the 'eligible demo investments' section). All beneficiaries will also be entitled to participate in the matching grant and AIPA financing opportunities under the TRTP for further financial support to upscale their water efficient micro-irrigation investment. The Adaptation Fund funds will be allocated on a first-come first-serve basis, in the unlikely event that the Adaptation Fund funds be exhausted, the beneficiaries will still be entitled to the TRTP

⁷ See relevant PIM section.

matching grant and AIPA financing, (for details see relevant section in PIM). In order to remain flexible and be able to adapt to variable demand, the remaining USD 1.2 million will, in the event of insufficient demand, also be accessible to other smallholders looking for climate adaptive support. These will include, but will not be limited to, more drip-irrigation, on-farm water harvesting ponds, hail nets, and anti-frost equipment. In this case the 30% cost-share will still be applicable as will the opportunity to access the TRTP matching grants and AIPA loans.

- **Conservation Agriculture.** A total of USD 550,000 will be allocated to supporting the NPCA that will aim to mainstream CA into the higher level educational system in Moldova and provide technical support to a research institute. In line with the priorities of the NPCA USD 50,000 will be committed to conducting a national inventory of CA, to get a complete understanding of the current adoption rate of CA in Moldova and farmer satisfaction levels. It will also produce a white paper recommending the most appropriate forms of CA for Moldova. The activity will support the development of a national CA curriculum with around USD 105,000; it will support the training of CA professionals with USD 65,000; support the development of CA research with USD 100,000 in research grants, USD 50,000 for the setting up and running of CA demo plots, USD 100,000 research CA machinery, and 30,000 to strengthen lab soil analysis capacity.

- **Implementation Arrangements**

- The implementation arrangements are broadly the same as under section 1.1.1 and is derived from the established procedures and management arrangements that have been fine-tuned and proven effective since 2007 with the CPIU retaining a key role in the investment selection process, quality control assurance and monitoring of results, while services including information campaign, feasibility studies and supervision of works and specialized consultancies will be outsourced to qualified service providers.
- The three main bodies involved in implementation are:
 - Selection Committee (SC);
 - Consolidated Programme Implementation Unit-IFAD (CPIU); and
 - Service Provider.

- **Selection Committee**

- The SC is a responsible body for approval of competitive grant award under sub-component 1.1 (outcome 1.1.1 and 1.1.2) and established by the decree of the Ministry of Agriculture, Regional Development and Environment (MARDE).
- The SC is chaired by the representative of MARDE and comprised of the following members:
 - CPIU Director;
 - CPIU Adaptation Fund Climate Specialist
 - CPIU Infrastructure Development Specialist;
 - CPIU Irrigation Engineer;
 - CPIU Financial Manager;
 - CPIU Procurement Officer;

- Representative from Ministry of Finance (MoF);
- Representative from "Apele Moldovei" (State Water Administration Agency).
- As under outcome 1.1.1: To ensure competitiveness and comparativeness the SC meetings will be held once at the end of each project year to review and approve proposals for the next year's grants award. The number of grants for each year would depend on the success of the mobilisation campaign and the ability of the SP to mobilise the appropriate number of trainers and set up demo plots. It is advisable to carry out the bidding procedures in the winter season and to implement works during the more favourable seasons.
- The SC makes its decisions on a basis of review of the evaluation report and recommendations prepared by the CPIU. The SC ensures that the infrastructure investment selection procedure is in line with the policies and criteria agreed with IFAD and further described in this manual.
- The CPIU shall provide the evaluation report and recommendations to the SC members at least 5 days before the agreed SC meeting date. Decisions in SC sessions are made on a basis of simple majority of vote. The decisions could be made if at least 2/3 of SC members are participating on meeting.
- **CPIU (as from section 1.1.1)**
- The CPIU is an executive body and responsible for implementation. The role of the CPIU is to review applications for competitive grants, provide recommendations for approval to the SC for the applications that meet the eligibility criteria and subsequently to instigate and oversee project implementation.
- The CPIU will have the following main tasks:
 - a) Awareness-raising about the availability of the competitive grants award scheme in the project area (media campaign will be coordinated with those needed by other components of the TRTP, annual awareness-raising campaign by contracted consultant);
 - b) Review and evaluate grant applications in accordance with the guidelines and mechanisms described;
 - c) Assist interested groups of farmers in application preparation, provide information on relevant technologies and innovations;
 - d) Undertake preliminary review of investment proposals and pre-qualify the eligible proposals, including site visit and discussion with interested groups;
 - e) Procure consultancy services for feasibility studies of pre-qualified investment proposals;
 - f) Conduct final qualification and ranking of proposals for SC decision making;
 - g) Review and comment on technical design documents for selected proposals provided by the interested groups;
 - h) Conduct procurement of services, goods and works;
 - i) Provide oversight for implementation of investments by SP;

- j) Provide monitoring of the SP in training of client groups in operation and maintenance issues and extension services;
- k) Periodically check that the SP is delivering the contracted extension services.
- l) Periodically assess the impact of the investments according to the indicators described in the M&E section of the PIM.

Eligibility Criteria for Service Provider

- The CPIU will launch a competitive tender for the recruitment of a competent and experienced service provider, the weighting for the SP selection is in table 1 below. The SP will:
 - Be an entity that has considerable experience in delivering similar projects in Moldova.
 - **Be experts in the field of agriculture and in particular in that of climate-smart and water efficient irrigation technologies and techniques.**
 - **Be experienced in setting up and managing demo plots for training.**
 - **Be experienced in recruiting experts for ToT programmes and in overseeing the development of ToT programmes, the training of trainers, extension workers and beneficiaries.**
 - **Have a network of extension workers.**
 - **Be experienced in designing easy to follow manuals for beneficiaries.**
 - **Be responsible for hiring the experts that will develop the training curriculum, train the trainers that will in turn train the extension workers and the on-farm irrigation and climate adaptive agricultural management beneficiaries.**
 - **Manage the network of extension service that will provide support to the irrigation beneficiaries as well as to the climate adaptive agricultural management beneficiaries.**

Table 1 Service Provider selection ranking criteria

Service Provider Ranking Criteria	Weightings %
Experience in setting up drip-irrigation demo plots / FFS projects including implementing ToT programmes, the training of extension workers and training of beneficiaries.	45
Number and quality of training manuals developed	10
Extent of extension worker network and experience in providing irrigation extension service support.	25
Financial proposal	20
Total	100

B. Knowledge Management

Baseline

- The Adaptation Fund will be fully integrated into the TRTP project at every level. This will begin with the baseline and will be conducted prior to the AF start date (that is set for PY2) and will be conducted in close coordination with section 1.1.1 under sub-component 1.1. Climate change vulnerability will be mainstreamed into the baseline meaning that to the extent possible it will include indicators on the extent of water

vulnerability (percent of income spent on irrigation water, water availability: rainfall or irrigation) and farm land irrigation.

Knowledge Management

- **Awareness.** The Adaptation Fund places significant importance on Knowledge Management (KM), the TRTP-Adapt will therefore allocate USD 56,000 and partially fund the salary of a KM Officer. The KM Officer will work together with the Climate Specialist and M&E Officer to set up a campaign of gathering project-related information on success stories in every aspect of the AF funded activities. The KM Officer will be responsible for recruiting production consultants and closely overseeing the production of video material on the impact of climate change and water scarcity; on the benefits of efficient water technologies and how they can save money and improve the quality and quantity of crops, and therefore also sales; and on conservation agriculture. The KM officer will actively engage with beneficiaries to record farmer experiences but also digest and present the scientific research generated as a result of the project in a format that is easily understood by the general public. The KM products will then be broadcast on the AgroTV channel as well as social media (facebook, instagram and youtube). Other appropriate material will also be produced for the relevant outlets such as radio and the printed media including posters, leaflets etc.
- **Studies.** The Climate Specialist will engage with the Agrarian University and post-graduate research students to generate published scientific research in key project areas such as on the impact of drip irrigation on saving money, water, and improving the quality and quantity of produce; the impact that using the types of low-cost climate adaptive techniques promoted by the project have on the livelihoods of smallholder farmers; and on Conservation Agriculture. The Specialist will work closely with the KM Officer to use the information generated to feed directly into the awareness campaign as outlined above.
- **Impact Assessment.** Due to the small number of beneficiaries that will be recipients of on-farm irrigation technologies the project will collect water vulnerability data of those beneficiaries being supported. The surveys at project start will help the understand the extent of water vulnerability in terms of the type of irrigation they use, if any; the cost of water vis-à-vis their annual income; food insecurity; perception of climate change before and after the project; if they already use climate adaptive agricultural techniques. At project closure the impact assessment will use the same indicators to measure impact and also assess what they have learned as a result of the project, and if they feel that they have better knowledge and tools at their disposal to adapt to climate events.

C. On-Farm Water Management Techniques⁸

Background

- The CPIU will competitively tender a contract for a SP that is experienced in: delivering Farmer Field Schools (FFS) and demo plots; identifying national expert trainers to be trained as part of the ToT activity; that will take on the list of identified participating beneficiaries from the CPIU and train them and train their extension workers; produce easy to follow

⁸ Refer to the Adaptation Fund Project design document for more detailed information.

manuals; have a network of extension workers they can activate to both support the irrigation beneficiaries with maintenance and technical support, and provide limited technical support to the 4600 beneficiaries that will receive low-cost climate adaptive agricultural training⁹.

- On-farm water management practices will be disseminated through demo plots and FFS in the areas determined by the climate change vulnerability analysis. These will host on-farm water efficient micro-irrigation demonstrations and control sites as well as demonstration and control sites for low-cost climate adaptive agricultural techniques to increase soil resilience. The SP will provide practical and theoretical training through the FFS, and design and produce an easy to follow manual for all participants. Training will be split between i) those receiving micro-irrigation grants (a minimum 400 beneficiaries) and ii) those receiving low-cost climate adaptive training (4600 beneficiaries), although this will be flexible and adjusted according to demand.
- The training programmes will be tailored to the needs of the farmers (men and women have different needs and these will be taken into consideration in designing the training programmes). It might not be feasible to for example to make them attend several consecutive days of training and this could be spread out throughout the year to demonstrate different techniques relevant to different times of the season. The length of the training sessions will also be dependent on the technical advice of the SP and the training curriculum designed by the SP based on their experience.

Grant beneficiaries. Training will include, but will not be limited to:

- a. Irrigation systems and equipment operation and maintenance, water quality and irrigation regimes;
- b. Simple entry accounting and fiscal reporting;
- c. Expenditures and revenues of irrigated sectors;
- d. Advisory services in technology, economics and marketing;
- e. Climate change awareness capacity building;
- f. Training on the importance and necessity of sustainably utilising the limited water resources in Moldova;
- g. Composting and organic agriculture;
- h. **Insufficient moisture.** Simple techniques can be taught that will help improve soil moisture, fertility and make crops more resilient to climate shocks. For example, for droughts farmers will understand the stress impact of drought on specific crops and how to adapt; to check for leaks; irrigate during the cooler hours of the day; avoid irrigating during windy conditions; ensure water used in irrigation is not more than the soil is able to absorb; drain any excess water left in the pipes (if using) back into storage if possible. Other techniques can include explaining the benefits of weather insurance (if available); the importance of drip irrigation in reducing tree stress and improve size and quality of produce; the importance of using mulch; additional water storage; crop load management (heavier fruit loads are more vulnerable to water stress than those with less fruit). During times of drought thinning can help to mitigate the adverse long-term effects of water stress on growth and can benefit fruit growth; summer pruning can reduce water stress while having minimal impact on fruit growth; and avoid applying foliar nutrients during

⁹ These beneficiaries will be entitled to the grant and irrigation training should they wish to make use of the project activities as a result of this training and there are funds available.

heat stress because the nutrients will not be able to enter the tree and salts will concentrate too quickly in the leaves.

- i. **Cooler growing season.** Farmers will be taught about the importance of choosing the right cultivars for the climate as some easy-to-colour cultivars naturally finish well with good colour, without much sunshine before harvest, and some actually prefer cooler night-time temperatures, and early-ripening cultivars may avoid late summer cool temperatures; reflective mulch material under trees before harvest will help maximize fruit colour and enhance harvest efficiency. Using reflective mulches requires attention to orchard floor management eg. mowing, levelling etc. Nitrogen management as excessive nitrogen will delay fruit colouring and maturity.
- j. **Excessive moisture.** To cope with periods of too much moisture, farmers will be taught techniques to minimise negative impacts. These will include appropriate drainage options; the importance of land preparation for example application of gravel on heavier soil to improve drainage; during heavy rains allow for drainage before using heavy machinery to minimise compaction. Cover crops or orchard sod row middles can help to absorb moisture throughout the growing season and may help trees or prepare for winter. They also prevent leaching losses by tying up nutrients in organic form over winter, and releasing them in the spring when the trees can use them. Monitor soil moisture to void excessive irrigation.

Non-irrigation beneficiaries will receive the same training under section i) above but without the irrigation usage and maintenance training¹⁰.

D. Demo Plots

Demo Application Procedure

- In collaboration with the SP, the IFAD CPIU will launch the call for proposal for the demo plots. The SPs will also use their existing network in addition to local and national mass media and social media.
- With IFAD CPIU oversight, the selected SP will assist in the development of business plans for each demo plot and the programme will facilitate the acquisition of the equipment needed for the implementation of demo plots activities through the matching grants programme. Farmers will be supported in the selection/choice of the most appropriate equipment and in tracking down supplier firms in Moldova or abroad, the SP will also make use of the FAO CA technology online database, which contains detailed information on equipment and suppliers.
- Interested parties need to fill in the application form and prepare the required documentation. The application package with all programme requirements will be available on CPIU home page on the internet. The application form and the set of documents for the application package will be submitted in sealed envelopes directly or by regular mail to CPIU office for registration. Each application will be registered with a reference number.

Eligibility Criteria for Demo Plots

- **CEILING:** USD 7,500 per demo (with in-kind contribution for maintenance costs and option to access matching grants or AIPA loans).

¹⁰ All training will be demand-driven to best meet the needs of the beneficiaries.

- Owners of FFS demo plots could be:
 - Private farmers and / or State-owned agriculture companies from rural areas, except for Chisinau and Bălți towns.
 - Scientific research institutions if they have a legal address in Chisinau or Bălți, and the farm land they own is located in rural or extra urban area.
 - Agriculture Research Institutes / Stations.
 - State Agrarian University of Moldova.
 - Agricultural colleges, boarding schools.
 - Other research institutions closely related to agriculture.
 - It is accepted to increase the number of FFS and demo plots from the Adaptation Fund grant, within TRTP project according to the available budget for the activity.
- All beneficiaries should meet the following eligibility criteria:
 - Should be a legal entity in one of the geographical zones of Moldova
 - For research institutions – copy of registration certificate.
 - Have at least 2 ha land (owned and / or long-term leasing) he/she is willing to dedicate to on-farm irrigation and adaptive agricultural practices as well as control sites.
 - Maintain accounting evidence for overall transactions and operations in accordance with acceptable accounting procedures and standards.
 - Show a commitment to co-finance the investment with in-kind contributions to the operating costs of the farm/infrastructure.
 - Applicant should not have debts to the public budget.
 - Applicant should have satisfactory financial statements as an average for the last 3 years.
 - Applicant should present the types of activities to be undertaken on the proposed demo plot.

Application documents

- Application form.
- Confirmation that applicant owns or has a long-term land lease agreement for crop production;
- Confirmation that applicant is willing to regularly host trainers and beneficiaries to learn from the demo plots.
- Confirmation that the applicant is willing to pay for the running costs of the demo plots.
- Copy of the financial reports for the previous three years of management or, where appropriate, an income statement.
- Certificate on the absence or existence of debts to the central public budget, issued by the regional tax authorities, or where appropriate, copy of debt rescheduling agreement, concluded as required.
- Affidavit on legitimacy of presented data and documents.

Types of Eligible Demo Investments

Equipment for irrigation:

- Grants will be used exclusively for the purchase of climate-smart irrigation¹¹, these will include:
 - Pumps and pump filters
 - Drip pipes
 - Micro-sprinklers

¹¹ This project is based on demand-driven solutions. The project will therefore remain flexible to the climate adaptive needs expressed by the farmers and SP.

- Machines for soluble and liquid fertilisers.
- Small reservoirs, hail nets, and anti-frost (only if there is extra budget due to low demand).

Equipment for demonstrating adaptive agricultural techniques:

- Shredders for crop residues in the field.
- Foil for ponds for capturing rainwater used later for crops irrigation.
- Machine for distribution of organic fertilizers.
- Composts making machines.
- Row cultivators.
- Weed burners.
- Hand tools.
- Other machines and equipment specifically for organic farming (subject to IFAD approval).

E. Adaptation Fund On- and Off-farm Water Management Activities

Technical Support

- The pre-qualification process will be carried out prior to SP involvement, however the CPIU has the flexibility to make adjustments as it sees fit to incorporate SP suggestions as they will have recommendations and advice in regard. With IFAD CPIU oversight, the selected SP will provide technical support through the extension services programme that will focus mainly on areas covered by the training. Farmers will also be supported in the selection/choice of the most appropriate equipment and in tracking down supplier firms in Moldova or abroad, the SP will also make use of the FAO CA technology online database, which contains detailed information on equipment and suppliers.

Financial arrangements for poor smallholder farmers

- The aim of the Adaptation Fund is to target the most highly-disproportionally climate vulnerable smallholders, this means that the project will also target poorer farmers and with fewer financial means. One of the obstacles that have been overcome as a result of the design of TRTP (TRTP-Adapt) is that of devising an innovative approach to grant disbursement that bypasses the need for the beneficiary to pay the grant plus the additional 30 percent co-financing upfront and then request a refund from IFAD. This old system has been reviewed in view of the fact that it effectively excludes the main target group of the project.
- The CPIU will therefore enter in an agreement with commercial banks as partners, such as MIAB, MICB and MobiasBank. The banks will provide a service where those beneficiaries unable to pay upfront will be allowed to open a transitional commercial bank account (with an administrative cost of USD 150 per account paid for by the Adaptation Fund). With this transitional commercial bank account the beneficiary applies to IFAD with a contract from a supplier to supply the on-farm irrigation equipment. Should the projects criteria be met and the application approved, then the account is opened and IFAD pays the grant money into the transitional commercial bank account, into where the beneficiary also pays the 30 percent co-financing. The commercial bank will be tasked to carry out all verifications of the supplier and contracts, and subsequently send the payment to the supplier.

Mobilisation / Outreach Campaign (in coordination with section 1.1.1)

- The grant beneficiaries will be identified and selected in a process outside of the remit of the demo and ToT service provider. The Adaptation Fund will contribute a total of USD 80,000 to the mobilisation campaign (USD 20,000 per year) carried out together with section 1.1.1. The first beneficiaries to be targeted for the Adaptation Fund will be in preparation for PY2¹² of the TRTP project and as explained in 1.1.1 the information and awareness campaign will be undertaken by the CPIU staff through workshops and seminars organized in regions and would include local authorities. In a departure from section 1.1.1, section 1.1.2 will only target smallholder farmers up to 10 ha. The targeted areas will prioritise those that have been identified in the climate vulnerability analysis as being highly vulnerable and score highly on the SADI poverty index map. As detailed in 1.1.1, at least one workshop per agro-ecological zone will be carried out, these will be followed by radio and television broadcasts and through the printed media but also on social media (facebook, Instagram etc.) to better target the youth.
- **Types of beneficiaries.** The awareness campaign will need to target two types of smallholder beneficiaries that are reflective of the AF activities: i) a minimum of 400 beneficiaries requesting a grant for on-farm irrigation¹³; and ii) 4,600 beneficiaries that will receive on-farm adaptive agricultural training. The former will likely be individual farmers trained in groups of around 20, while the latter will be targeted and trained as a group. The latter groups will ideally comprise members of one village to promote group learning and cooperation, however in order to meet the 40 percent youth target, this can be opened up to groups of members from neighbouring villages if necessary.
- **Adaptive / flexible approach.** Each annual campaign will need to be flexible and reflect the changing needs of the project. At a minimum, the project will target 400 on-farm climate smart irrigation beneficiaries and these will fulfil a combination of the 30 percent target for section 1.1.1, but they will also include any other farmers that already have access to water and are interested in receiving the grant for micro-irrigation. Separately - the annual awareness campaign for the remaining 4600 will need to adjust to reflect the mobilisation rate of success. Should it for example become clear that there isn't the demand for 4600 farmers, then the mobilisation campaign will need to adapt and increase the focus on extending the USD 2,500 grant scheme until the USD 2.2 million budget is disbursed. The latter will need to be farmers already with access to a source of water, farmers needing other climate adaptive hail nets, anti-frost machines etc. and also those wanting to construct rainwater harvesting ponds.

On-Farm Beneficiary Application

- Request for funding may come from a variety of sources. Applicants may be individual farmers, small farmers' interest groups and Water Users Associations (WUA). Deadline for the applications for the grants available for the subsequent year is the 1st of October of current year. The application will be done in writing and should consist of the required information and data as per the application form used by CPIU under the

¹² With the exception of any smallholders targeted under section 1.1.1

¹³ Also in coordination with the tertiary irrigation scheme under 1.1.1

on-going projects and adjusted to meet the selection criteria eligible for funding.

- The applicants for the grants will need to conduct a feasibility study and business plan including an economic feasibility study. The application will be submitted to the steering committee comprising the Ministry of Agriculture Regional Development and Environment (MARDE), Ministry of Economy, Ministry of Finance, CPIU and Apele Moldova. Through this process the applicant will secure the required permits. Once secured the permits they will be able to start the design of the technical drawings that will need to be verified by the 'State Verification' – the state enterprise responsible for checking drawings.

On-Farm Grant Selection

- **Screening and prequalification.** The SP will generally not be involved in the mobilisation efforts although this is a flexible point and the CPIU will have the leeway to adjust during implementation as the SP could have important feedback for improving the mobilisation of the Adaptation Fund beneficiaries, especially those not linked to the section 1.1.1.
- The selection procedures will be the same as those for section 1.1.1. but with the only exception that only smallholder farmers will be eligible. The applications will undergo a desk review by the Applications Evaluation Committee (AEC) comprising of at least four CPIU staff members¹⁴, which is expected to check the general eligibility, verify the integrity of the file, and develop a first long list of pre-qualified applications. For pre-qualification, applications will be required to comply with the following compulsory criteria: (i) the proposal is presented by and is directly supportive of smallholder farmers; (ii) the proponents are committed to co-finance 30 percent in cash; and (iii) the proposal contains a feasible provision for operation and sustainable maintenance of the facility. Any proposal which does not satisfy these criteria will be rejected.
- After the screening stage, the CPIU, will review the actual situation in the field. Verification will be carried out to ascertain the eligibility of the applicant in terms of prioritized economic and climate resilience linkages, the feasibility of proposed works, size of landholdings, their legal status, and other relevant items. The field review will also assess whether the technical pre-conditions (i.e. there already is a source of water that can be legitimately used, location for rain-harvesting ponds etc.) have been correctly addressed in the proposal and will consolidate the initial cost estimate for the proposed works.
- Following the field verification, the pre-qualified applicants will have to undertake the pre-feasibility check, executed by a specialized company from a shortlist of qualified professionals retained at the CPIU. This exercise will result in a document, which shall certify the technical feasibility for the proposed investment, present a preliminary design and budget for the expected investment and include all the necessary elements for ranking of the proposal in line with the relevant criteria. All the non-prequalified applicants will be formally notified by the CPIU with clear justifications and reasons for rejection.

¹⁴ Programme Director; Infrastructure Development Specialist, Irrigation Engineer and Procurement specialist.

Agro-climatic Selection

- In addition to the beneficiaries receiving the micro-irrigation grants, the project will also target beneficiaries (4600) receiving technical training and awareness raising (see section on types of training to be delivered). The type, structure and scope of activities will be significantly different to those receiving the irrigation grants and as such, so will the application and selection process. Most significantly the selection process will be much more simplified as no infrastructure will need to be procured and installed. The CPIU will carry out the targeting in groups from one or neighbouring villages (should one village not have sufficient members for a group of 20). The objective is to promote group learning and foster trust and cooperation within a village or between villages.
- As a result of the mobilization campaign a preselection or long-list of interested villagers will be collected and farmers committed to the programme. The poorest, most climate vulnerable primarias will be prioritized. A minimum of thirty-five percent will be women and 50 per cent will be youth. The eligibility criteria for the training is that the farmers have no more than 10 ha of land (owned and cultivated). As with the on-farm irrigation, the CPIU will conduct verification exercises that the groups actually meet the poverty, climate vulnerability, and landholding criteria. Should any of these beneficiaries be interested in the irrigation grant then the above process will apply. The CPIU will procure the required equipment¹⁵ based on the recommendations of the SP to ensure the beneficiaries are able to implement the training on their own fields.

Table 2 Grant ranking criteria

On-farm Grant Ranking Criteria	Points
Number of hectares cultivated	
Less than 3	0
Between 3 and 7	5
Between 8 and 10	10
Climate vulnerability (refer to the climate vulnerability map)	
From highly vulnerable geographic location	0
From moderately vulnerable geographic location	25
From low vulnerable geographic area	30
Poverty indicator (refer to the map created by IFAD based on selected SADI data).	
High	0
Middle	25
Low	30
Maximum points (preference to lowest score)	70

- **Final selection.** In line with the procedures for section 1.1.1, the CPIU will submit the results of the ranking to the SC for final selection and inclusion of the grant disbursements in the following AWPB. The implementation of eligible investments in excess of the annual budget will be postponed to the following AWPB. At this stage, the CPIU will also consult with relevant institutions to ensure that there are no overlaps and

¹⁵ From the remaining USD 1.2 million

duplication with other development plans in the same area. After technical approval by the SC, all proposals are to be sent to IFAD for review and no-objection prior to a final decision on awarding grants. After receipt of no-objection from IFAD, the CPIU will sign the agreements with the successful applicants for the procurement of the micro-irrigation infrastructure. Following the approval of the design from the State Enterprise, the CPIU will start the procurement process.

- All approved designs that are to be implemented are required to meet the provisions of the environmental legislation of the Republic of Moldova in accordance with the "Instructions for Environmental Assessment" approved by the Environmental Ministry of the Republic of Moldova (No. 188, 10.09.2002 with the latest changes). The environmental permit process is incorporated as part of the steering committee approval process together with MARDE and Apele Moldovei.

Procurement

- The CPIU will be responsible for procurement of services (consultancy services for awareness-raising campaign, studies and supervision of works) including that of the SP. Particularly the following procurement methods will be used for activities under the subcomponent: i) for consultancy services for awareness raising campaign and feasibility studies – Consultancy Qualification Selection (CQS); and (ii) for supervision of works – Individual Consultancy Selection (ICS). Details on methods, thresholds, standard bidding documents, and bidding procedures are provided in the relevant section of the PIM.

Supervision of Works

- Any required supervision will be carried out by the CPIU through short-term contracted daily site-supervisors for the duration of each contract as per the procedure and forms for works supervision and contract management developed under the previous IFAD funded interventions. Technical advisory and extension services will be conducted by the SP.

Monitoring and Evaluation of Activities

- The CPIU Monitoring and Evaluation Officer will be responsible to facilitate and coordinate monitoring and evaluation activities under the component. Details on M&E activities, data collection, evaluation methodologies and reporting are provided in the relevant section of the PIM. Specifically, for the Adaptation fund the Environment and Climate Specialist will need to coordinate with the M&E officer to ensure that the appropriate AF trackers are being completed and reported on, on an annual basis¹⁶; also the Environmental and Social Management Plans (ESMP) requirements for the Adaptation Fund will need to be complied with, more detailed information will be available in the Adaptation Fund Project Design Document.
- Adaptation Fund Reporting Requirements.
- The Adaptation Fund requires detailed and complicated annual reporting through the Project Performance and Reporting (PPR) tool.¹⁷ The PPR includes information related to financial data; procurement; risk

¹⁶ <https://www.adaptation-fund.org/projects-programmes/project-performance/>

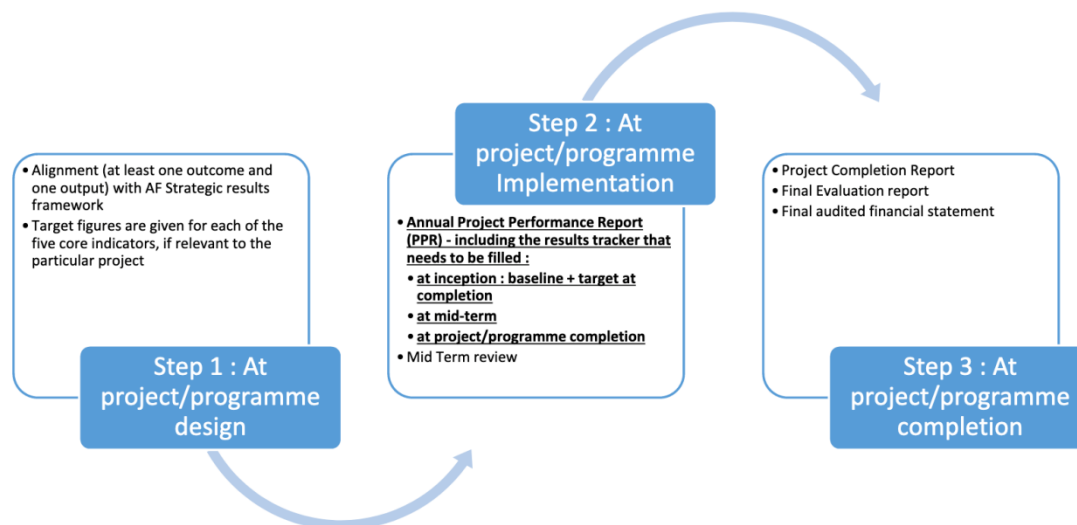
¹⁷ Instructions on how complete the tracker are here: <https://www.adaptation-fund.org/projects-programmes/project-performance/>

assessment¹⁸; Environmental and Social Policy (ESP) compliance; Gender Policy (GP) compliance; rating; project indicators; and lessons learned.

- The PPR also needs to be filled and submitted at inception with baseline-related information including planned targets at mid-term and at project closure. At project completion the project will need to submit a final PPR that would serve as a project completion report; a final evaluation report; and final audited financial statements.
- As part of the PPR is the results tracker that is an integral part of the Project Performance Reports (PPR) that AF-funded projects/programmes have to submit annually to the AF Secretariat, and upon which the AF Board decides to disburse tranches of funding. The results tracker fits within a broader series of reporting requirements that projects have to comply with, as per the Fund's Results Based Management and Monitoring and Evaluation policies. These requirements are summarized in Figure 1 below, and can be synthesized as follows:
 - **Step 1:** Once the project/programme is approved and the first funds allocated, proponents should monitor projects continually, and:
 - Submit a PPR each year to chart progress. The PPR includes, among others, information related to financial data, procurement, risk assessment, rating, project indicators, lessons learned. In addition, it includes the results tracker that needs to be filled:
 - At inception: baseline-related information needs to be submitted, as well as planned targets at project/programme completion;
 - At mid-term;
 - At project/programme completion.
 - **Step 2: At project/programme completion, each project/programme should provide:**
 - Final PPR that would serve as a project completion report;
 - Final evaluation report;
 - Final audited financial statements.

¹⁸ These should be the same risks as those identified in the AF project document. The project will have to report on how the risks have been addressed.

Figure 1 : AF M&E Procedures



	2020	2021	2022	2023	2024	2025	Total
Baseline PPR reporting		100%					100%
Project Completion PPR						100%	100%
Annual PPR reporting		20%	20%	20%	20%	20%	100%

F. Conservation Agriculture

- In line with the request from MARDE the project will support the mainstreaming of Conservation Agriculture (CA) into the national educational and research frameworks. CA is a concept for resource-saving agricultural crop production that aims to achieve acceptable profits, high and sustained production levels and is based on the principles of on-farm water conservation and enhancing natural biological processes above and below the ground. Mechanical soil tillage is reduced to an absolute minimum, and the use of external inputs such as agrochemicals, nutrients of mineral or organic origin are applied at an optimum level and in a way and quantity that does not interfere with or disrupt the biological processes. CA is characterized by three principles which are linked to each other, that are:
 - Minimum mechanical soil disturbance throughout the entire crop rotation. ^[SEP]
 - Permanent organic soil cover. ^[SEP]
 - Diversified crop rotations in case of annual crops or plant associations in case of perennial crops.
- CA is reportedly increasingly being adopted by farmers in Moldova mainly because of its low input costs but it also provides many benefits in terms

of water conservation and improving soil structure and resilience to climate events. At present however the Government of Moldova (GoM) does not have an overview of the extent of CA adoption across the country and a national consensus on the definition of CA and what this means in technical and practical terms among educational and research circles is still lacking.

National Survey of Conservation Agriculture

- The very first task of the CPIU is to recruit a team of experts that will lead the national survey of CA in Moldova. The team will comprise experts in CA, water management, surveys and enumerator training.
- The survey team will:
 - a. Train a team of enumerators in surveying techniques and approaches.
 - b. Report on the number, size and location of farms and hectares of land already under CA.
 - c. Collate the practices being used and categorise them accordingly.
 - d. Report on the number of farms that have access to a source of irrigation or rainfed agriculture.
 - e. Assess the general knowledge of CA among the farmers practicing CA.
 - f. Produce a white paper analysing the general picture of CA in Moldova and make recommendations as to the most appropriate form of CA for Moldova and the best way for the GoM to move forward in further developing CA.

Development of National CA Curricula and Educational Mainstreaming.

- **Curriculum development.** Based on the white paper the Adaptation Fund will contribute USD 105,000 towards developing a CA curriculum. It will do this initially by:
 - g. Setting up a workshop of CA specialists that will review the findings of the white paper and make recommendations.
 - h. The white paper will form the basis of the CA convention that the CPIU will organise. The convention will comprise a broad spectrum of the institutions that deal with CA in Moldova, they will include relevant people from MARDE, research institutes, universities, farmers associations, water user associations, relevant UN agencies (FAO) but also international higher-level educational CA experts contracted to attend for technical advice. The convention will discuss the findings and recommendations of the white paper and set out to work towards a national consensus on CA. The output will be a general outline of a national curriculum on CA that can be adopted by all relevant higher level educational institutions and to the extent possible have a gender-balanced focus on smallholder farmers.
 - i. The Convention will be followed by workshops or expert panel of technical specialists to design a CA curriculum and identify the appropriate international textbooks to use.
 - j. Should it be deemed necessary to have a second convention to finalise, then sufficient budget has been allocated for this purpose. Should this not be necessary, then the project will continue with the development of the curricula in partnership with the relevant institutions.

Educational Support

- It has been identified that the mainstreaming of CA in Moldova is hindered by a lack of quality textbooks and research papers that are not in local language, as they are mainly in English. The project will therefore:
 - a) Support the translation of key CA textbooks and research papers suitable for graduate and post-graduate level education. The textbooks to be translated will be identified as a result of the workshops and convention(s).
 - b) The project will also support two post-graduate scholarships (USD 20,000 each) to study CA abroad, the successful candidates one will be both one male and the other female and will be successful candidates of transparent and competitive examinations on topics that include CA as well as language exams for the relevant scholarship country. The Master scholarships will be for one year in a relatively close-by country at a university specialised in sustainable agriculture. The design of the selection process and exams will be reviewed by a review panel comprising at least four members.¹⁹
 - c) The project will further help strengthen the academic and practical environments by promoting university students to support CA researchers at AF supported 'Selectia' research institute in Bălți.

Research Institute Support

- As a result of discussions with the Associate Professor Rurac Mihail from the Department of Crop Science at the State Agrarian University, and a lead contributor to the MARDE NPCA, the project will support an agricultural research institute in developing CA. Mr Rurac had suggested the Porumbeni research institute, however as this has already been an IFAD project recipient, the AF will therefore support the 'Selectia' research institute in Bălți. The project will support it with:
 - a) USD 100,000 in research grants over 5 years with a focus on smallholder farmers and gender. The objective will be to produce CA research papers and create linkages with agricultural university students where they can gain practical experience by supporting a researcher.
 - b) The project will also conduct a feasibility study with the aim to support the institute with USD 100,000 towards CA machinery that could include but is not limited to, a 6-row no-till drill and CA seeder both of which cost in the range of USD 50,000 with all the accessories. Mr Rurac explained that it should be possible to negotiate with the manufacturers for substantial discounts as these will be exclusively for academic and research purposes.
 - c) Soil lab analysis is also of crucial importance in developing CA research capacity, the project will therefore dedicate USD 30,000 to either developing in-house soil testing capacity or outsourcing the service. The preference is for in-house as is more sustainable and the preferred option.
 - d) Lastly the project will support the development of demo plots with USD 50,000 to be located on land that is owned by the research institute (RI). The RI will be expected to provide in-kind contributions.
 - e) All requests for funding including equipment, research grants and soil lab capacity, will be reviewed by the AEC comprising at least three CPIU staff members.²⁰ Requests for funding will be assessed to ensure that requests for financing will be focused on Conservation Agriculture research; that

¹⁹ Programme Director; Climate Specialist, Procurement specialist and a representative of the State Agrarian University.

²⁰ Programme Director; Climate Specialist, Procurement specialist.

there will be a gender balanced approach and will include a focus on smallholder farmers.

Training of professionals in CA

- A key constraint raised by MARDE in general has been the lack of professional capacity in Moldova. The technical support problems in Moldova in relation to CA stem from the absence of agricultural extension services and the government solution is to build the professional capacity in this sector. With respect to the Adaptation Fund support to CA, and at specific request from MARDE, the project response will be to allocate around USD 65,000 to support the training of professionals in CA who will provide professional services in CA in Moldova, to both smallholders and larger businesses. In order to do this the CPIU will:
 - a) Tender and recruit an international CA training specialist
 - b) The specialist will identify the national priorities in terms of extension support and the existing extension landscape. To do this he/she will meet with a broad spectrum of national stakeholders including MARDE; active NGOs and agricultural service providers; the farmers' association; and agricultural research institutes and identify the critical knowledge gaps.
 - c) Based on this assessment he/she will design a ToT training programme and train an identified number of trainers.
 - d) Based on the strategy developed by the international expert, the CPIU will implement the training programme and the training of existing professionals, as well as other specialised organisations and potential service providers that in future also will want to start providing such services.

SAMPLE TERMS OF REFERENCES

Adaptation Fund Climate Specialist

Job Description

- Under the direct supervision of the CPIU Director, the Adaptation Fund Climate Specialist will be responsible for the overall guidance and management of the Adaptation Fund related activities as described in the TRTP-Adapt PDR, the TRTP PDR, the PIM and in accordance to the CPIU regulations. The Specialist will pro-actively find solutions to problems, delays and bottlenecks to ensure that project implementation schedule is on track. In doing so the Specialist will be closely involved in every aspect of the project. He/She will be responsible for the contracting, supervising, guiding and closely overseeing the Service Provider contracted to implement the on-farm water management activities. The Specialist will also work in close coordination with the irrigation engineer under outcome 1.1.1 to ensure that 30 percent of beneficiaries of benefitting from the tertiary irrigation system are smallholders only using micro-irrigation systems designed for maximum water efficiency, or are successful applicants of the irrigation grants. Furthermore, the Specialist will also be responsible for the successful implementation of the Conservation Agriculture activities vis-à-vis the contracting of experts; carrying out of the national survey; organising national conventions and working with all parties to ensure that a CA curriculum is developed, that support is provided to CA research and that a professional CA training programme is set up.
- Be the focal point for all related Adaptation Fund activities.
- Work closely with the Knowledge Management and Monitoring and Evaluation Officers to ensure that knowledge is being captured throughout the project and disseminated through mass media but also in scientific journals and studies.
- Supervise the implementation of the project.
- Ensure that the project is complying with Adaptation Fund Project Performance and Reporting (PPR) requirements.²¹
- In cooperation with the CPIU relevant staff participate in workshops and sensitize rural communities about the subcomponent, its objectives and eligibility criteria, application and selection procedure.
- Be the main driver of results ensuring implementation schedules are adhered to and problems solved.
- Participate in all bid opening and evaluation panels to evaluate bids for grants and contracts.

Qualifications

- A higher degree in agriculture, water management, natural science or social science or equivalent in environment management, land use planning, sustainable development, or related field. The successful candidate will have demonstrated experience working for international development agency or NGO in leading project implementation of a similar nature; experience in


²¹ <https://www.adaptation-fund.org/projects-programmes/project-performance/>

working with a broad range of national and international stakeholders; demonstrated experience in project implementation, M&E and knowledge management; and experience in the use of computers and office software packages, and in the handling of web based management systems.

SAMPLE TERMS OF REFERENCES

Knowledge Management Specialist

Job Description

- Under the direct supervision of the CPIU Director, the Knowledge Management Officer will be responsible for overall knowledge management strategy and will work in close collaboration with the Climate Specialist and the Monitoring and Evaluation officer. He/she and will be responsible for recruiting production consultants and closely overseeing the production of video material on the benefits of efficient water technologies and of conservation agriculture. The KM officer will actively engage with beneficiaries to record farmer experiences but also digest and present the scientific research generated as a result of the project in a format that is easily understood by the general public. The KM Officer will be responsible for the generation and broadcast of KM products on the AgroTV channel as well as social media (facebook, instagram and youtube). Other audience appropriate material will also be produced for the relevant outlets such as radio and the printed media including posters, leaflets etc.
- **Work proactively with the Adaptation Fund Climate Specialist and M&E Officer to capture lessons learned, project achievements and identify opportunities for disseminating information.** 
- **Actively explore mass media opportunities to raise the general public's awareness about climate change and the importance of sustainable water management and Conservation Agriculture.**
- **In cooperation with the CPIU relevant staff to participate in information workshops and sensitize rural communities about the subcomponent, its objectives and eligibility criteria, application and selection procedure.**
- **Solid understanding of climate change issues.**

Qualifications

- **Higher degree or equivalent in journalism and/or communication with sound knowledge on issues surrounding agriculture, water management and climate change adaptation in Moldova. A minimum of five years working experience in generating knowledge from similar projects and producing knowledge management products for distribution in mass media (TV, radio, Facebook, YouTube etc.), of which 1-3 years in knowledge management at an international development organisation. Fluent spoken and written English and fully computer literate. The selected candidate will have a pragmatic, creative and energetic approach to problem solving and decision-making and the capacity to operate effectively with a broad range of media actors, international and national stakeholders. He / She will be experienced in the use of computers and office.**

Sub-Component 1.2 Agribusiness Development (ABD)

1.2.1 Strengthening Value Chain for Producer Groups

1. This sub-component will be focused on enhancing the potential for agri-processing and agribusiness in rural areas aimed at individual farmers willing to undertake agro-processing and agribusiness development through producer groups, farmer associations or cooperatives. The principals which will be adhered to in the implementation of this component draw strong lessons from previous experience. In the past, cooperative endeavours did not succeed due to several reasons; (i) lack of financial resources with cooperatives and (ii) lack of professional management of collective enterprises and (iii) lack of an approach that worked backwards from the market and (iv) poor links with markets. TRTP will be based on principles designed to remedy these past failures. The model will provide a strong market driver who will be expected to drive the process. The driver will be selected through a call for proposals which clearly demonstrates the links with smallholder farmers and organizations and willing to consider their partnership in the enterprise. The market driver will have strong market links and will provide a model that offers professional management and strong technical support in linking with markets and moving the partnership forward and enhancing farmers links to markets and their incomes. The shift towards the use of service providers to carry out the mobilization, mentoring and brokering the partnerships with a range of partners is also a key implementation principal and TORs are provided for the selection of such a facilitator.

2. It is expected that this component will benefit 10-12 producer groups (PG) with around 1000 beneficiaries of whom 400 are expected to be investments that directly target women and 300 young farmers. The active participation of smallholder farmers, YE and women in these groups is expected to generate ideas and increase their opportunities for employment and enterprise development. The grant/loan per group will be based on a proper assessment of their financial and technical proposal, number of farmers expected to benefit, the technical strength of the partnership and corporate capability of the group. Each grant can be up to a maximum of USD 450,000 provided it does not exceed 7500 per participating farming household.

3. An Agribusiness Specialist will be hired by the CPIU to help coordinate the implementation of this sub-component. The project will be implemented by a service provider who could be a consulting firm or an NGO, which has the requisite skills to disseminate the information regarding the various types of support provided under the component and provide the technical support which is required from time to time. The selected agency will be hired as soon as possible after project effectiveness. A draft of the terms of reference for the service provider is included in the PIM. The service provider will begin by holding regional meetings to identify the value chains with the potential for value addition and smallholder engagement. These are likely to include high value horticulture crops, herbs and medicinal plants, ornamentals as well as dairy products, etc. The smallholders with production potential may already be organized into producer groups or may need assistance in organization. Capacity building support is budgeted in the project for those who may require assistance.

4. The selected agency will hold diagnostic surveys at the village or Rayon level to identify opportunities for agribusiness development by groups. Concurrently the service provider will identify market drivers engaged in the trade of the selected value chains in the domestic or export market. The project will host meetings between the producers and

market drivers to assess the potential for collaboration. The potential beneficiaries will be provided opportunities to engage with multi-stakeholder forums which include representatives from all main actors of the selected value chains such as producers, intermediary agents, traders, processors, input suppliers, transporters, and retailers. These meetings will help to identify the opportunities and constraints that hinder partnership and guide the way forward. The project will work closely with the Producer Groups and market drivers to develop proper feasibilities and business plans for collaboration.

5. The project will also put in place innovative arrangements for investments in collection and grading centres, warehouses, cold storages and agro-processing facilities, refrigeration trucks, branding, marketing and providing equipment and materials, etc. The project investments in the market infrastructure and processing facilities will represent an investment on behalf of the smallholder farmers who are members of the producer group, association or cooperative. The market driver who collaborates with the farmer group will also take part of in providing the professional management of the enterprise and marketing. A formal contract will be signed by the two parties to specify their share and the roles and responsibilities of each.

6. It is proposed to finance the investment in equipment as grant for 5 newly established groups of agricultural producers from the priority value chains as follows (total equipment budget USD 2 million).

- 2 groups with a least 10 members of which 70% will have no more than 10 ha of arable land, group members – 40% young entrepreneurs, 30% women, with a maximum amount of a grant up to USD 200,000.
- 2 groups with at least 25 members, of which 70% will have no more than 10 ha of arable land, group members – 40% young entrepreneurs, 30% women, with a maximum amount of a grant up to USD 400,000.
- 1 group with at least 35 members, of which 70% will no more than 10 ha of arable land, members of the group – 40% young entrepreneurs, 30% women, with a maximum grant amount of USD 800,000.

Moreover, loans and grants, with 80:20 proposition, will be provided on preferential conditions for other 5-6 producer groups for the expansion and development of businesses with an orientation to export products. The amount of the package should not exceed USD 450,000 per group (total USD 1,768 million of loan and USD 0.442 million of grant). The 20% of the value of the investment landed as loan initially will become grant after repayment of the loan.

7. This arrangement will address some of the key constraints, which is lack of capital to invest in the facilities, poor capacity in professional management, weak links with markets and inability to arrange the logistics and aggregate production. The consulting firm hired to support implementation of this sub-component will provide oversight and supervision of the arrangements and secure any additional technical and management expertise required. The participating smallholders will in addition to getting a more secure market for their produce and a higher price also benefit from the dividends that are distributed annually to shareholders. The service provider will mentor and coach the PGs until the private sector partners and PGs demonstrate that the arrangement is effective and sustainable.

1.2.2 Strengthening MARDE Technical Capacity

8. The project will strengthen the capacity of MARDE by providing it technical specialists for economic and market analysis. These specialists will be kept informed of the experience of the project in undertaking some of the innovative arrangements in organizing the market facilitation meetings, partnership with private sector entities and the experience of PGs in the equity partnerships. This will help to identify any policy implications and modify and refine policy as required. The project will also organize opportunities for learning and experience sharing for MARDE staff and PGs. The CPIU capacity to deal with this component will be strengthened through the recruitment of an Agribusiness Specialist who will interact closely the Ministry.

Selection of Technical consultants or consulting firms for Agribusiness Development

9. The CPIU will be responsible for procurement of the services (consultancy services of Technical consultants or consulting firm for implementing the activities under this sub-component. The Technical consultant (TC) will be selected as soon as possible after the project has been successfully negotiated between IFAD and the GoM and will be in place at project start-up or as soon as possible thereafter. The selected technical consultant will have demonstrated capacity for undertaking market assessment of value chains in high value horticulture crops, dairy sector or other identified, and will have the capacity to work with smallholder farmers, producer groups and a range of market drivers. The TC/consulting firms should have at least 5 years experience in this field and have the capacity to bring in technical experts who have knowledge of different value chains in the horticulture, dairy or other identified prioritized sector. The TC should have experience in conducting diagnostic surveys for value chains, undertake market facilitation meetings, good knowledge of key market players, strengthening of producer groups and ability to facilitate partnerships between producer groups and market drivers. The qualifications and draft terms of reference for the TC which is to be selected on a competitive basis are given in Appendix 2.

Selection of Producer Groups for collaboration and Financing

10. Technical support, capacity building and support for the development of feasibility and business plans and grants for equity investment awards to Producer Groups, Associations or Cooperatives will be based on a set of specific criteria that will include the following;

- a) The selected producer group can be part of an existing producer group, association or cooperative or it can be a group of smallholders willing to organize as a producer group and register themselves locally based on legally recognized forms in the country;
- b) Preference will be given to those Producer Groups who are from (i) location in areas defined as most vulnerable in terms of climate vulnerability and poverty (refer to map developed for TRTP overlaying SADI with climate vulnerability in Targeting section of PIM) and (ii) belong to those specific locations or villages where smallholders are unable to market their produce and (iii) will deal with PGs undertaking production of high value crops, horticulture, ornamental, herbs, dairy production and agro-tourism.
- c) The group consists of a minimum of 25 households and at least 70% of them are smallholders owning up to 10 hectares of land.

- d) Priority will be given to PGs which include at least 40% of the members of the PGs will be women and 30% will be youth. This can be achieved by ensuring that members with these profiles are included in mixed PGs or there are separate groups with only youth or women as members.
- e) The members are willing to work as a group and undertake the responsibilities assigned to them and ensure that the decisions agreed to by the group and the partnership with the market drivers in terms of the production, use of inputs and abide by agreed quality standards.
- f) The members agree to participate in the collective processing, storage and marketing of their produce in collaboration with the market driver entities, PGs with whom they agree to collaborate with.

11. The PG and the market driver firm will be jointly eligible for an investment grant provided they are willing to collaborate in an open and transparent manner and the technical feasibility and business plan indicate that the enterprise will be successful.

Financing conditions of the grants

- a) The size of the grant will be based on the number of members in the PG, the equity investments that PG members and the market driver entity is willing to make and the potential for generation of value and employment.
- b) The members of the producer group will receive 80% share of the value of the investment made by the project and 20% share will be received by the market driver entity.
- c) The group members agree to let the market driver firm manage the agribusiness in a professional manner in lieu of 20% of the equity investment made by the project.
- d) The PG and the market driver entity agree to share all reports on their enterprise and key performance indicators with the CPIU and are open to supervision and audit.

Selection for Grants

12. All applications will go through a two-step selection process of: (i) screening, pre-qualification; and (ii) qualification and ranking.

13. **Screening, pre-qualification.** The applications will undergo a desk review by the Applications Evaluation Committee (AEC) comprising of at least four CPIU staff members²², which is expected to check the general eligibility, verify the integrity of the file, and develop a first long list of pre-qualified applications. For pre-qualification, applications will be required to comply with the following compulsory criteria: (i) the proposal is presented by PGs and is directly supportive of small agribusinesses and smallholder farmers; (ii) PGs members are committed to invest in the enterprise from their own resources; (iii) the proposal contains a feasible provision for professional management and sharing of dividends with share holders. Any proposal which does not satisfy these criterion will be rejected.

²² CPIU Director; Financial services and rural development manager, Agribusiness specialist, and Procurement specialist.

14. After the screening stage, the CPIU, supported by technical consultants, will review the actual situation in the field. The review team will assess the feasibility of proposed works, potential number of beneficiaries, landholdings, their legal status, and other relevant aspects and the capacity of the private partner selected. In other words, in this stage, the link between the proposed investment, the expected benefits and the commercial justification will be further researched. Only investment proposals requiring a contribution of less than US\$ 400,000 (excluding beneficiary contribution and VAT) will be considered for further processing.

15. Following the field verification, the pre-qualified applicants will have to undertake the pre-feasibility check. This exercise will result in a document, which shall certify the technical feasibility for the proposed investment, present a preliminary design and budget for the expected investment and include all the necessary elements for ranking of the proposal in line with the relevant criteria, including but not limited to the calculation of the investment IRR. A minimum cut-off level for the IRR will be applied at this step of the selection process. Proposals showing an IRR lower than 10% will be rejected.

16. All the non-prequalified applicants will be formally notified by the CPIU with clear justifications and reasons for rejection.

17. **Qualification and ranking.** All the pre-qualified investment proposals will be ranked, based on the outcomes of the feasibility studies, using the scoring system described below. The proposals will be ranked in descending order until all the available funds for a given year are allocated.

Scoring for Agribusiness Investment Proposals

	Reference Maximum Points	Value	Score
Average Investment Cost per Member (VAT Included)			
More than USD >10,000	10		
Between USD = 5000 and 10,000	15		
Less than USD 5,000	20		
Internal Rate of Return (IRR)			
Less than 15%	0		
Between 15-20%	5		
More than 20%	10		
Number of benefitting households (smallholder farmers with less than 10 ha land)			
Less than 25	0		
Between 25 and 40	15		
More than 40	30		
Climate change vulnerability (based on vulnerability map)			
From low vulnerable geographic area	0		
From moderate vulnerable geographic area	10		
From highly vulnerable geographic area	15		
Deprivation (SADI indicator for irrigation)			
Low (564-843)	0		
Middle (282-563)	10		

High (1-281)	15		
Professional experience of the market driver			
Less than 5 years experience	3		
Between 5-10 year experience	5		
More than 10 years experience	10		
TOTAL (max. 100)			

18. Final selection. The CPIU will submit the results of the ranking to the SC for final selection and inclusion of the investments in the following Annual Work Plan and Budget (AWPB). The implementation of eligible investments in excess of the annual budget will be postponed to the following AWPB. After technical approval by the SC, all proposals are to be sent to IFAD for review and no-objection prior to a final decision on awarding grants. After receipt of no-objection from IFAD, the CPIU will sign investment agreement with the successful applicants as per the format used under the previous and on-going IFAD projects to proceed with the detailed designs.

19. All approved designs that are to be implemented through the subcomponent are required to meet the provisions of the environmental legislation of the Republic of Moldova in accordance with the "Instructions for Environmental Assessment" approved by the Environmental Ministry of the Republic of Moldova (No. 188, 10.09.2002 with the latest changes). The existing legislation requires Environmental Assessment of detailed designs by the State Environmental Inspection.

20. The main staff involved in Agribusiness subcomponent implementation will consist of a CPIU Agribusiness Specialist and the NGO/firms selected for the purpose. Sample Term of References are provided in the Appendix 2.

Monitoring and Evaluation of the ABD activities

21. The CPIU Monitoring and Evaluation Senior Specialist will be responsible to facilitate and coordinate monitoring and evaluation activities under the ABD sub-component.

SAMPLE TERMS OF REFERENCES

Agri-Business Development Technical Consulting Firm/NGO

Reports to: CPIU Agribusiness Specialist

Qualifications and Experience

22. A Technical consulting (TC) firm/NGO with more than 10 years of corporate history of working with smallholder farmers and private sector firms in Moldova. The selected TC will have demonstrated experience and capacity in organizing smallholder farmers and knowledge of the constraints and opportunities of working with producer groups, association and cooperatives in Moldova. The TC will also be expected to have strong outreach capacity to ensure the inclusion of smallholders, women and youth in the producer groups formed and ensuring outreach to areas of the country which have specific constraints in organizing and aggregating their produce for markets. The TC is also expected to have experts on its panel who can be called upon to give technical advice on production, processing, marketing and branding for a range of high value products that could include horticulture crops, ornamentals, herbs, dairy, nuts, etc. The TC will have knowledge and familiarity with the range of private sector entities and market players dealing with horticulture and high value crops. The selected firm will have the capacity to provide a nurturing environment for the growth and development of Producer Groups and the capacity to put in place pragmatic, creative and innovative arrangements for agribusiness development of its clients.

Key Tasks

- The TC will identify key market drivers and private sector entities and in collaboration with them identify the high value horticulture, ornamental, herbal crops, dairy produce or agro-tourism potential for enhancing market value and incomes of smallholder farmers;
- The TC will conduct regional visits to identify smallholder producers, producer groups, associations who are having difficulty in marketing their produce and assess their interest and willingness to organize for participation in project activities.
- The TC will ensure that at least 40% of the members of the PGs are women and 30% are youth. This can be achieved by ensuring that members with these profiles are included in the PGs selected or there are separate groups
- The TC would also be expected to assist Producer groups in forming partnerships with a range of different private sector entities for marketing their produce in local or export markets.
- The TC will also make arrangements for strengthening the producer groups through technical support, training and capacity building in production, logistical organization, sorting and grading, understanding market demand and price trends, accounting and any other aspects required.
- The TC will match these PGs with private sector partner willing to collaborate with them and facilitate the preparation of a proper diagnostic survey for the selected produce or enterprise. The diagnostic survey will identify the key constraints and

challenges in the production, processing and marketing of the selected produce and lead to the preparation of a business plan and feasibility study. The private sector firm will take the lead in the preparation of the feasibility study with some technical assistance from the service provider and inputs from the smallholder producer.

- The TC will facilitate the meetings between the selected private entities and smallholder producer to ensure that the feasibility study or business plan is appropriate for addressing the smallholder constraints and can lead to increase in the marketing of their produce and securing a higher price.
- The TC will help the PGs and the private sector partner to put together a proposal which will be submitted to the CPIU for investment in physical infrastructure, equipment or materials that will be required to enhance the production and marketing of the selected produce. This could include investments such as logistical centres, sorting, grading and packing facilities, processing equipment, cold storage, warehouses, refrigerated trucks, agro-tourism promotion infrastructure and materials, etc.
- The TC will assist the selected PG and private sector partner agree on the equity share of each, the responsibility and rights of all partners, the responsibility for operation and maintenance and the sharing and tracking of costs and dividends. The professional management of the enterprise will be generally assumed by the private sector firm. The equity of the PG members will be equal to at least 80% of the share contributed by the CPIU on behalf of the smallholder.
- The TC will continue to track and monitor the partnership and the success or failure of the enterprise for at least two to three years after the investment has been made and report on the experience. An annual report will be prepared by the selected service provider that will report on key indicators such as number of participating smallholder farmers, youth and women in the groups; the volume of produce marketed, the value added in terms of increased sales and price and the jobs created, etc.
- The TC will present case studies, peer learning events and sharing the experience in workshops hosted by the project and through sharing their knowledge with supervision, mid-term and project completion and evaluation reviews.

SAMPLE TERMS OF REFERENCES CPIU Agriculture Specialist

Responsible to: CPIU Director

Qualifications and Experience

1. A Master degree or an equivalent qualification in Business Management or Economics with sound knowledge of contemporary issues in the agri-business sector in Moldova. A minimum of five years working experience with projects dealing with horticulture value chains and an understanding of the private sector dealing with marketing and branding of horticulture produce both locally and those exported. Familiarity with the preparation of business plans and feasibility studies for agribusiness and agro-processing. Fluent in English, both spoken and written is preferable. Computer literate. The selected candidate will have a pragmatic, creative and energetic approach to problem solving and decision-making and the capacity to work closely with smallholder farmers, women and youth and operate effectively with a range of private sector partners.

Job Description

2. Under the direct supervision of the CPIU Director the Agribusiness Development Specialist (ADS) will be responsible for overall guidance and management of the Agribusiness sub-component and the guidance given in the PIM. The Agribusiness Development Specialist will be responsible for supervising and guiding all activities identified in the sub-component including the preparation of the AWPB and ensuring successful implementation and monitoring of all agreed actions. Within this overall role, the following tasks would be the specific responsibility of the ADS.

- In cooperation with the CPIU relevant staff prepare the AWPB for the sub-component and ensure that all procurements are made in a timely manner, including the technical strengthening of the MARDE and the learning opportunities planned;
- To ensure that the Technical consultant provides plans for all activities to be undertaken by them and undertakes them effectively.
- To provide oversight and monitor the activities of the Technical Consultant and undertake periodic supervision visits to ensure that the plans of the TC are being implemented as planned.
- Review and assess the PGs selected by the TC and ensure that these are in keeping with the specified criterion.
- Review and assess proposals for PG equity investments and assess their technical feasibility and preliminary cost estimation.
- Assess whether the proposed civil works, equipment and materials selected are appropriate or whether other, more appropriate alternatives may be more suitable.
- Evaluate and rank the proposals as per the agreed selection criteria and procedure and provide your views to the Evaluation Committee.
- Review detailed feasibility and business plans in terms of technical soundness, quality and identified scope and volumes of produce to be processed.
- Participate in Bid Opening and assist Evaluation Committee in evaluation of bids for implementation of the market infrastructures.
- Participate and contribute in discussions with applicant, design company and other interested parties during the implementation stage.

- Supervise the implementation of civil works and coordinate activities of site supervisors in accordance with agreed procedure and standard formats.
- As a member of the CPIU Management Team, provide regular updates and reports to the CPIU Management and contribute to progress reports.

II. Component 2. Entrepreneurship Finance

Subcomponent 2.1. Affordable credit for youth and women

Overview

1. This component will be made of two complementary subcomponents: 2.1. Affordable credit for youth and women; and 2.2. Rural finance sector development.
2. **Subcomponent 2.1. Affordable credit for youth and women** will be focused on addressing the two main bottlenecks affecting access to credit for the rural youth and women – the cost of capital and lack of collateral. To this end, the project will provide mentoring support to the beneficiaries to facilitate the formation of **investment/working capital packages** consisting of:
 - 1.1.1. IFAD-funded matching grants up to 40% of the investment costs, matched with loans from the project and beneficiaries' contributions of 25% of the total investment costs; and
 - 1.1.2. AIPA-funded matching grants up to 42%²³ of the investment costs, matched with bank credit and ODIMM loan guarantee.
3. Loan amounts will be up to US\$ 50,000 and will be used for productive investment in equipment and working capital in both on-farm and off-farm activities. In total, the project will facilitate about 520 of such financing packages, for a total of about US\$24.393 m, of which US\$ 5.29 m will be funded by IFAD, US\$ 1.675 m will be provided by AIPA,²⁴ US\$ 15.26 m will be provided by commercial banks, with the rest representing the government's and beneficiaries' contributions.
4. Additionally, IFAD will provide a US\$ 2 m **credit line for Saving and Credit Associations (SCA)** to on-lend to microenterprises in rural areas. SCA are currently the main providers of agricultural credit to the rural poor, with over 45% of their aggregated loan portfolio in agriculture²⁵ (to compare, banks have about 8% of their portfolio in agriculture and serve better-off clients).²⁶ The credit line is expected to reach about 300 beneficiaries with average loan amounts between US\$ 6,000-8,000 to cover both investment and working capital needs of the borrowers, both for on-farm and off-farm activities. The beneficiaries' contribution is expected to be at least 25% of the total investment.

Subcomponent 2.2. Rural finance sector development

Overview

5. **Subcomponent 2.2. Rural finance sector development** will build on the achievements of the previous IFAD's projects and will further strengthen the SCA sector of the country and the regulatory and supervisory capacity of the NCFM.
6. Specifically, IFAD will provide a US\$ 1 m loan to cover the initial funding gap for the establishment of the **SCA Stabilization Fund**.²⁷ The SCA Stabilization Fund, managed by NCFM as the SCA sector regulator, will serve as the central short-term

²³ The share of 42% is based on discussions with AIPA during the project design. The actual co-funding from AIPA can be up to 48.75%.

²⁴ This represents a conservative estimate based on the current program of AIPA which runs through 2021. The program is likely to be continued beyond this period.

²⁵ National Commission for Financial Market, 2017.

²⁶ National Bank of Moldova, December 2018.

²⁷ According to the Law of the Republic of Moldova # 139-XVI dated 21 June 2007, as amended "On Savings and Credit Associations", the funding sources for the SCA Stabilization Fund can include means from government sources, donations, grants and external financial assistance (Article 50).

liquidity facility for the whole SCA sector. Loans issued to SCAs from this fund will be used to satisfy SCAs' short-term liquidity needs (as opposed to supporting their core business of lending). These liquidity needs may include (but not limited to): bill or tax payment, maintaining required reserves, operational expense payment, loan repayment etc. The concept of the Stabilization Fund is similar to central banks' liquidity facilities available to banks in many countries. The purpose of these facilities is to ensure stability in the financial sector by preventing failures of financial institutions due to liquidity shortages.

7. According to the new amendments to the Law of the Republic of Moldova "On Savings and Credit Associations" #139-XVI of 21 June 2007 (SCA law), SCAs will be contributing fees every year to help form and maintain the Stabilization Fund. It is expected that every year, the SCAs will contribute about US\$ 100,000 to the Fund, and thus the IFAD loan will be repaid over this period of time. This will ensure a clear exit strategy for the IFAD's funding contribution.

8. The Stabilization Fund will be used by NCFM to fund about 10 SCAs every year with short-term loans. The provision of these loans will ensure that these SCAs will be sufficiently liquid to be able to serve their members with savings and credit services. With 506 members per one SCA, on average,²⁸ the Stabilization Fund will indirectly benefit about 25,300 SCA members over the course of 5 years.

9. The funding for the SCA Stabilization Fund will be provided by the government as a credit to NCFM for a period of 10 years, in two equal tranches, at an interest rate determined by the government.

10. Additionally, IFAD will provide US\$ 0.85 m to establish the **SCA Deposit Insurance Fund** aimed at insuring the deposits at SCAs, similar to the banks' deposit insurance system (currently SCA deposits are unprotected which puts SCA depositors – who are mostly rural poor – at a disadvantage as compared to bank depositors). These funds will be placed with the government and will only be used to cover any outstanding SCA depositor claims in case of SCA bankruptcy. For reference, in the past 3 years (2016-2018), the amount of unmet claims was about MDL 1.3 m (approx. US\$ 76,500) due to the bankruptcy of one SCA.

11. The SCA Deposit Insurance Fund will be established only after the SCA Stabilization Fund is in place and the government has sufficient assurance of the increased stability of the SCA sector. Similar to the SCA Stabilization Fund, there is a clear exit strategy: all deposit-taking SCAs will be contributing to the formation of the SCA Deposit Insurance Fund. It is expected that it will be fully funded by SCAs over the course of 7 years. Thus, the amount of the government guarantee for insuring the SCA deposits will be reduced by 1/7 of the full amount (approx. US\$ 121,500).

12. The functioning of the SCA Deposit Insurance Fund will be modeled after the bank deposit insurance scheme: deposits up to MDL 50,000 (approx. US\$ 2,940) will be fully covered. Based on 2018 NCFM data, this will ensure 100% coverage for 89% of all SCA deposits. About 7,300 current depositors of SCAs will directly benefit as their deposits will be protected.

13. The establishment of the SCA Deposit Insurance Fund will be a significant step towards further strengthening the stability of the SCA sector as it is expected that it will lead to higher trust and increased number of SCA depositors (over the past year, the growth of SCA depositors was 4%). This will also lead to higher financial inclusion as with increased available funding from deposits, SCAs will be able to reach more borrowers; as well as consumer protection, as the Fund will ensure a level playing field for both SCAs and banks.

²⁸ Per the National Commission for Financial Market, 2018.

14. The establishment of the Stabilization Fund and the Guarantee Fund should be in line with the Moldovan laws and regulations and in close coordination and agreement with the Ministry of Finance.

15. Under this Subcomponent, the project will provide the **technical assistance** (US\$ 0.84 m) as outlined further below.

Subcomponent 2.1. Affordable credit for youth and women

16. Subcomponent 2.1, activities 2.1.1 and 2.1.2 (Financing Packages for MSE)) and 2.2.4 (MSE Mentoring) are linked together and will be managed by CPIU through outsourcing to several service providers. Specifically, CPIU will initially select a service provider to help communicate project activities to the target group and preliminarily identify beneficiaries who would be interested and eligible to participate. Other appropriate service providers will be hired as the beneficiary selection has progressed, to facilitate the formation of financing packages (consisting of either IFAD-funded grants matched with bank credit, or AIPA-funded grants matched with bank credit and ODIMM loan guarantees, as appropriate). Additional service providers may be hired to help develop business plans for the beneficiaries and provide various mentoring and technical support as necessary throughout the project term.

17. Activity 2.1.3 – Credit Line to ME through SCAs will be implemented by the Credit Line Directorate (CLD) which is in charge of PFI selection for IFAD projects. SCA selection will be done in close collaboration and coordination with NCFM. CPIU will monitor lending activities and SCA performance indicators.

Procedures and eligibility criteria for selecting participating financial institutions (PFIs)

18. Licensed commercial banks, MFOs and SCAs shall have the opportunity to apply for participation in the TRTP Subcomponent 2.1. Licensed SCAs will have the opportunity to apply directly to the CPIU for funds for micro entrepreneur lending.

19. The FIs selected by MoF and validated by the CLD shall be able to comply at all times to a set of eligibility criteria specified below.

General requirements – banks

- Must be in possession of a banking license issued by the National Bank of Moldova (NBM);
- Should maintain accounting evidence for overall transactions and operations in accordance with acceptable accounting procedures and standards;
- Shall have financial and accounting statements that reflects overall operations and financial performance of the bank;
- Shall be audited in accordance with the International Standards on Auditing;
- At the beginning and during the project implementation period, the PFI would submit to CPIU its annual report inclusive of the Auditors' report;
- Shall submit, during entire project implementation, quarterly progress reports to the CPIU and any other information/ad-hoc reports that the CPIU may reasonably require;
- Be interested and committed to serving the target groups who may become beneficiaries of the Project in rural areas;
- Must have a significant geographic coverage throughout Moldova, and operations in rural areas.

Requirements on financial standards – banks

- Be fully in compliance with all guidelines and financial covenants imposed by the NBM and must have a Total Regulatory Capital as required by NBM;

- Must have a minimum capital adequacy ratio as required by NBM;
- Should maintain an allowance for loan losses (risk fund) at an amount at least as what is prescribed by NBM;
- Be fully in compliance with NBM's requirements with regards to lending to a single borrower or to an affiliate group;
- Be in full compliance with all other NBM guidelines on financial soundness, management, accounting with the requirements of Law and normative acts issued by NBM;
- Satisfactory financial statements as an average for the last 3 years and positive return on equity for the last fiscal year;
- Shall have a Portfolio at Risk for more than 30 days of less than 8% and write-off ratio for the period of 12 month no more than 3%.
- Have an open foreign exchange position and maintain open currency position limits in accordance with NBM rules.

Managerial standards – banks

- The Bank's Council, which is responsible for the overall policies of the bank and for the oversight of the banking operations, must ensure that the bank is in conformity with acceptable banking practices;
- Must, at all times, have a sound and updated business plan that ensures the bank's institutional capacity development and its sustainability;
- Must have sound lending policies and lending procedures in place. Have effective practices for loan appraisal, loan approval, loans monitoring and risk estimation and loan recovery policies and procedures;
- Have satisfactory procedures for external and internal auditing and internal control;
- Have in place management information and reporting systems that provide suitable information to the bank's owners and general management on the general and financial performance of the bank, inclusive of the bank's management of its risks.

General requirements - SCAs

- Shall carry its activity in accordance with the Law on Savings and Credit Associations no. 139-XVI dated on 21th of June 2007, with changes made to it and normative acts in force;
- Must be in possession of a B or C license in accordance with the legislation in force issued by licensing authority;
- Should maintain accounting evidence for overall transactions and operations in accordance with acceptable accounting procedures and standards.
- Should prepare financial and accounting reports that reflect the institution's operations and financial performance.
- Must, during project implementation, submit to CPIU annual reports, quarterly progress reports and ad-hoc reports as requested by the CPIU.

Requirements on financial standards – SCAs

- Be fully in compliance with all guidelines and financial covenants imposed by the NCFM and other Moldovan authorities.
- Be fully in compliance with financial prudential norms set by supervisory authority for each category of license held.
- Satisfactory average financial statements for the last 3 years and positive return on equity for the last fiscal year.
- Must have a debt to equity ratio not higher than 5.0;

- Should have an average portfolio at risk for more than 30 days of less than 5%, and a write-off ratio for a period of 12 month no more than 3%.
- Be fully in compliance with requirements in force set by NCFM with regards to lending to a single borrower or a group of members.
- Be fully in compliance with regulations on financial stability, management, accounting, with requirements of Law and other normative acts issued by NCFM.
- Must have an operational self-sufficiency (financial revenue divided by financial expense + loan loss provision expense + operating expense) more than 100%.
- Must have an operating expense ratio (operating expenses divided by period average gross loan portfolio) of less than 20%.
- Must have a risk coverage ratio (loan-loss reserve divided by portfolio at risk >180 days) more or equal to 100%.
- No arrears or default on any loan or refinancing granted by commercial banks or other lenders.
- Must annually report to the MIX Market (www.mixmarket.org).

Managerial standards – SCAs

- The board of the participating SCA must ensure that its operations and policies are in conformity with acceptable practices for SCAs;
- Must, at all times, have a sound and updated business plan that ensures long term sustainability of the SCA;
- Must have sound lending policies and lending procedures in place. This will include loan appraisal, loan approval, loans monitoring and loan recovery policies and procedures;
- Has satisfactory internal control procedures in place;
- Has in place management information and reporting systems that provide suitable information to the SCAs members and lenders.

1. **Eligibility of SCAs as retail financial institutions.** To be eligible for financing under the Project, through one of the eligible wholesalers PFA, the SCA shall meet all the prudential norms established by the supervision authority and/or other specific criteria established by the supervision SCAs bodies.

Eligibility monitoring of PFIs

2. The criteria and standards mentioned above shall be used by the CLD to constantly monitor the continued eligibility of the PFIs. The CPIU shall, if it discovers that a PFI is no longer fulfilling the eligibility criteria-based on quarterly reports (which will enter into force 30 days after the end of each quarter), the CLD Board can temporary allow some flexibility and can negotiate a Side Agreement.

Stages of the PFI selection process

20. When the project is effective, MoF/CLD shall select PFIs from the interested eligible institutions:

- a) Banking Financial Institutions (for participation in the YE/SME financing and Micro Entrepreneurs financing through SCA, acting as wholesale financial institutions).
- b) Non-banking credit organization (NBCO, in Micro Entrepreneurs financing through the SCAs, acting as wholesale financial institutions).
- c) B licensed SCAs (in the micro entrepreneurs financing facility accepted as eligible PFIs in direct financing of micro entrepreneurs, acting as retail financial institution);

- d) B and A licensed SCAs as retail financial institutions (in the micro entrepreneurs financing facility through one of the eligible wholesalers PFI accepted as eligible) will carry out a valuation of the financial institutions and approve it in participation in the implementation.

21. The CLD shall inform CPIU and the applying financial institutions whether they have been approved as PFI or not.

22. When approved by the CLD Board, the Ministry of Finance, CLD, PFIs and CPIU-IFAD will sign the Re-financing Agreement (RfA) which details procedures, terms and conditions for individual sub-loans.

Application and disbursement – banks

23. Banks may request matching grants from the CPIU in order to co-finance loans the bank has appraised and intends to approve. The individual co-financing request for a matching grant shall be based on an application from the prospective borrower.

24. The CPIU shall, in case the application meets the agreed eligibility criteria, approve the loan and the grant. If the applications will not meet the criteria, terms and conditions, or the applicant, will not be available or will reject to sign the Statement, the application will be rejected and returned to the respective bank.

25. When the grant is approved by CPIU, CPIU and the bank would sign an individual agreement, under which the CPIU would disburse relevant proceeds to the bank's correspondent account in accordance with the terms and conditions stipulated in the agreement. The disbursement shall be done by CPIU within 3 working days after the signing of the agreement.

26. The bank shall, within three working days from the receipt of the CPIU matching grant funds, provide availability of funds to the borrower's account. The bank can open a special transitional commercial bank account to ensure the targeted use of the funds by the borrower. The loan/grant proceeds shall not be disbursed to the beneficiaries in cash.

27. Beneficiary/borrower, within 20 working days, upon the crediting of its account with the loan/grant amount, shall ensure the use of funds, by transferring them directly from the borrowing company's account, to the respective suppliers.

28. The bank is fully responsible and shall monitor the use of fund by the borrower and shall inform the CPIU, within 20 working days, on the status of beneficiary funds and namely whether he/she has or has not used the funds received and their destination in respect to the contract.

29. Other terms and operational procedures for provision of loans to beneficiaries will be applied in accordance with the existing banking procedures.

Application and disbursement – SCAs

30. SCAs may request loans from the CPIU in order to finance the loans which SCAs have appraised and intend to approve. Individual refinancing requests shall be based on applications from the prospective borrowers. The CPIU shall, in case the applications meet the agreed eligibility criteria, approve individual loans. CPIU and the SCA would then sign the individual loan agreement, under which CPIU would transfer relevant proceeds to the SCA's account in accordance with the terms and conditions stipulated in the individual loan agreement. The disbursement shall be done by the CPIU within 3 working days after the signing of the loan agreement.

31. SCAs within 3 days shall, thereafter, disburse the funds directly to equipment or goods provider, when goods are purchased from specialized companies. The SCA shall, if

such transfer is impossible, disburse the funds to the borrower in cash. The borrower shall then pay the supplier(s) directly and supply the SCA with proof that the payment has been made.

32. Borrower, within 20 working days, upon receiving loan amount, shall ensure the use of funds. SCA is fully responsible and shall monitor the use of fund by the borrower and shall inform the CPIU whether he/she has or has not used the funds received and confirm their destination in respect to the approved destination.

33. The Ministry of Finance is entitled to suspend the transfer of matching grant proceeds and/or to terminate any Individual Agreement, if any of the following circumstances occur:

- The PFI or SCA fails to perform payment obligation pursuant to any Individual Loan Agreement;
- has recorded violations that result from thematic examination for compliance with Legislation conducted by NCFM;
- the PFI or SCA shall have failed to comply with the eligibility criteria;
- the PFI or SCA does not respect the conditions for provision of loans to beneficiaries/micro entrepreneurs.

34. The CPUI shall inform MoF if any of circumstances occur and report to IPSC for final decision.

Beneficiary loan approval and disbursement

35. It is the responsibility of the PFIs (banks, MFOs and SCAs) to approve loans under TRTP within the agreed criteria. It is, as such, the PFI that will make decisions relating to loan sizes, repayment periods, security aspects etc. CPIU has the right to reject applications which fall outside the objectives, target group and criteria of TRTP.

36. For each loan, the PFI shall supply the CPIU with detailed information on the borrower and the prospective loan. The information should, amongst other, include the following:

- Name, ID number and address of borrower;
- Existing or start-up operation;
- Total project cost, loan amount and grant amount (the latter, for YE loans);
- Loan purpose;
- Repayment period;
- Grace period;
- Type and value of collateral and other security;
- Present number of employees and the expected job creation.

37. If SCA is requesting refinancing of the loans disbursed to the SCA's members from the own resources of the SCA, SCA is to provide the loan agreement and the order of payment and, where appropriate, the confirmation documents of procurement of goods from the loan means.

38. Attached to loan application should be beneficiary declaration on use of the loan, which will be endorsed by the authorized representative of the SCA. Declaration shall serve as document for monitoring of loan destination and will be presented in the case of the procurement of goods from individuals, which cannot be confirmed with documents. In case the goods are procured from legal entities, to the loan application will be attached the sale contract and / or proforma invoice or invoice.

39. CPIU will screen the application and check its compliance with the eligibility requirements established under the TRTP and will approve the application for financing. CPIU will then draft the Individual Loan agreement and submit to PFI to be signed. The CPIU, based on signed Individual Loan agreement, will transfer funds to PFI account.

Loan repayment – SCAs

40. The SCA would repay the Subsidiary Loan in accordance with the principal repayment schedules set forth in the individual loan agreements based on repayment schedules between the SCA and the borrowers. The repayments should be deposited in the Revolving Credit Fund account which is managed by the Credit Line Directorate (CLD).

41. The SCA is obliged to repay the subsidiary loans and interest according to the schedules of the individual loans irrespective of actual loan repayment by the SCA/borrower.

Terms and conditions of individual loans to ME (through SCAs)

42. Under the SCA credit line, loans will be made available to rural-based smallholder farmers, micro-entrepreneurs (natural persons or legal entities), members of SCA who are embarking on income generating activities.

43. The following applicants shall be eligible for a microfinance loan:

- Micro entrepreneurs who are Moldovan citizens and intend to develop or expand an agricultural and / or non-agricultural income generating activity, based on private property;
- Micro entrepreneurs who have registration documents, certificates and licenses to the type of business (if applicable);
- Micro entrepreneurs who carry activities according to normative and legislative acts, and have no negative impact on the environment;
- Micro entrepreneurs who maintain or are willing to maintain relevant income and cost records and provide relevant information the CPIU may require.

44. Micro entrepreneurs, members of SCAs, beneficiaries of the previous IFAD projects, with a positive credit history, could be repeatedly financed for expansion or diversification of their businesses. The amount of repeated financing requested by the member of SCA will not exceed the maximum cumulative amount eligible for financing according to the project conditions.

45. Eligible borrowers shall be able to get loans under TRTP for medium term investments and working capital in rural on- and off farm income generating activities to acquire productive assets.

46. The loans cannot be used for the following purposes:

- Refinancing of existing debts;
- Payment of any taxes or duties;
- Acquisition or lease of land;
- Construction of domestic house;
- Production and sales of alcohol beverages;
- Gambling, leisure centers, bars, other similar businesses, and
- Procurement of pesticides.

47. It is a pre-condition for each project, which is to be financed, that it, at the appraisal stage, is commercially viable and that it shows a positive impact in terms of job creation and income generation.

Loan sizes, destination and financiers - SCAs

48. Successful applicants under the SCA credit line would be entitled to a loan of up to a maximum of MDL 150,000, which represents 80% of the total loan amount approved, with the remaining 20% to be co-funded by SCA. The loan amount can be used for investments/to acquire productive assets, as well as for working capital.

49. Beneficiaries shall co-finance up to 25% of the investment cost of the ME projects, in cash or in kind.

Repayment periods – SCA beneficiaries

50. Repayment periods shall be according to the lifespan of the investments, up to a maximum of five years inclusive of grace periods. Grace periods should be according to the nature of the investment, up to a maximum of 2 years.

51. PFIs are liable for repayment of loans and interest according to the agreed schedule irrespective of defaults by the borrower.

Terms and conditions of individual financing packages (loan + grant) to MSME (through banks)

52. Under this activity, financing packages consisting of IFAD-funded matching grants and loans from banks will be made available for rural based MSMEs, for both off-farm and on-farm activities. To qualify for financing under the project, the MSMEs selected by the Bank against economic, technical, financial and commercial evaluations determined by the Bank, shall meet the following criteria:

- The activity is based on private property and owned and managed by Moldovan citizens;
- To be registered (Hotărârea nr. 1/18 din 11.01.2018 a Ședinței CSPI) under legislation of the Republic of Moldova, in any legal form, and have all necessary permits that allow business activity;
- Maintain relevant accounting evidence and submit standard financial statements in a timely manner;
- Are in full compliance with the criteria set un in Law nr. 206-XVI on supporting SMEs sector, dated 7th July 2006;
- Comply with legal acts and standards concerning environmental protection and principles for environmental impact assessment.
- Ensure that any activities that produce wastewater also include provisions for its processing and/or safe disposal.

53. The enterprises which have already benefitted under the previous IFAD projects and want to extend the business from production to processing /packing /marketing or to diversify the type of activities, shall be eligible for financing.

Eligible activities

54. MSME financing packages can be used for investments and working capital both for on-farm and off-farm activities. Below is an indicative list of investment purposes:

- Production, harvesting and storage of fruits, berries, vegetable in greenhouses and/or in open fields, medicine and aromatic plants, field crops and table grapes (except for technical grapes, tobacco, forestry and landscaping crops);
- Production, harvesting and storage of seeds and seedlings (except for technical grapes, tobacco, forestry and landscaping crops);
- Livestock production, inclusive of purchase of graded animals, equipment and farm machines;
- Sorting, processing and packaging of agricultural products (except for technical grapes, tobacco, forestry and landscaping crops);
- Processing and disposal of waste water;
- Building of warehouses and cold storage facilities for agricultural products;
- Rural agri tourism (purchase of animals, equipment and machinery necessary for farm development in the tourist complex);
- Transportation and installation costs;
- Other on-farm and off-farm activities.

Non-eligible activities

The financing packages cannot be used for the following activities:

- Re-financing of existing debts;
- Payment of any taxes or duties;
- Construction of domestic houses;
- Acquisition/lease of land and of existing production/storage buildings;
- Alcoholic spirits production.

Loan sizes, destinations and financiers – bank beneficiaries

55. Successful applicants under the MSME financing packages would be entitled to a package up to a maximum of USD 150 000 that would include a bank loan of 60% and an IFAD-funded grant of 40%.

56. The loan amount can be used for investments/to acquire productive assets, as well as working capital.

57. The borrowers are required to provide a minimum of 25% of the total project cost in cash or in kind.

PFI monitoring reports

58. The PFI shall supply the CLD every six months as per 30th June and 31st December reports on loan portfolio, on overall performance, and other reports as required. The reports would include the below mentioned information and indicators:

- Total number of borrowers;
- Total number of active borrowers disaggregated by gender;
- Value of gross loan portfolio (total outstanding principal of all outstanding loans);
- Amount in arrears;
- No. days in arrears;
- Legal action taken for loans in arrears, if applicable;
- Portfolio at risk (PAR)>30 days;
- Write-off rate for period.

59. Additionally, SCA will report the following indicators:

- Total number of voluntary savers;
- Total value of voluntary savings;

- Operational self-sufficiency (OSS);
- Operating expenses for a period to average gross loan portfolio.
- Active borrowers to staff members.

60. The PFI shall be given up to a maximum of one month to complete the reports, which, as such, should be submitted to CLD not later than on 31st January and 31st July respectively.

61. The PFIs shall, furthermore, provide ad hoc reports as requested by the CPIU.

Subcomponent 2.2. Rural Finance Sector Development

62. **Subcomponent 2.2, activity 2.2.1 (SCA Sector Strengthening)** will be implemented by NCFM which will oversee the utilization of the Stabilization Fund among eligible SCAs based on their short-term liquidity needs. NCFM will also manage the submission of withdrawal requests against the Deposit Insurance Fund when required (i.e. in the case of insufficient funds to cover SCA depositor claims).

63. CPIU will oversee activities **2.2.2 (SCA Capacity Building)** and **2.2.3 (NCFM Capacity Building)** of Subcomponent 2.2. The implementation of the technical support under the Subcomponent will be done in collaboration with NCFM who will support the identification of service providers to whom the provision of specific TA will be outsourced (e.g. software development, training courses etc.), as well the preparation of terms of reference for these providers.

64. Specifically, SCA capacity building will consist of further support to the development of reporting and accounting software to SCAs (previously, IFAD funded the development of unified, electronic system for regular SCA reporting to NCFM); the development of software for calculation and disclosure of effective interest rates on SCA loans to customers; and a software module for SCA reporting the credit bureau. Additionally, the project will support the creation of the Central Association of SCAs and the provision of necessary trainings to SCAs (e.g. accounting, reporting, financial analysis, loan analysis, delinquency management, human resources management, legal issues, use of software etc.). This technical assistance will benefit the entire SCA sector (about 267 SCAs as of 2018).

65. The project will further strengthen the capacity of NCFM to regulate and supervise the SCA sector. Specifically, the project will support the development of the deposit insurance monitoring system necessary to launch and run the SCA Deposit Insurance Fund; the development of the necessary regulations supporting the implementation of the amendments to the SCA law; and a study visit abroad.

66. For activity **2.2.4 (MSE Mentoring)**, information and awareness campaign will be undertaken by the CPIU staff through their website, Facebook page, participation in relevant events and workshops including festivals in primarias. Printed material will be developed to support the information campaign. In addition, some specific strategies will be introduced to target the youth. These will include the introduction of Instagram as an outreach tool, presentations at universities in the three regions led by successful young entrepreneurs supported by previous IFAD projects. Opportunities for broadcasting information in TV and radio programs for youth or popular with youth will be identified at the regional and national level. A service provider will be hired to undertake more in-depth mobilization for those primarias ranked as (i) most vulnerable in terms of climate vulnerability and poverty (refer to map developed for TRTP overlaying SADI with climate vulnerability in Targeting section of PIM) and (ii) where the uptake from youth

entrepreneurs in IFAD 6 & 7 have been low. The service provider will hold two-hour events in these primarias to introduce the project support available and follow up with a one-day event to support interested YEs in developing their concept further. The service provider can then identify YEs who meet the project's selection criteria and the required level of support that needs to be extended to them to develop their business plan.

67. MSE mentoring support will include the support in forming the investment/working capital packages mentioned above, first through information and awareness campaign and then through hiring service providers to mobilize and select beneficiaries, assess their needs in training and mentoring support, and finally provide the necessary support. About 50% of the financing package beneficiaries are expected to benefit from full mentoring packages (such as start-up businesses or businesses diversifying or expanding their activities to new areas or sectors; others with more experience will receive support based on their identified unmet needs).

Planning, coordination and implementation

68. TRTP's direct and indirect support to the SCAs shall be coordinated closely with NCFM. The collaboration with NCFM shall be based on regular dialogue meetings between NCFM and the CPIU. The agenda for such meeting should include, but not be limited to aspects like (i) developments within the SCA sector; (ii) needs for support; (iii) impact of implemented activities; and (iv) plans for future activities. The dialogue meetings should also be used to make actual decisions regarding support implementation within the sector. The dialogue element should assist the CPIU in the identification of the most critical needs within the SCA sector and in consequent targeted implementation efforts.

69. All SCA sector support activities, and related budgets, should be included in the CPIU annual work plans.

Development impact monitoring and reporting

Monitoring

70. Monitoring responsibility is expressed through tracking ongoing progress information in both physical and financial aspects along with tracking impact evidence on the beneficiaries' side.

71. In terms of physical progress, information regarding all activities implemented and outputs achieved in order to compare them to AWPB and Appraisal Figures shall be collected. If available, data shall be gender disaggregated.

72. In terms of financial progress, data from the Financial Department regarding the disbursements of funds per Categories of Expenditures, Components and Sources of Financing will be collected.

73. Impact information will be collected from PFIs/SCAs and beneficiaries depending on the type of information required.

Baseline information

74. Baseline information for the direct impact monitoring shall be collected from the sources included in the table below.

Table: Sources of baseline information

Source	Type of information
PFIs /SCAs	Borrower information and financing package/loan information as described in this document. As the direct impact is expected to be in the form of job creation and/or

	income generation it is important that baseline information regarding these aspects is collected, as well as information on the expected impact of the loans and grants.
Service providers	Information on the types of mentoring services, training of the borrowers, software development services etc. that were received by beneficiaries, SCAs and NCFM.
NCFM	Information on SCA indicators before and after project interventions.

75. The baseline information for all the borrowers should be submitted into the CPIU's impact monitoring system (loan portfolio and development impact monitoring). The system shall be used to monitor the loan portfolio of and to monitor the consequent development impact of the lending to SCA members and financing packages for youth and women provided through banks.

76. Baseline information should also be collected regarding the number of direct and indirect beneficiaries. Under this sub-component **Direct Beneficiaries** include:

1. People benefitting from SCA loans funded with IFAD credit line;
2. People benefitting from financing packages made of IFAD grants and bank loans;
3. People benefitting from the project facilitation services aimed at matching AIPA grants, bank loans and ODIMM loan guarantees.

Indirect Beneficiaries include:

1. Employees of direct beneficiaries;
2. SCA depositors;
3. Members of SCAs funded with loans from the SCA Stabilization Fund.

Progress information

77. Data regarding the implementation of the project shall be collected on regular basis. Physical and Financial Progress Information shall be available for Annual and Semi-Annual Reporting, Supervision Mission support and ad-hoc data requests.

78. Impact monitoring data shall be collected on annual basis starting from the second year of the project implementation. Sources of data collection shall be used as included in the table below.

Table: Sources of progress information

Source	Type of information
PFIIs /SCAs/ beneficiaries	Borrower information regarding the financial progress in the reporting period, and profitability indicators.
Beneficiaries	Data regarding activity specific indicators: productivity, employment, salary and tax payment, training impact, etc.

79. In case any data collection exercises have been implemented in the reporting period regarding the Component (i.e. Mid-Term or Final Impact Assessment), these are to be used as sources of information when compiling the progress reports.

Information from PFIs

80. The CPIU shall submit the information per borrower into the impact monitoring system and shall use that information, together with the baseline information, to prepare loan portfolio reports to the TRTP stakeholders.

Impact information from borrowers

81. Impact information regarding job creation, income creation and other activity specific aspects shall be collected directly from the borrowers by the CPIU. Collection of impact information shall be done once a year. The information could be collected from all borrowers, but the CPIU might also decide to only collect information from a borrower sample which should be selected using a random sampling method. The collected information shall be tracked in the impact monitoring system.

82. The impact information, together with the baseline information and quarterly information from the PFIs, shall be used to prepare development impact reports to the TRTP stakeholders.

Reporting and flow of information

83. The CPIU shall provide the PFIs, SCAs, mentoring and others service providers (business plan service providers, awareness campaign providers etc.) with guiding information, instructions etc. to support the implementation of their services. These organizations shall, in their turn, provide CPIU with regular reports regarding their activities under TRTP.

84. IPSC shall receive regular reports and updates from CPIU, which, at the same times shall implement decisions that have been made by IPSC. This may include forwarding of reports and other information to the TRTP stakeholders.

85. CPIU shall provide the Ministry of Finance, the Ministry of Agriculture, Regional Development and Environment, IFAD and IPSC with (i) half-year Progress Reports, inclusive of the performance of the loan portfolio and (ii) Annual and Development Impact reports.

Tasks and responsibilities of CPIU

86. CPIU will have day-to-day responsibility for overseeing and monitoring the implementation of the activities under TRTP, and for ensuring that the intended beneficiaries are receiving the intended support. This will include regular meetings with PFIs and regular site visits to the sub-projects inclusive of meetings with the borrowers. The CPIU's specific responsibilities are elaborated below.

Monitoring of mentoring services providers

87. It is CPIU's responsibility to identify and approve companies/individuals that shall be approved as providers of mentoring support under the TRTP. It is also the CPIU's responsibility to verify that the business plan services are at acceptable quality levels. CPIU shall exclude service providers who do not meet acceptable quality levels.

88. Information on who has been provided with mentoring services shall be tracked in the impact monitoring system.

Development impact monitoring and field visits

89. CPIU shall carry out the development impact monitoring activities described above. The basis of the impact monitoring, which shall be carried out once a year, shall be visits to the individual borrowers.

90. The CPIU shall, in addition to the annual impact monitoring visits, make direct visits to the borrowers in order to verify that the agreed services have been provided, and that the services were of the intended quality. Such visits, which are very important during the first year of operation, may also provide the CPIU with ideas for improvements of the terms and conditions of financing packages for Youth MSME and loans for ME.

91. The CPIU shall be allowed to make visits to the borrowers but it shall inform the respective PFI (bank or SCA) of the plans and actual timing for such visits. Some of the

visits should be done together with the respective PFI. The CPIU's permission to visit the borrowers and to require information directly from the borrowers, regularly or ad hoc, shall be part of the loan agreement between the PFI/SCA and the borrower.

Tasks and responsibilities of the IPSC

92. The IFAD Programme Steering Committee (IPSC) which was established by the Ministry of Agriculture, Regional Development and Environment (MARDE), has the overall responsibility for the implementation of TRTP.

93. The Minister of Agriculture Regional Development and Environment (MARDE) is the chairperson of the IPSC. MOF, NBM, NCFM, Ministry of Economy are, amongst others, also represented in the IPSC.

94. IPSC has the following responsibilities relating to the financing activities under TRTP:

- Overall policy guidelines;
- Review of PFI applications;
- Approval of PFIs;
- Approval of interest rate calculation formula.

95. The MoF shall review and make decisions regarding inclusion and suspension of PFIs based on presentations by the CLD.

96. IPSC may decide to make changes to the policy guidelines, inclusive of loan and grant conditions. All such decisions will require IFAD approval on a no-objection basis.

III. Targeting Strategy for TRTP

A. Targeting Strategy

1. The targeting strategy developed for TRTP has been informed by the experience of previous IFAD projects in Moldova, country programme and project evaluations. It describes the specific target groups for TRTP and details the strategies and the criteria for ensuring that project services, products and benefits reach the intended beneficiaries by component.

B. Rationale

2. Inclusive rural development requires a strong focus on smallholder farmers, youth and women. Enhancing the livelihoods of smallholders is critical to the poverty reduction and shared prosperity agenda since they are more vulnerable to poverty due to high (farm) income volatility. In 2013, farmers and agricultural workers accounted for 40 percent of Moldova's poor.²⁹ In Moldova, the agriculture sector still accounts for 30 percent of employment, with an additional 24 percent engaged in low-intensity agricultural work. Targeting smallholder farmers who constitute 98 percent of farms, 30 per cent of the land and account for 71 percent of the agricultural production is of paramount importance.

3. A strong focus on the youth is equally important given (i) emigration from Moldova is the eleventh highest in the world, two thirds of the people who left the country are from rural areas and most of those are young people (ii)³⁰ In Moldova, about 30 percent of young people are either unemployed or not enrolled in any formal training (iii) there is a demographic dividend to be taken advantage of as in 2017 72.9% of the population was working age (15-64)³¹

4. A focus on women's inclusion will cut across activities as, although the agriculture sector remains an important employment sector for women, they continue to be disadvantaged in terms of their access to land, productive resource and finance. Around 36 per cent of landholders in Moldova are women, but these holdings account for only 19 per cent of agricultural lands (FAO, 2014). Women in Moldova manage smaller plots of land than men and on average have less livestock than men do. The average size of men's plot is 1.21 ha compared to 0.86 ha managed by women. Land is a key agricultural resource, used as collateral to access credit and obtain membership of cooperatives. The proportion of landholders with no education in agriculture is slightly higher for women at 82.2 per cent compared to men's 79.5 per cent. (National Bureau of Statistics of the Republic of Moldova 2014a). Nationwide, women account for only 27.5 per cent of entrepreneurs; in rural areas this drops to 14.9 per cent. The gender pay gap in Moldova is also noticeable, with women receiving pay at about 26 per cent lower level than men for the same work performed (NSB, 2011). In addition, women undertake a high load of unpaid work due to discriminatory social norms. Women in Moldova average 4.9 hours per day per person, when average of women in the OECD countries allocating 2.8 hours a day for household work.

C. Lessons Learnt

5. The following are the lessons learnt from reviewing the implementation of previous IFAD projects and evaluation reports;

²⁹ World Bank, Moldova Poverty Assessment, *Structural Transformation of Moldovan Smallholder Agriculture: Implications for Poverty and Shared Prosperity*, Report No. 105724-MD.

³⁰ <http://www.md.undp.org/content/moldova/en/home/blog/2018/making-the-most-of-emigration.html>

³¹ *Youth Well-Being Policy Review Of Moldova* © Oecd 2018

- (i) Beneficiaries, especially smallholder farmers (women, men and youth) as well as youth entrepreneurs who have lower income and education levels and are from areas that are poorer require a more targeted information and mobilization campaign to encourage their participation. This includes support in understanding project's products and processes through face-to-face interactions and support in preparation of technical and business proposals.
- (ii) Climate vulnerability and poverty criteria need to be specified and given sufficient weightage in ranking scales for evaluation of grants and proposals if project benefits are to reach climate vulnerable small-holder farmers beneficiaries.
- (iii) Through the Adaptation Fund TRTP will promote increased youth involvement in sustainable agriculture by promoting Conservation Agriculture through the higher educational system. Conservation Agriculture is a well-known means of adapting to climate change, particularly in helping rehabilitate and return degraded agricultural land back to being productive with minimal input costs, fertiliser use and water consumption.
- (iv) The project design should have eligibility criteria and procedural requirements that are conducive for the participation of the more socially excluded groups such as smallholder farmers, youth and women. For example, the requirement for submitting a two-year financial statement was a limiting condition for grants offered under IFAD 7. In addition, beneficiaries of grants were reimbursed after they had invested in equipment, albeit, they could obtain a commitment from the project that they would receive the grant.

D. Target Group

6. TRTP will benefit approximately 11,723 households. Forty percent of the beneficiaries will be women and forty percent will be youth. In addition, through the sector level interventions in rural finance, 32,650 hhs are expected to benefit in the long term from the investments in the SCA sector. The number of beneficiaries for each sub-component is disaggregated by gender and age as specified in Table 1: TRTP Beneficiaries. The primary target group of TRTP is commercially-orientated small-holder farmers and youth entrepreneurs. The project will focus on women, youth and men small-holder farmers cultivating land up to 10 ha, engaged in horticulture and cultivation of high value crops who face constraints in increasing productivity, in accessing finance and technical expertise, in aggregating their produce and accessing markets. TRTP will focus on youth entrepreneurs, women and men from rural areas facing challenges in accessing finances and business development support to establish and expand their on and off-farm businesses. In addition, the project will engage with a range of actors such as agribusinesses, exporters, input suppliers, processors of agricultural goods, farmers with larger landholdings where they can function as aggregators, innovators and catalysts providing pathways for small-holder farmers to access national and international markets. In all project activities, there will be a strong focus on youth and women.

Table 1: TRTP Beneficiaries

Component	Unit	No	HHs	Women	Youth	Target Group
1 Resilient Economic Transformation						
1.1 Climate Resilient Infrastructure						
Roads	Kms	30	2,250	1,125	338	Small-holder farmers/Agribusiness
Irrigation	schemes	20	1,200	600	360	Small-holder farmers (men, women and youth) with selection

						criteria that prioritizes those from the poorest most climate vulnerable area
Water Efficient Technologies	participants	885	885	398	443	Small-holder farmers (men, women and youth) from poor and climate vulnerable areas. The ranking scale favours the most vulnerable farmers.
On-farm Climate Resilient Water Management Capacity Building	participants	4600	4,600	1610	2300	Small-holder farmers (men, women and youth) with less than 10 ha from poor and climate vulnerable areas
1.1 Subtotal		5485	8,935	3,733	3,441	25,912 people
1.2 Agribusiness Development						
Value Chain Diagnostic Surveys	Surveys	22	330	99	132	Small-holder farmers
Producer Groups Associations	Associations	10	400	120	160	Small-holder farmers constitute 70 per cent of producer groups
Participation in Market Facilitation Meetings	Meetings	24	528	158	211	Small holder farmers, private sector participants along the value chain and farmer groups.
Business Mentoring support	Plans	110	110	44	44	Small holder farmers interested in agribusiness, youth entrepreneurs and women.
Agro-processing Grants	Grants	10	600	210	240	Small holder farmers interested in agribusiness, youth entrepreneurs and women.
1.2. Subtotal			1,968	631	787	5,707 people
2. Entrepreneurship finance						
2.1 Affordable credit for youth and women						
IFAD matching grant + PFI credit	# borrowers	180	180	72	108	Rural women and youth farmers / agro-processors/ entrepreneurs
AIPA matching grant +	# borrowers	340	340	136	204	Rural women and youth farmers / agro-processors

ODIMM collateral + PFI credit						
ME loans through SCAs	# borrowers	300	300	120	150	Poor smallholder farmers and rural entrepreneurs
2.1 Subtotal		820	820	328	462	2,378 people
2.2 Rural Finance Sector Development						
SCA Stabilization Fund ^{a1}	# SCA members		25,350	12,675	5,070	Borrowers of SCAs who are poor smallholder farmers and rural entrepreneurs
SCA Deposit Insurance fund ²	# SCA depositors		7,300	3,650	1,460	Borrowers of SCAs who are poor smallholder farmers and rural entrepreneurs
2.2 Subtotal			32,650^a	16,325	6,530	
Total			11,723	4,693	4,690	33,997 people
		(%)		40%	40%	

^a These benefits are likely to materialize in the medium-term

¹ Basis for calculation: NCFM plans to support 10 SCAs per year for 5 years with bridge loans from the Stabilization Fund each SCA has on average 507 members. Not all of them get loans, but their SCA will survive thanks to the NCFM loan

² Basis for calculation: There are currently 7,350 depositors of SCAs whose savings the Deposit Insurance Fund will help protect

Note: # of recipients of mentoring support is not included to avoid double counting (they are counted as borrower)

7. **Commercially-Orientated Smallholder farmers (Women, youth and men)³²:**

The commercially orientated small-holder farmers cultivating up to 10 hectares of land will be the main focus of TRTP. Agriculture still provides an important source of income for these households, although the share is supplemented by off-farm employment and remittances. Smallholder farmers engage in more diverse production activities than larger framers and produce a large range of vegetables, fruits, nuts, grapes, dairy products, livestock, and wine. They typically divide their land into three major production activities: (1) vegetables, including potatoes and leguminous plants, and fruits; (2) cereals – mostly maize – and sunflower; and (3) vineyards. Livestock is also an important activity. The size of the herd ranges from a couple of cows, sheep, pigs and poultry to larger herds of cows (5-10) and sheep (50 -200) on smallholders selling milk and cheese. These farmers mostly practice rain-fed agriculture with limited or no access to water due to the collapse of the irrigation system, leasing out of artificial lakes to private enterprises or individuals by the government and regulations prohibiting the use of groundwater as well as extraction of water from the river. Their knowledge of modern agriculture is generally limited and they access extension services mostly from agents selling fertilizers and pesticide. Their access to credit is limited by lack of collateral and high interest rates. Savings and Credit Associations, where available, provide credit without collateral to these households but at interest rates significantly higher than banks. Some of these households also engage in small rural enterprises and access credit for those enterprises as well. Small family farms are also less likely to benefit from

³² This description is informed by field visits and the following report by the World Bank: Moldova Poverty Assessment, *Structural Transformation of Moldovan Smallholder Agriculture: Implications for Poverty and Shared Prosperity*, Report No. 105724-MD.

public investment (less than 0.05 percent) since they often lack the networks, financial and technical capabilities to take advantage of such opportunities.

8. These farms can be operated by farmers without any registration or registered as peasant farms. The mission noted that the peasant farm can be registered in the name of a certain family member, mostly men, but the person running the farm may be another member of the household, the young son or daughter or the spouse of the person in whose name the farm is registered.

9. These farmers sell their surplus mostly in local open-air agricultural markets or to intermediaries who collect the produce from them. They are generally excluded from the export markets since they cannot fulfill requirements in terms of quantities, food safety and quality certification and export licences. The farmers, mostly tend to be individualistic and formal cooperation which would allow them to aggregate their produce for processing or improved access to markets is generally not favored due to the historical legacy of the kolkhoz (collective farms under the Soviet regime). The mission, however, found that the more commercially orientated farmers aspire to secure better prices by exporting their produce and, in some cases, are willing to consider business oriented arrangements which will allow them to aggregate their produce.

10. In consultations with women, men and youth farmers in the Central, Southern and Northern regions of Moldova by the mission, some of the key constraints mentioned by men, women and youth farmers were (i) marketing of produce (ii) lack of storage facilities (iii) lack of post-harvesting equipment (iv) lack of access to water (v) insufficient availability of labour for pruning & harvesting, especially skilled labour (vi) lack of access to affordable credit due to collateral requirements and high rates of interest (vii) lack of advice on market trends and crop diversification.

11. Women and youth face all the constraints listed above. These are further exacerbated by systemic age and gender biases. Women farmers, for example, highlighted the challenge of their long working hours due to their farming and domestic responsibilities. Youth, who had in several cases, returned after working abroad and invested their savings in agricultural enterprises, highlighted their difficulties in accessing credit due to high collateral requirements and rates of interest as they were perceived to be 'high risk'. Some young farmers maintained that they could only access credit and support their farming enterprise if they continued to work abroad for some months.

12. **Young women and men entrepreneurs:** Young women (up to 40 years of age and men (up to 35) will qualify as young entrepreneurs eligible for TRTP support. The definition of youth in Moldova includes young persons from the age of 16 to 35³³. Women, for the purposes for the IFAD projects in Moldova, from IFAD 6 onwards qualify as youth up to the age of 40. This affirmative action was taken to create a more level field for women who often have to opt out of economic activities due to their responsibilities for childcare. Young entrepreneurs include young women and men who have been living and working in Moldova, those young migrants who have returned to Moldova and invest in on and off-farm enterprises as well as those who have invested in an enterprise in Moldova but still work abroad for some months in the year to earn money to invest in their enterprise and in some cases to pay off the loans taken for investment. Among the young entrepreneurs some young men and women work independently but there are also spouses who run the enterprise as a team.

13. Young entrepreneurs are often limited by access to short-term finance due to their limited credit history, limited business skills, and lack of any form of "hard" collateral. While young entrepreneurs often have innovative ideas, drive and high ambitions, they often lack the experiences needed to translate these into viable, realistic and

³³ The Law on Youth No. 215 of 29 July 2016 is the national legal act that defines youth age in the Republic of Moldova. Chapter I, General Disposals, Article 2 defines a young person – a person aged between 14 and 35 years old.

implementable business plans. They also require assistance in developing their businesses after they have been established. The portrait of the YEs that emerges from the recipients of the matching grants packages offered under IFAD 6 is as follows: Thirty per cent of the YEs were women with 89% between the ages of 21-35. Five percent were between 36-40. Seventy percent of the recipients were men, with 92 per cent between 21-35. Ninety-four per cent of the applicants had micro-enterprises employing up to 9 persons. Sixty one percent of the applicants were expanding existing businesses, while 35 per cent were launching new businesses. The remaining 4 per cent were diversifying existing activities. More than 50 per cent of the YE had businesses that had been running between 1 to 5 years, while nearly 30 percent had a business that was a year or less than one year old. Seventy two per cent had peasant farms, while 26 percent has Limited Liability Companies (LLCs).

E. Social Inclusion strategy of TRTP

14. The social inclusion strategy of TRTP aims to empower vulnerable women, youth and men smallholder farmers and youth entrepreneurs by expanding their economic opportunities, access to credit, technical knowledge in agriculture, assets and productive infrastructure. It is expected that a minimum of 40 per cent of all project beneficiaries will be women, and 40 per cent will be youth. The project will have the following targeting measures in place: sensitization of implementers and policy makers to the strategic interests and needs of smallholder farmers, women and youth; direct targeting through quotas to ensure participation in project-related activities for women, youth and smallholders; self-selection through the size of grants and choice of project activities; appropriate mobilization and operational measures to address specific constraints faced by women, youth and poorer smallholder farmers; geographical targeting through selection criteria which prioritize youth, women and small-holder farmers and entrepreneurs from climate vulnerable and poorer areas of Moldova; and empowerment of beneficiaries through business plan development, mentoring, producer associations and young entrepreneur networks . As the project is national in scope, the geographical targeting does not limit project interventions to a specific geographic area but prioritizes interventions in the more climate vulnerable and deprived areas throughout the country based on SADI (Small Area Deprivation Index) and data on climate vulnerability from the 4th National Communication of the Republic of Moldova on Climate Change (see maps in Annex 1).

15. The M&E system will collect gender and age disaggregated area and monitor investments in high poverty and climate vulnerability rayons and primarias. The maps of the Small Area Deprivation Index (2014) for primarias and the climate vulnerability map will function as an important tool for targeting and tracking targeting (see Annex 1). Project management will be supported through including responsibility for implementing targeting methodologies and achieving targets in the TOR of managers and specialists in the CPIU. The targeting strategy will be discussed in the start-up workshop and supervision missions will include a poverty and social inclusion expert.

F. Social Inclusion Measures by Component

Component 1: Resilient Economic Transformation.

16. *1.1.1 Climate Resilient Infrastructure (CRI):* Investments in irrigation infrastructure will focus on micro and small irrigation schemes. Investment in rural roads improvements will be directed to rural feeder roads and ancillary structures that complement and strengthen project investments by assuring adequate access to production areas and facilitating marketing of smallholder farmers produce.

17. The information awareness campaign for this sub-component will be followed by a more in-depth mobilization approach for primarias located in areas with (i) high levels of climate vulnerability and poverty and (ii) with low levels of investment in infrastructure from IFAD projects in the last 8 years. A service provider will be contracted to hold

meetings with smallholder farmers and local government to provide detailed information on the investment opportunity, explore barriers to application and support the application process.

18. The eligibility criteria for irrigation schemes requires that a minimum of fifty percent of the land that is to be irrigated under the scheme should be cultivated by smallholder farmers with up to 10 ha to qualify. Applications for feeder roads will only be considered if at least 50 households are benefiting. In addition, out of the 5 ranking criteria, for both roads and irrigation, three are focussed on targeting vulnerable smallholder farmers and account for 60% of the weightage: (i) Number of benefitting households (smallholder farmers with less than 10 ha land). (ii) Climate change vulnerability based on the Climate Vulnerability Map (Annex 1) and (iii) Irrigation deprivation ranking extracted from the Small Area Deprivation Index³⁴ for irrigation and the SADI ranking for roads for feeder roads.

19. *1.1.2 On-farm Climate Adaptive Water Management:* Smallholder farmer's resilience to climate change by fostering the adoption of climate smart, water saving technologies and building smallholder awareness and capacity in climate adaptive agricultural practices. Grants up to \$2500 will be provided to support small-holder farmers. The project will train and provide demand driven advisory services in irrigation systems, regimes and water quality; simple entry accounting and fiscal reporting; and in expenditures and revenues of improved irrigation systems. Only those farmers with up to 10 ha of land (owned and cultivated) will be eligible for these grants. Application forms for these grants will be simplified to suit the needs of the target group. A minimum of thirty-five percent of the farmers benefiting from grants and training will be women and fifty percent will be youth.

20. The general information awareness campaign for this sub-component will be followed by in-depth mobilization of smallholder farmers through the service provider contracted for Sub-component 1.1. The mobilization will begin in the primarias that have been identified as highly climate vulnerable with high levels of deprivation (see Annex 1 for Climate Vulnerability and SADI maps). The mobilization will be informed by a youth-sensitive awareness campaign using channels such as Facebook, Instagram and universities.

21. In recognition of the fact that women and young persons can be actively managing farms without being registered as owners of the peasant farm, women and young persons managing farms will be eligible if they are administrators or even members of a peasant farm. In addition, applicants will not be required to submit financial statements of the previous years. Farmers who are not registered as peasant farmers can apply if they provide evidence of having initiated the registration process at the point of application. The option of opening a transitional commercial bank account will be available for farmers who do not have the resources to invest in the equipment up-front and be reimbursed later. The bank's fee for the transitional commercial bank account will be borne by the project.

22. The training will be organized by a competitively selected service provider and delivered at the primaria level. The service provider will prioritize primarias that are most vulnerable from the climate and poverty perspective using the specified criteria and the maps developed for TRTP (Figure 1). The training groups will comprise an average of 20 farmers of which a minimum of thirty-five percent will be women and 50 per cent will be youth. The eligibility criteria for the training is that the farmers have no more than 10 ha of land (owned and cultivated). The service provider will design and deliver the training keeping in mind the number of hours and timings preferred by smallholder farmers, especially women farmers. The benefits of climate adaptive water management for small-holder farmers will be highlighted by disseminating the impact and key lessons

³⁴ See Annex 1 for description of SADI indicators and map.

from the intervention through developing video-clips for sharing through multiple channels such as facebook, tv, agroinform websites.

23. The Adaptation Fund resources will also be used to provide two competitively selected and gender-balanced scholarships to young Moldovan agronomists to specialise in Conservation Agriculture. It will be mandatory to involve young students as researchers (gender-balanced) under the research grants sponsored by the Adaptation Fund for conservation agriculture. At least one of the research grants will focus on the implications of conservation agriculture for smallholder farmers and explore international best practice. Each research will be required to address the gender dimension of the subject. The participation of women farmers, small-holder farmers and youth farmers will be ensured at conferences and consultations to be held to prepare for consensus on the definition of Conservation Agriculture. In the development of the national curricula for Conservation Agriculture there will be a focus, to the extent possible, on conservation practices that can be adopted by smallholder farmers. In the nationwide inventory of the extent and types of CA techniques that are being practised in the country, findings will be disaggregated by size of landholding cultivated (owned plus rented) by an entity.

Sub-Component 1.2 Agribusiness Development

24. *1.2.1 Strengthening Value Chain for Producer Groups:* This sub-component will be focused on enhancing the potential for agri-processing and agribusiness in rural areas aimed at individual farmers willing to undertake agro-processing and agribusiness development through producer groups, farmer associations or cooperatives. It is expected that this component will benefit 10 producer groups (PG) with around 600 beneficiaries. A minimum of 70 percent of the members of these producer groups will be farmers cultivating land up to 10 ha (owned and cultivated). Thirty percent of the beneficiaries will be women and forty percent youth.

25. The service provider engaged to identify potential value chains will use potential for smallholder farmer engagement (up to 10 ha), especially women and young farmers as critical selection criteria. In recognition of the fact that women and young persons can be actively managing farms without being registered as owners of the peasant farm, women and young persons managing farms will be eligible if they are administrators or even members of a peasant farm.

26. The project investments in the market infrastructure and processing facilities will represent an equity investment on behalf of the smallholder farmers who are members of the producer group, association or cooperative. It is envisaged that the project investment in the marketing infrastructure will be in a ratio of 80:20 with Producer Groups having 80% of the share with a private investor having 20% of the share. However, this ratio will be negotiated based on the capital invested by the Producer Group and the private sector partner. Thirty per cent of the directors on the board of the entity managing the group, association or cooperative will be women. The participating smallholders will, in addition, to getting a more secure market for their produce and a higher price also benefit from the dividends that are distributed annually to shareholders.

27. *1.2.2 Strengthening MARDE Technical Capacity:* The project will strengthen the capacity of MARDE by providing it technical specialists for economic and market analysis. These specialists will be sensitized to the potential of engagement with smallholder youth, women and men farmers through exposure to the experience of TRTP in capacity building, organization of producer groups, and innovative arrangements in organizing the market facilitation meetings, partnership with private sector entities and the experience of PGs in the equity partnerships. This will help to identify any policy implications, modify and refine policy as required for supporting small-holder farmers.

Component 2. Entrepreneurship Finance

28. *Subcomponent 2.1. Affordable credit for youth and women:* This intervention enhances access to credit for women and men smallholder farmers, youth entrepreneurs (YE) and rural entrepreneurs. Smallholder farmers and rural entrepreneurs will be provided access to credit through providing a line of credit to SCAs, the financial institutions serving the rural poor. Forty percent of the beneficiaries will be women and 40 per cent will be youth. Young entrepreneurs will be provided with a loan plus matching grant (40 %) package of up to 150,000 USD for capital investment and working capital. The ceiling for these packages has been increased to 150,000 USD from the 100,000 USD under IFAD 7. This increase in amount is based on feedback from YEs requiring higher level of investments required for post-harvest and processing facilities. Ninety percent of the grant-loan packages are reserved for microenterprises (see Table 2: Definitions of Micro, Small & Medium Enterprises). Small enterprises will only be eligible for this package if they can prove that the investment will serve smallholder farmers, women and/or youth through providing employment, purchase of commodities or access to markets. Forty percent of the loans for YE will be reserved for women.

Table 2: Definitions of Micro Small & Medium Enterprises

	Micro	Small	Medium
Number of employees	1-9 employees	10-49 employees	50-249 employees
Average annual revenues	< MDL 3 million (EUR 135 000)	< MDL 25 million (EUR 1.1 million)	< MDL 50 million (EUR 2.3 million)
Average annual total assets	< MDL 3 million (EUR 135 000)	< MDL 25 million (EUR 1.1 million)	< MDL 50 million (EUR 2.3 million)

Source: Republic of Moldova (2006), Law No. 206-VXI of 7 July 2006: On Supporting the SME Sector, Republic of Moldova.
Note: Exchange rates for EUR amounts as of 1 September 2016.

29. The information dissemination and awareness raising campaign will be informed by youth focussed strategies such as the inclusion of instagram, facebook, active engagement of successful young entrepreneurs in presentations in universities and primarias. In addition, a mobilization campaign will target and support youth in primarias which are the most vulnerable in terms of climate and poverty and where previous participation of YE in IFAD projects has been negligible or low. The provision of support in developing proposals and mentoring under subcomponent 2.2 is designed to overcome any barriers that young women and men may face due to lower levels of education or exposure.

30. *Subcomponent 2.2. Rural finance sector development:* This sub-component is targeting the rural poor by strengthening the SCA sector that serves their financial needs. The project will make a pioneering contribution to consumer protection of the rural poor and their sustainable access to finance by providing the National Commission for Financial Markets (NCFM) with a stabilization fund for SCAs and a deposit insurance fund. The development of the necessary regulations for the implementation of the amendments to the SCA law will also be supported. The Stabilization Fund will indirectly benefit about 25,300 SCA members over the course of 5 years. The deposit fund will ensure 100% coverage for 89% of all SCA deposits. About 7,300 current depositors of SCAs will directly benefit through protection of their deposits. The SCAs will be further strengthened through support for the creation of the Central Association of SCAs, provision of software for reporting and accounting, calculation and disclosure of effective interest rates on SCA loans to customers and the provision of trainings to SCAs. The project will further strengthen the capacity of NCFM to regulate and supervise the SCA sector. TRTP through these interventions will have facilitated a pro-poor systemic change for the SCA sector.

31. Under this sub-component, the mentoring support from development of proposals to business mentoring provided to young entrepreneurs and women will be targeted by providing higher levels of support to women, start-ups and those diversifying into a new area or a new market. Forty percent of the beneficiaries of this support will be for women. The engagement of successful YEs in providing mentoring support to YEs under TRTP will be an integral part of the intervention. TRTP will support the creation of YE network for exchange of experiences and access to mentoring support.

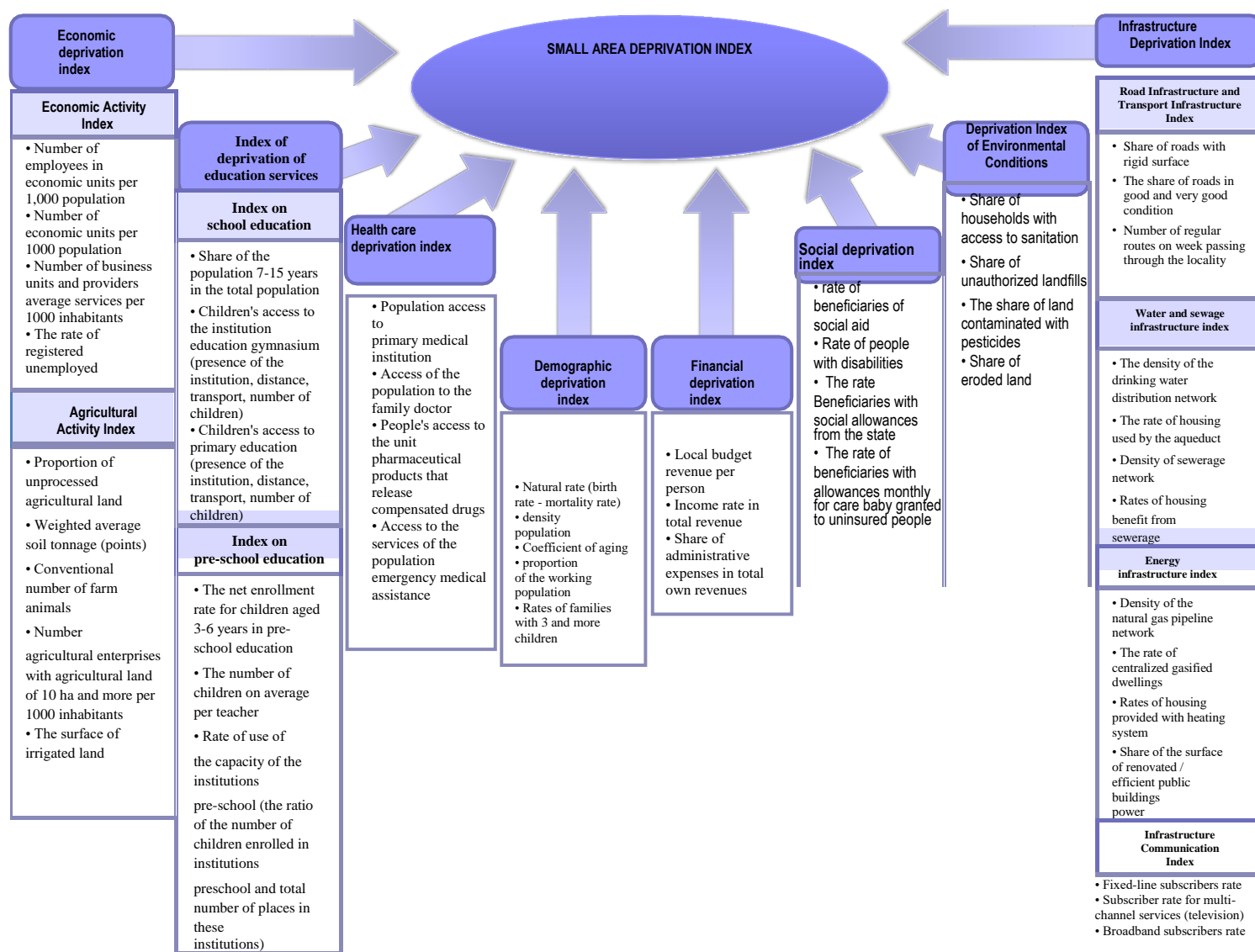
Component 3: Project Management.

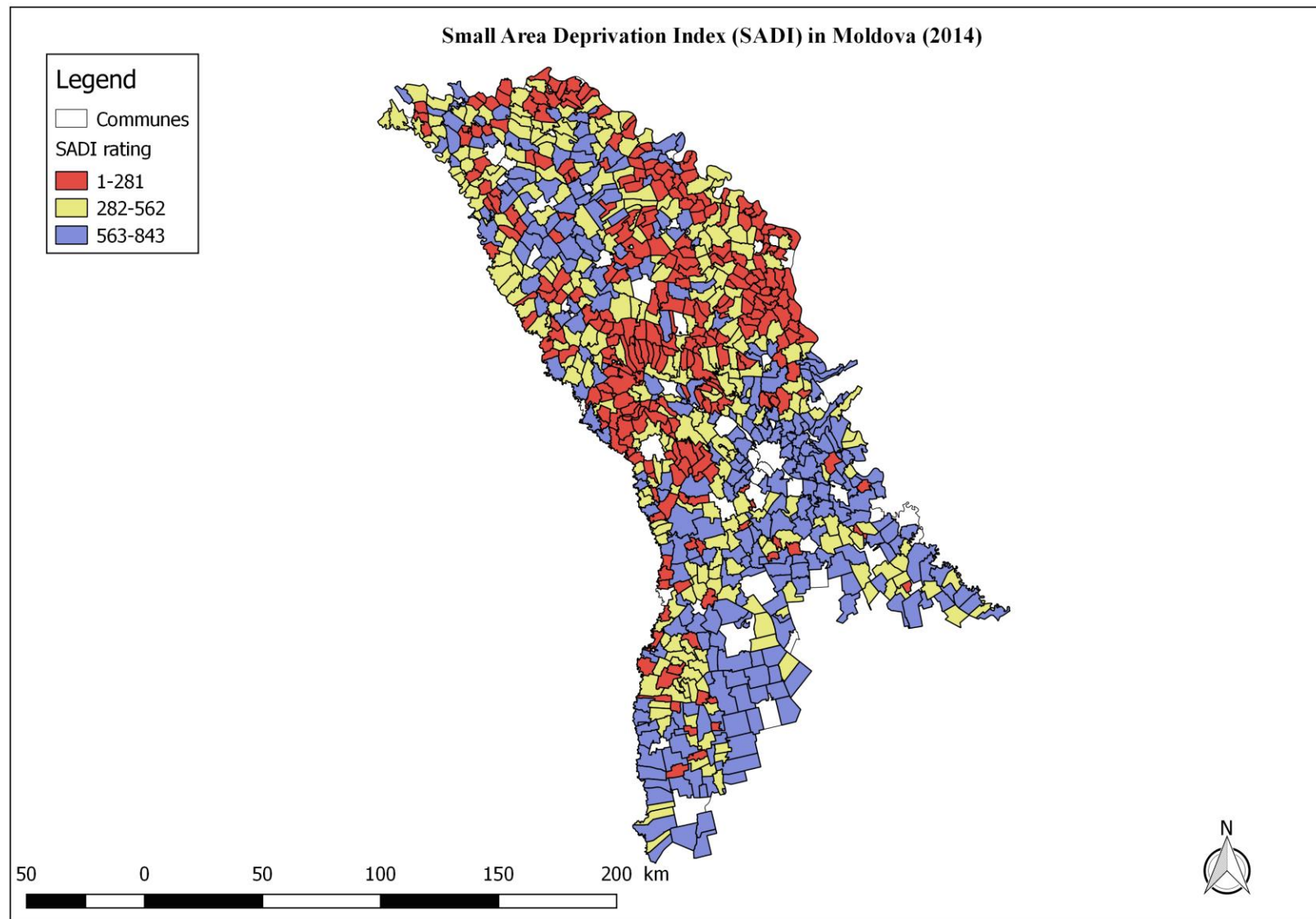
32. (i) The job descriptions of all the managers and specialists managing the components will include responsibility for implementing the social inclusion strategy of the project, identifying and taking corrective action to address any barriers in meeting targets. (ii) TORs and MOUs developed for service providers will specify the social inclusion measures for small-holder farmers, women and youth and hold the service providers accountable to implement them and achieve the specified targets (iii) The targeting strategy will be discussed in the start-up workshop and supervision missions will include a poverty and social inclusion expert.

33. The M&E system will collect gender and age disaggregated area and monitor investments in high poverty and climate vulnerability rayons and primarias. The maps of the Small Area Deprivation Index (2014) for primarias and the climate vulnerability map will function as an important tool for tracking targeting as beneficiaries of the project will be mapped on to these on an on-going basis. The progress report of TRTP will have a section reporting on progress against the targeting strategy of the project. The baseline will include gathering data for the Women's Empowerment in Agriculture Index. The WEAI was developed to track the change in women's empowerment levels that occurs as a direct or indirect result of interventions. The Index aims to increase understanding of the connections between women's empowerment, food security, and agricultural growth. It measures the roles and extent of women's engagement in the agriculture sector in five domains: (1) decisions about agricultural production, (2) access to and decision-making power over productive resources, (3) control over use of income, (4) leadership in the community, and (5) time use. It also measures women's empowerment relative to men within their households³⁵.

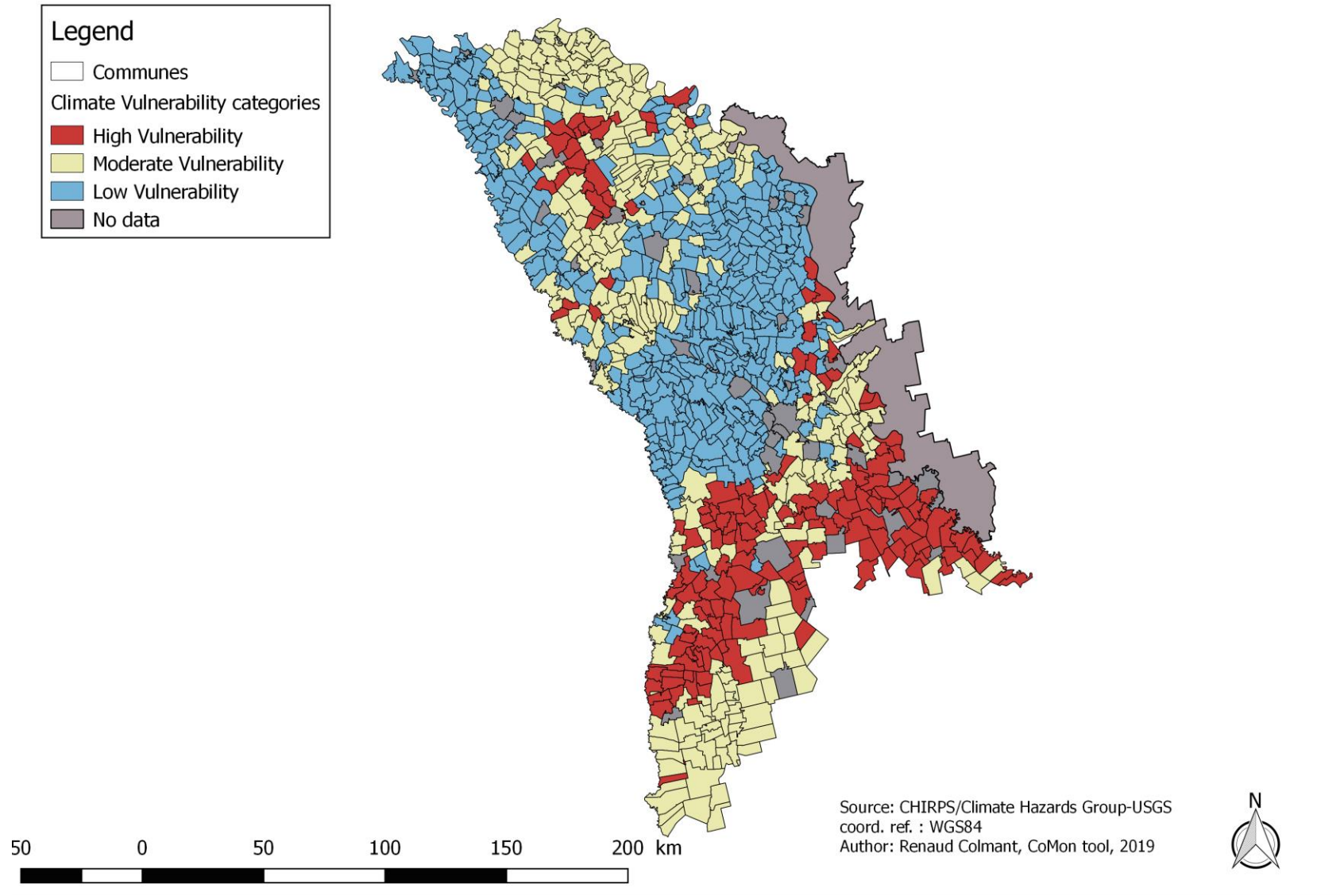
³⁵ https://www.feedthefuture.gov/wp-content/uploads/2018/03/weai_brochure_2012.pdf

Annex 1: Climate Vulnerability and SADI maps





Climate Vulnerability related to precipitation in Moldova (1981-2018)



Monitoring and Evaluation

1. **Main objectives and general framework.** The Monitoring and Evaluation (M&E) and knowledge management (KM) activities would be the responsibility of TRTP project implementation unit and its dedicated staff. The M&E and KM system will be organized around three main objectives: a) Facilitate project implementation; b) support economic decision and policy-making process; c) share knowledge and upscale good practices.
2. A well-functioning M&E system should be able to collect information and data required to: measure project progresses and outcomes; determine project effects on the livelihoods of the primary target group; assess the relevance of project implementation strategy and procedures; identify and circumvent bottlenecks during project implementation; and support the decision-making process to sustain an efficient and effective project implementation.
3. The M&E system would provide information to the primary target group, in particular young farmers and entrepreneurs, and to all stakeholders involved, as they might develop profitable and sustainable activities and adapt their strategies according to the evidence collected.
4. Finally, evidences on good practices and successful initiatives should be gathered to develop lessons learnt. This knowledge should be properly disseminated among stakeholders and partners with a view to support project performance, policy development and policy dialogue.
5. The M&E specialists (two associates) will be responsible for data collection and data analysis on activities, outputs, and outcomes and for reviewing the performance of components and sub-components on the basis of information collected from the field. Components specialists working at the PIU would also be responsible for data gathering of specific aspects of the components under their responsibility. Furthermore, These strategy will ensure a broader and deeper data collection and it will facilitate knowledge sharing across team members and further dissemination to all stakeholders.
6. **LOGFRAME and indicators.** The TRTP logical framework constitutes the premises for results-based M&E and include an initial list of SMART (Specific, Measurable, Achievable, Relevant and Time-bound) indicators to monitor progress and identify achievements. In compliance with the new M&E procedures and the recently adopted IFAD Operational Results Management System (ORMS), the programme log frame includes core indicators, further disaggregated by gender and youth whenever possible.
7. The M&E matrix will be aligned to indicators and activities reported in the logframe while the detailed M&E work plan will be jointly prepared by project team and other stakeholders during the start-up workshop. Throughout the project implementation period, M&E staff will be requested to organize monthly meetings with PIU staff to discuss implementation progress versus targets. As in the case of the ongoing RRP project (IFAD VI), also during TRTP the M&E specialists will adopt a geo-reference methodology that would assist knowledge dissemination via modern communication strategies (e.g. infographics) and the combined use of innovative software solutions (e.g. google earth, QGIS and Excel

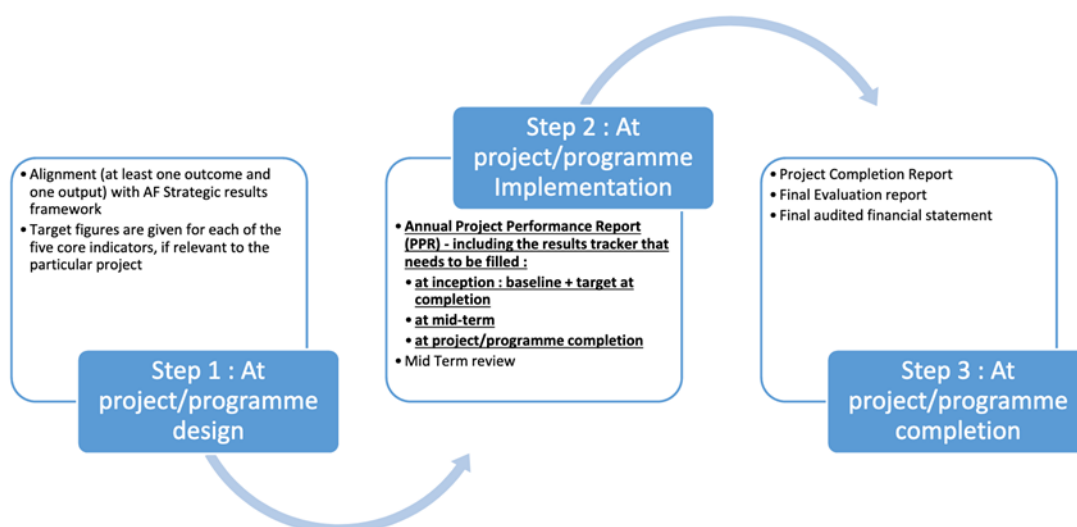
power map). Relevant information and data will be sourced through a number of studies/surveys organized as follows.

- **Annual Outcome Survey (AOS).** These studies will be undertaken on a yearly basis in the attempt to capture advancement of IFAD-funded operations towards their primary objectives. The data collection provides useful insights about programme's performance and outcomes at household level, meanwhile assessing the efficacy of the adopted targeting strategy. Evidences streaming from the AOS can provide timely indications on potential success or failure, thus pre-alerting project staff on corrective measure to be considered. The AOS study will be outsourced to qualified consulting firms requested to comply with specific Terms of Reference (TORs). Data analysis and report writing will be done by PIU M&E specialists and progress reporting will be done according and against AWPB targets.
- **Project Baseline Survey.** The baseline survey is a central element of result-based M&E systems as it provides the foundation to determine project efficiency, effectiveness and ultimately impact on the target group. The baseline data will serve as the basis for determining whether indicator and objectives - as reported in the logframe - were currently met and the extent of the impact achieved. The study will include the target group and a control group which is critical to attribute changes occurred in the target population to the project. Data for the baseline will be collected through comprehensive questionnaires thereby compiling information regarding the social and economic dimension of the target population. The study will gather gender and age-disaggregated information in order to further investigate gender issues through an analysis of current and future trends in the Women's Empowerment in Agriculture Index in the country. Finally, project resources were also specifically allocated to carry out a separate and detailed baseline about climate vulnerability issues. Information will be collected with ad-hoc questionnaires.
- **Annual Review and Evaluation Workshops.** Starting from the second year of implementation, annual workshops will be held bringing together project staff and relevant stakeholders. The main aim of these meetings is to discuss the overall performance of project and to elaborate on the challenges eventually faced during its implementation. This activity is deemed to ensure a steadier implementation and provides an occasion to identify corrective steps and responsibilities that the project may require.
- **Mid-line survey and mid-term Review:** In order to guarantee consistency and comparability across time, the data collection for the mid-line survey will be based on the same questionnaires and respondent samples adopted for the baseline. The MTR mission and the data collection will be carried out during the third year of implementation. The main objective of the review is to analyse operational aspects, assess implementation status and estimate the likelihood of achieving final objectives based on past implementation trends. During the MTR, corrective measures could be identified and thereof implemented to steer the project towards its ultimate objectives.

- **Project End-line survey (impact evaluation):** During the last year of implementation, the project team will outsource the data collection task to a qualified consulting firm. The data will be used to determine project impact on target group by direct comparison of current data with past data collected during the baseline and mid-line survey. The evidences would backstop the narrative and key finding to be included in the project completion report (PCR). As in the case of the mid-line survey, also during the end-line survey, the specialized service provider would gather information using analogous questionnaires adopted in previous surveys.
8. **Progress Reports.** The progress reports will compare actual achievements against those planned, including expenditures, and explaining variations between the two. The semi-annual physical progress will be recorded in terms of quantitative outputs, activities and inputs, presented in tabular spreadsheet forms. The physical and financial progress reporting will be tied to the AWPB targets. The consolidated progress report will identify the constraints to implementation and corrective actions that have been taken. The progress report will also describe the number of beneficiaries, disaggregated by gender and age category (youth) including the type of activities they have participated in. Such progress reports will serve as knowledge products and provide detail information on:
- Current progress compared to planned activities (physical progress), and actual expenditure compared to budget (financial progress) ;
 - Implementation issues and mitigation measure adopted;
 - Quantitative and qualitative progress made in achieving overall objectives; and
 - Lessons learned to inform future interventions and technical insights to provide strategic direction for the next planning cycle.
9. **Beneficiary database.** A database will be developed in Excel to store detail information on project beneficiaries. The database will allow for tracking beneficiaries and activities as well as providing a mean for sampling for data collection and visits during supervision missions.
10. **New ORMS system.** The new system links the outputs and outcomes (core indicators) to strategic objectives (SOs) and areas of thematic focus of the IFAD Strategic Framework 2016-2025. The new core indicators that are relevant for the TRTP programme are included in the log frame.
11. **Adaptation Fund Reporting Requirements.** The Adaptation Fund requires detailed and complicated annual reporting through the Project Performance and Reporting (PPR) tool. The PPR includes information related to financial data; procurement; risk assessment; Environmental and Social Policy (ESP) compliance; Gender Policy (GP) compliance; rating; project indicators; and lessons learned.
12. The PPR also needs to be filled and submitted at inception with baseline-related information including planned targets at mid-term and at project closure. At project completion the project will need to submit a final PPR that would serve as a project completion report; a final evaluation report; and final audited financial statements.

13. As part of the PPR is the results tracker that is an integral part of the Project Performance Reports (PPR) that AF-funded projects/programmes have to submit annually to the AF Secretariat, and upon which the AF Board decides to disburse tranches of funding. The results tracker fits within a broader series of reporting requirements that projects have to comply with, as per the Fund's Results Based Management and Monitoring and Evaluation policies. These requirements are summarized in Figure 1 below, and can be synthesized as follows:
14. Step 1: Once the project/programme is approved and the first funds allocated, proponents should monitor projects continually, and:
- Submit a PPR each year to chart progress. The PPR includes, among others, information related to financial data, procurement, risk assessment, rating, project indicators, lessons learned. In addition, it includes the results tracker that needs to be filled:
 - At inception: baseline-related information needs to be submitted, as well as planned targets at project/programme completion;
 - At mid-term;
 - At project/programme completion.
15. Step 2: At project/programme completion, each project/programme should provide:
- Final PPR that would serve as a project completion report;
 - Final evaluation report;
 - Final audited financial statements.

Figure 1 : AF M&E Procedures



	2020	2021	2022	2023	2024	2025	Total
Baseline PPR reporting		100%					100%
Project Completion PPR						100%	100%
Annual PPR reporting		20%	20%	20%	20%	20%	100%

Procurement

Country Procurement Assessment

1. IFAD's revised General Conditions emphasises the use of the Borrower's procurement regulations, provided they are deemed to be consistent with IFAD's guidelines. This is in line with the various commitments of the international donor community to work towards increasing the use of national systems where they can be shown to be compatible with the requirement of the donors.
2. In this regard, a desk review has been conducted in order to validate and update the earlier assessment undertaken in 2015 on the occasion of the project design for the loan under IFAD allocation.
3. In considering Moldova's Public Procurement Law (PPL), policy and institutional structures (including the role and responsibility of the Public Procurement Agency), the overall and strategic policy development and review remains with the Government, and particularly with the Ministry of Finance. In this regard, procurement law and policy is treated as a feature of budgetary discipline by the state, whilst grounded on principles of administrative law, rather than as an aspect of economic and competition policy.
4. While the PPL foresees decentralization of procurement activities, the PPA has maintained its role as central agency that reviews and approves all contracts for public entities. In a fully decentralized public procurement system, however, public entities are responsible and held accountable for their actions in conducting public procurement. Approval of contracts by an authority like the PPA is not an internationally accepted practice, as the decision is taken out of hands of the purchaser, and thereby undermining accountability.
5. The newly adopted PPL introduced some improvements in the institutional framework of the public procurements. The dispute settling function became independent from PPA and was transferred to the newly established National Dispute Settlement Agency (NDSA), subordinated directly to the Parliament. After several years of implementation of the new PPL, the complaint system is still not well functional. Actually, due to the transition period, the complaint review process was halted during one year and was possible only through courts. Also, NDSA should ensure high level of transparency and independence, or else the worthiness of this institution will be low.
6. Other weaknesses identified pertain to the absence of tools, guidelines, templates for use by local and regional public entities under the decentralization of procurement activities, as well as the chronic understaffing of the PPA. The ongoing electronic public procurement reform still has the troubles with both from quantitative and qualitative point of view. In the former case, until now only small part of procuring entities participate in the system out of more than four thousand connected to it. From the qualitative point of view, the mentioned system is grossly outdated and does not correspond to the best efficiency and transparency requirements for an e-procurement system. Namely, the contracting authorities mainly register tenders rather than follow fully-fledged electronic procurement cycle, since it is impossible for applicants to submit complete electronic offers, and not all tender documents are available online after the finalization of the procedure. The further development of e-procurement will constitute a significant step towards introducing higher levels of transparency to the public procurement domain in Moldova and will contribute to improving risk assessment ratings that are based on the likelihood of fraudulent practices being applied. The standard Bidding Documents are very broad and shall be adapted by each procuring agency individually for each procurement. The standard Bidding Documents do not contain many provisions that IFAD has. Among the main failings can

be mentioned such issues as the transparency, corruption. Also, the issue with explicit incorporation of provisions concerning the conflict of interest, corruption and fraud into the tender documentation was not resolved in the PPL.

7. In light of these considerations, the current procurement system of Moldova can be rated as not suitable for use at this stage. The current system does not comply with internationally accepted practices and foremost with IFAD's Guidelines on procurement principles and arrangements.
8. Based on the above considerations, it is recommended that the IFAD Procurement Guidelines will be followed for all types of procurement to be financed out of the proceeds of IFAD financing.

Procurement Guidelines

9. It is feasible to apply this arrangement in the current country context, since Article 4(1m), of the PPL, specifically excludes from the application of the provisions of the law on public procurement contracts awarded according to International Agreements concluded by Moldova for which specific procedures of an international organization can apply.

CPIU Procurement Assessment

10. Since the day-to-day oversight and management of the project will rest with the existing Consolidated Programme Implementation Unit (CPIU), it is expedient that the latter will also be responsible for implementing the project's procurement activities in accordance with IFAD Guidelines.
11. The capacity of the CPIU to carry out the project's procurement activities needs further development to improve an efficient and effective to select the procurement methods and combine activities in most efficient way. The improvements in efficiency of procurement shall be assessed regularly during annual IFAD supervision missions for the IRECR and RRP projects. CPIU has recruited a procurement specialist who has received guidance and training from the CPIU and IFAD Procurement Consultant on public procurement requirements for projects funded by IFIs, and has demonstrated his capacity for planning and preparing of tendering documents in accordance with IFAD's Guidelines. However, the procurement specialist needs further development in the best procurement practices, preferably using the bidding documents developed by the World Bank and go through the training in public procurement delivered by ILO in Turin, Italy. The quality of the bidding documents prepared needs further development. As an example of the best procurement practices the existing bidding documents shall be modified according to the World Bank procurement requirements.
12. National Competitive Biddings conducted by the CPIU were properly advertised and the communication between the bidder and the CPIU had been managed in an acceptable way. Also, public bid openings were organized whenever necessary. Bid evaluations were carried out thoroughly and accurately on the basis of the criteria specified in the bidding documents, and the reviewed evaluation reports contained required information. Most of the contracts were awarded to the lowest evaluated responsive bidder. In general, contract administration has been done in a proper manner. The CPIU has a excel based contract monitoring system in place that involves technical staff in the management of on-going contracts, and a contract register is kept by the Procurement Officer to monitor all requirements of contract administration, such as payment schedules, contract amendments, performance guarantees, defects liability periods (works), etc.
13. The CPIU has access to a legal web database where all the national primary and secondary legislations are stored. Independent audits have been undertaken regularly and the

procurement specialist prepares periodic briefings on overall procurement activities both, for the management meetings and for regular reporting purposes.

14. The assessment identified procurement planning and market research as an area that should be strengthened further, commensurate with the increasing complexity of the technical fields of project interventions and heightened importance of aligning the schedules of inter-dependent project activities.
15. Overall, the CPIU procurement unit has relevant capacity to manage the project's procurement process in accordance with IFAD's Guidelines and it can be assigned to manage the day to day project's procurement tasks, including issuing all tenders and awarding contracts. It is expected to include an initial 18-months procurement plan and subsequently 12-months updates in the Annual Work Plan and Budget submissions. Procurement Plan should identify the methods and procedures that must be implemented by the CPIU in order to ensure consistency with the IFAD Project Procurement Guidelines and Letter to Borrower. All updates of the Procurement Plan shall be done in one document starting from the beginning until the project completion.

Project Procurement Methods and Thresholds

16. Procurement of goods, works and consulting services shall be bundled together, to the extent possible, into sizeable bid packages in such a manner as to permit the optimal use of competitive bidding and should be carried out by the CPIU. At the same time CPIU shall analyse and take into consideration the capacity of local companies that possibly can apply to ensure the maximum level of competition. The following procurement methods are recommended and will be further stipulated in the Letter to the Borrower.
17. Works estimated to cost more than USD 1 000 000 equivalent should be procured based on International Competitive Bidding (ICB). Works estimated between USD 25 000 and including USD 1 000 000 equivalent may be procured based on National Competitive Bidding (NCB). Works estimated below USD 25 000 may be procured following Shopping procedures. Direct Contracting will have to be identified and approved by IFAD in advance for those cases that justify the use of such a method.
18. Goods estimated to cost more than USD 200 000 equivalent should be procured based on International Competitive Bidding (ICB). Goods estimated to cost between USD 25 000 and including USD 200 000 equivalent may be procured based on National Competition (NCB). Goods estimated below USD 25 000 may be procured following Shopping procedures. Direct Contracting will have to be identified and approved by IFAD in advance for those cases that justify the use of such a method.
19. Non-consultancy services estimated to cost more than USD 200 000 equivalent should be procured based on International Competitive Bidding (ICB). Non-consultancy services estimated to cost between USD 25 000 and including USD 200 000 equivalent may be procured through National Competition (NCB) and below USD 25 000, non-consultancy services may be procured based on Shopping procedures. Direct Contracting will have to be identified and approved by IFAD in advance for those cases that justify the use of such a method.
20. Contracts for consultancy services may be awarded on the basis of either of the following methods: Quality and Cost Based Selection (QCBS), Selection based on Consultants Qualification (CQS), Quality Based Selection (QBS), Fixed Budget Selection (FBS), Least Cost Selection (LCS) and Individual Consultants Selection (ICS). Contracts estimated to cost more than US\$100,000 will be selected through QCBS. The specific nature of each

assignment will determine the selection method of procurement to be followed and will be determined in procurement plan. The processes that may apply are as follows:

- (a) Request for Proposal (Internationally), for contracts with a value over USD 300,000 equivalent
- (b) Request for Proposal (Nationally), for contracts with a value of up to and including USD 300,000 equivalent

Single Source Selection (SSS): All SSS shall be strongly justified, all subject to IFAD prior review.

- 21. The selection of infrastructure interventions (projects) to be supported by the proceeds of the IFAD loan or grant component does not fall within the realm of the procurement framework, but under the overall responsibility of a Selection Committee set up for this purpose. However, the CPIU Procurement Specialist will be a member of the Committee and provide guidance on principles of competition, fairness, transparency that are also the basis for public sector procurement.
- 22. All Bidding documents and contracts for the procurement of goods, works and services financed by the IFAD Loan shall include a provision requiring bidders, suppliers, contractors, sub-contractors and consultants to permit the Fund to inspect their accounts, records or other documents relating to the bid submission and contract performance and to have them audited by Fund-appointed auditors and investigators.

Prior Review of Procurement Decisions

- 23. In accordance with paragraph 80 of the IFAD Project Procurement Guidelines, the following will be subject to prior review by IFAD:

Works

- (a) Draft bidding documents, opening and evaluation committee reports, for works estimated to cost USD 100,000 equivalent or more; and
- (b) Award of any contract through direct contracting.

Goods

- (a) Draft bidding documents, opening and evaluation committee reports, for works estimated to cost USD 50,000 equivalent or more;
- (b) Award of any contract through direct contracting.

Non-consulting service

- (a) Draft bidding documents, opening and evaluation committee reports, for non-consulting services estimated to cost USD 50,000 equivalent or more; and
- (b) Award of any contract through direct contracting.

Consulting services

- (a) Terms of References, Request for Expression of Interest and Short-listing (if applicable), Request for Proposals, Technical Evaluation, Minutes of Financial Proposal Opening (if applicable), Minutes of negotiation and draft contract for the consulting contracts estimated to cost USD 50,000 equivalent or more; and
- (b) Award of any contract through single or sole source selection.

- 24. The aforementioned thresholds may be modified by IFAD during the course of Project implementation.

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Annex 2: Financial Management Arrangements to the PIM


IFAD Consolidated Programme Implementation Unit (CPIU)

Talent Retention and Rural Transformation Project (TRTP)

Financial Management Arrangements to the PIM

Appendix of the Project Design Report (PDR)

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Acronyms

AWPB= Annual Work Plan and Budget

NB = National Bank of Moldova

FA= Financing Agreement

FM = Finance manager

IFAD = International Fund for Agricultural development

LPA = Lead project Agency

SDR = Special Drawing Right

MFI = Microfinance Institutions

MADRM = Ministry of Agriculture, Regional Development and Environment

MOF = Ministry of Finance

PD= Project Director

PIM=Project Implementation Manual

CPIU =Consolidated Project Implementation Unit

WA = Withdrawal Application

1.0 Introduction

The following manual outlines the financial procedures to be followed by the IFAD Consolidated Programme Implementation Unit (CPIU) during the following stages of the project cycle: i) preparation and planning, ii) implementation and iii) completion of the project. The manual aims to describe in detail the necessary steps to be undertaken by the relevant project staff and the Finance manager (FM) in particular, when undertaking actions related to a) planning and budgeting, b) accounting, c) records management, d) internal controls, e) flow of funds, f) withdrawal of financing proceeds, g) processing of payments, h) financial reporting, i) fixed asset management, j) audit arrangements, k) supervision by IFAD and l) project completion and loan closure.

It is important to note this manual makes references to the following IFAD key documents: Financing Agreement, IFAD General Conditions, Letter to the Borrower/Recipient, IFAD Handbook on Financial Reporting and Auditing, as well as the IFAD Loan Disbursement Handbook.

1.1 The Projects

The International Fund for Agricultural development (IFAD) has agreed to provide the Borrower/Recipient on the terms and conditions set in the Financing Agreement for:

- **Talent Retention and Rural Transformation Project:** loan No. [xxx] (the "IFAD Loan"), a grant No. [xxx] (the "AP Grant").
 - A. The amount of the IFAD Loan is SDR [xxx] (equivalent to USD [xxx])
 - B. The amount of the AP Grant is USD [xxx]

The Project will consist of the following components/Sub-components as outlined in schedule 1 of the financing agreement:

Component 1: Resilient Economic Transformation

- Sub-component 1.1: Climate Resilient Infrastructure
- Sub-component 1.2: Agribusiness Development

Component 2: Entrepreneurship Finance

- Sub-component 2.1: Affordable credit for youth and women
- Sub-component 2.2: Rural finance sector development

Component 3: Project Management

The Recipient/Borrower and IFAD have agreed within the Financing agreement (FA) to allocate the financing to categories of eligible expenditures shown in the Schedule 2 of the FA. The schedule 2 also specifies the percentages of such eligible expenditures to be financed by the Financing (net of taxes and duties):

Category	IFAD Loan Amount Allocated (expressed in SDR)	IFAD Loan Amount Equivalent (expressed in USD)	AP Grant Amount Allocated (expressed in USD)	% of eligible expenditure to be financed by IFAD loan + AP Grant
I. Consultancies, Studies, Technical Assistance and Workshops	[xxx]	1 250 000	1 080 000	100% net of taxes
II. Equipment, Material, Goods and Services	[xxx]	4 700 000	-	100% net of taxes
III. Credit	[xxx]	3 850 000	-	100% net of contributions from PFIs and Beneficiaries
IV. Grant	[xxx]	2 000 000	2 000 000	100% net of contributions from PFIs, Beneficiaries and AIPA
V. Works	[xxx]	5 500 000	2 000 000	100% net of taxes, beneficiaries' contribution
VI. Salaries and Allowances	[xxx]	1 100 000	100 000	100% net of taxes/duties
VII. Operating Costs	[xxx]	400 000	382 000	100% net of taxes/duties
VII Unallocated		2 200 000		
TOTAL	[xxx]	21 000 000	5 562 000	

(Table 1: Schedule 2 of the financing agreement - eligible expenditures by expenditure category)

In addition to IFAD financing the Project will also receive counterpart financing from the Government. The counterpart financing will include the taxes and duties in cash from the Government's budget and VAT in kind Government Contribution. The project beneficiaries will also contribute approximately USD [xxx] million to the project.

1.2 Consolidated Programme Implementation Unit

Overall responsibility for the Project management and implementation will rest with the IFAD Programme Steering Committee (IPSC) already established by Government

decree and responsible for providing overall policy guidance and oversight for all IFAD-supported projects and programmes in Moldova.

The Minister of Agriculture and Food Industry will be the Chairperson of the IPSC. Other members include one representative each of the Ministry of Finance, the Aid Coordination Unit under the State Chancellery, the Parliament's Agricultural Committee, the National Bank of Moldova, and representatives from other Project stakeholders, including government agencies and public and private organisations as appropriate. The IPSC membership can be amended depending on programme requirements, with a view to reflect the increased emphasis on climatic adaptation and resilience.

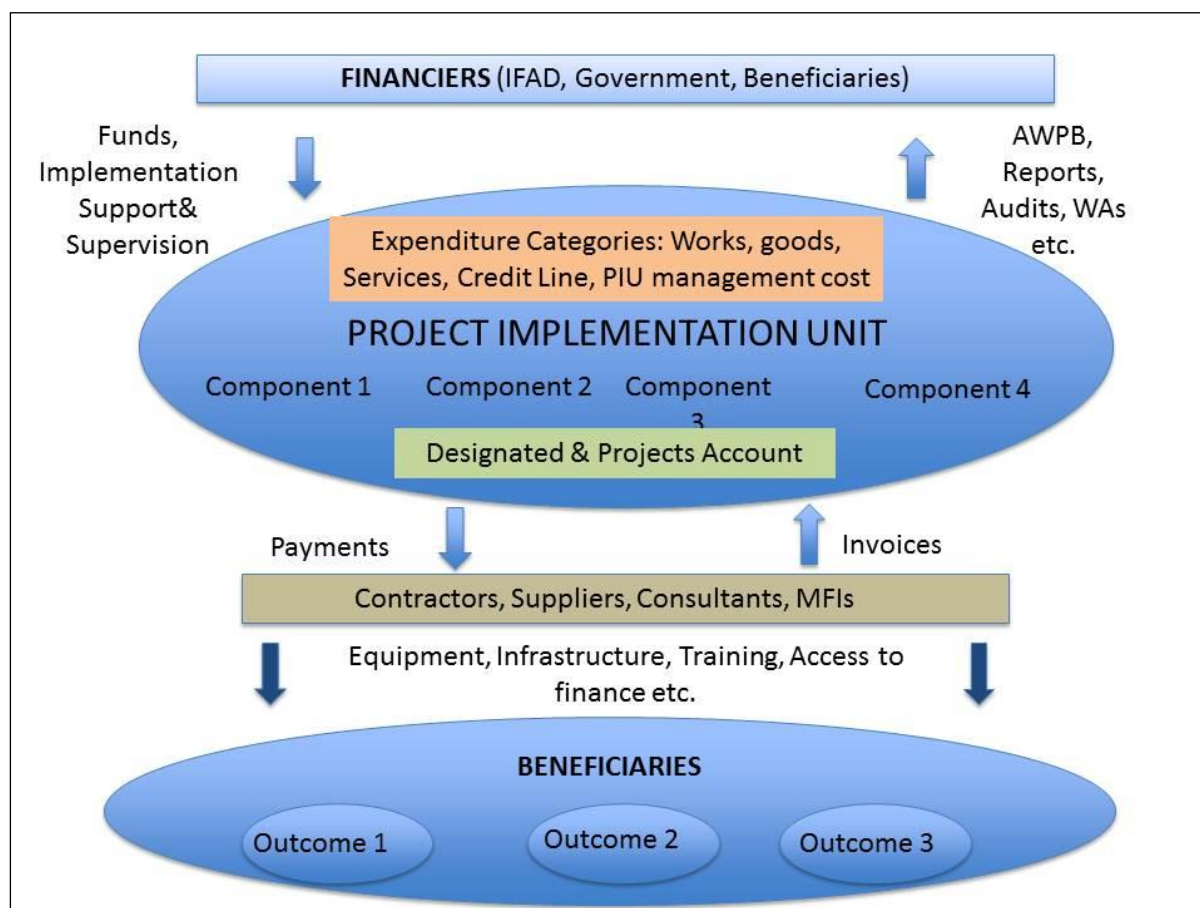
Day-to-day management and implementation of the Project will rest with the existing Consolidated Programme Implementation Unit (CPIU), which has established a robust and well-recognised track record of competent and diligent programme management of IFAD's previous and ongoing projects.

The principal functions of the CPIU will be to carry out the overall programming and budgeting of Project activities, take the lead in implementation - in cooperation with business development partners and other services providers, infrastructure contractors, beneficiary institutions, such as farmer-based organisations, participating financial institutions - and to monitor and document



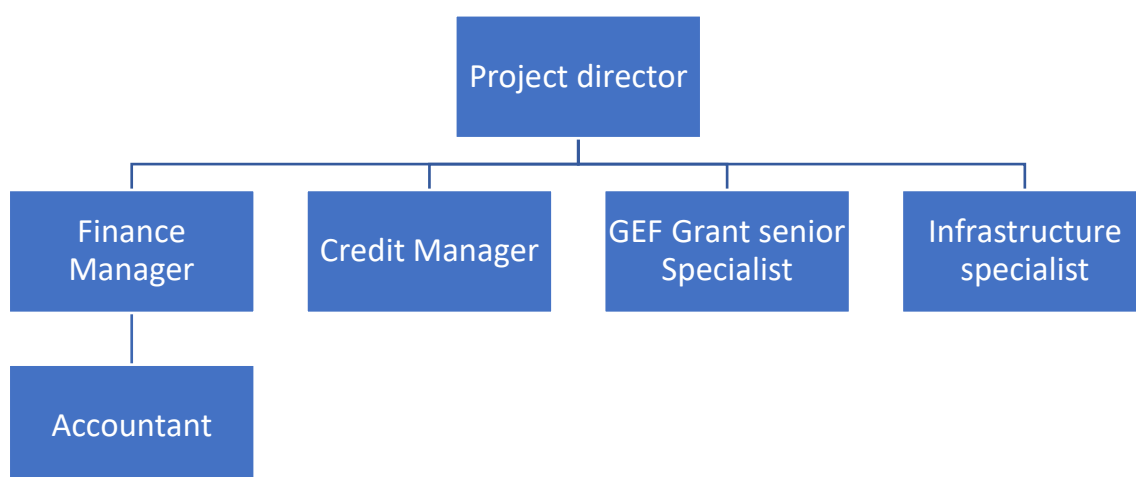
(Chart 1: organogram of the project implementation arrangements)

To implement the project and its components, the CPIU will receive funds from the financiers (IFAD, the government and beneficiaries), which will be channelled through separate designated and project accounts to cover project expenditures, in accordance to the Annual Work Plan and Budget (AWPB) and the expenditure categories as per the schedule 2 of the FA.



(Chart 2: The Financial operations environment of the CPIU)

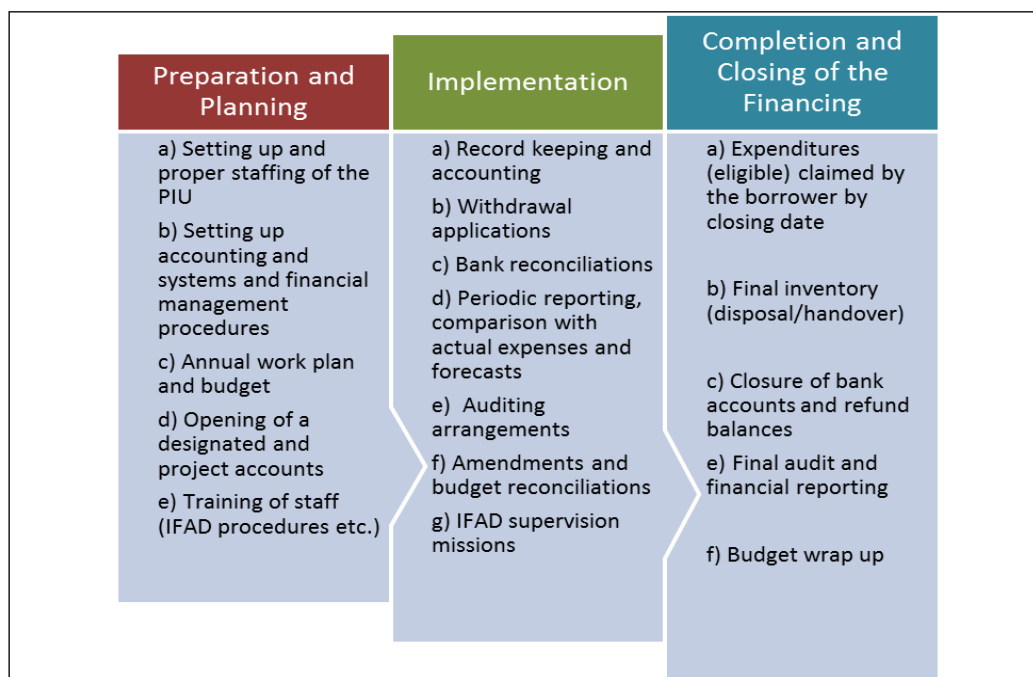
The Project and the CPIU will be managed by the Project Director, Credit Manager, Grant senior Specialist, Infrastructure specialist who will responsible for setting up the CPIU and the proper staffing of it. The project funds will be managed by the Finance Manager, with the support of an Accountant, under the direct supervision of the Project Director.



(Chart 3: Organogram of the PIU staff involved in financial operations)

In order to ensure that the financing proceeds are used for the intended purpose and as efficiently as possible, it is essential that the Finance Manager sets up and maintains adequate financial

management arrangements in each stage of the project cycle: i) preparation and planning, ii) implementation as well as iii) completion and closing, as illustrated in the chart below.



(Chart 4: Financial management arrangements in the different stages of the project cycle)

1.3 Anticorruption policy

The management of the project funds shall be sufficiently rigorous to safeguard against Fraud and Corruption. Fraud and corruption include, but are not limited to:

- “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value in order to improperly influence the actions of another party;
- “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party in order to obtain a financial or other benefit or to avoid an obligation;
- “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including improperly influencing the actions of another party;
- “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party in order to improperly influence the actions of that or another party;
- An “obstructive practice” is: (i) deliberately destroying, falsifying, altering or concealing evidence that may be material to an investigation by the Fund or making false statements to investigators in order to materially impede an investigation by the Fund; (ii) threatening, harassing or intimidating any party in order to prevent that party from disclosing its knowledge of matters relevant to an investigation by the Fund or from pursuing such an investigation; and/or (iii) the commission of any act intended to materially impede the exercise of the Fund’s contractual rights of audit, inspection and access to information.

IFAD applies a zero-tolerance policy towards fraudulent, corrupt, collusive or coercive actions in projects financed through its loans and grants. ‘Zero tolerance’ means that IFAD will pursue all allegations falling under the scope of this policy and that appropriate sanctions will be applied where the allegations are substantiated. IFAD takes all possible actions to protect individuals who submit allegations of fraudulent or corrupt practices in its activities from reprisal. The IFAD anticorruption policy

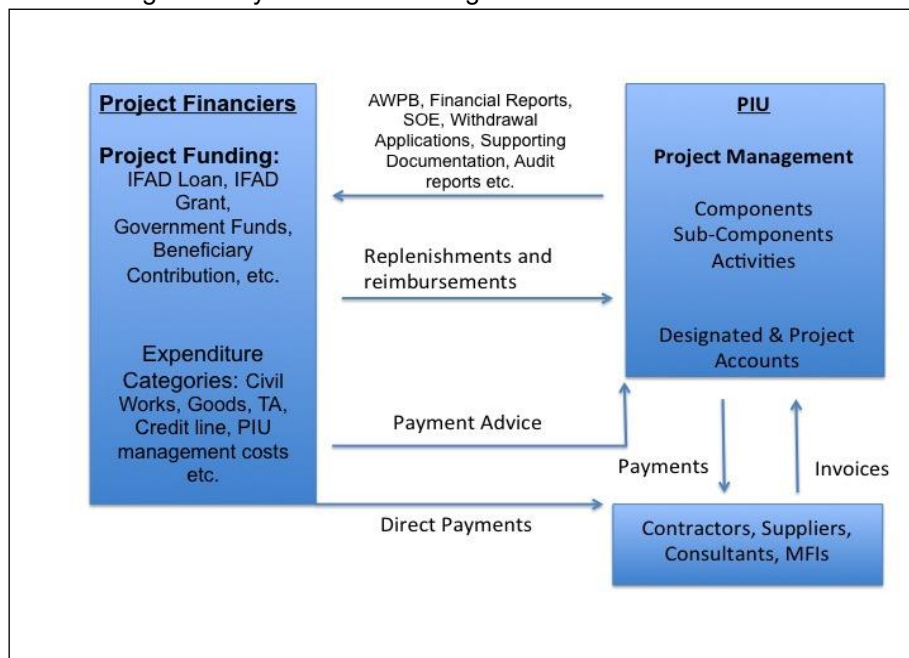
is available on IFAD website at www.ifad.org/governance/anticorruption/index.htm). The IFAD website also provides instructions on how to report any alleged wrongdoing to the Office of Audit and Oversight (<http://www.ifad.org/governance/anticorruption/how.htm>).



It is the Project Director's and the Finance Officer's responsibility to make sure that all CPIU staff including the financial department are aware of IFADs and the lead project agency's anticorruption policy and whistle blowing procedures.

A. 2.0 Accounting System

The majority of project activities result in the receipt, commitment or expenditure of funds. The accounting system records, processes and organises this data in order to produce useful financial information in form of AWPB, Financial Reports, Withdrawal Applications, Financial Statements etc. needed by the Project Financiers (IFAD, Government, Beneficiaries) as well as the CPIU management. The accounting system should reflect the project's needs and be designed to provide the financial information required by all interested parties (MOF, MADRM and IFAD). It should also fulfil all the legal and regulatory requirements of the borrower/Recipient. The accounting system is a critical part of the project's financial management system and its design.



(Chart 6: The operating environment of the project accounting system)

The Finance Manager is responsible for the following key areas related to the accounting system of the project:

- Designing the accounting system of the project
- Selection and maintenance of an accounting software.
- Development of an accounting manual

2.1 The project accounting system and software

As a minimum requirement the Accounting system will need to produce the following reports:

- Statement of cash receipts and payments (by category and by financier),
- Statement of cash receipts and payments (by component),
- Comparison of budget to actual expenditure,

- Sources and uses of funds statement (by category/financier)
- Sources and uses of funds statement (by component/financier)
- Statement of Special Account movements,
- Statement of Special Account Reconciliations,
- SOE-Withdrawal Application Statement.

Fixed asset register summaryAs a minimum requirement the accounting system must include the following list of transactions/activities:

- a) Purchase orders, receipts, check books and other similar documents evidencing receipt, commitment or expenditure of funds.
- b) A journal for primary entry of all transactions, including adjustments, destined to be posted to the ledger.
- c) A petty cash book (PCB) for small cash expenditures below a certain low threshold. The credit side of the PCB should be analyzed into columns, one for each project component, The totals to be posted to ledger accounts monthly.
- d) A bank cash book (one for each source of financing). The credit side should also be analyzed into columns, one for each project component (like PCB). Total of these columns should be posted to their respective ledger accounts monthly.
- e) A ledger containing separate ledger accounts for each project component. The debit side of each ledger account should be analyzed into the expenditure categories defined in the IFAD Financing Agreement The ledger accounts should be closed and trial balance prepared at the end of each month.
- f) Fixed asset register to record source of asset funding (IFAD, Government, etc.) location, price and date of acquisition (or completion) of all buildings, vehicles, computers, printers, major equipment and furniture, estimated life fo the asset.. There register should have a separate section for each type of fixed asset.

Information storage and back-up.

Access level and different user rights e.g. (i) active use for inputing/editing of data for different modules; (ii) read-only use; or (iii) no-access

The accounting software should contain the following modules:

i) general ledger module, ii) accounting module incl. petty cash, iii) budget module, iv) fixed asset module, v) contract management and procurement management module. - The integration of budgeting module accounting module/system is important to enable comparison of the actual performance with budgets/targets (quarterly, annual, and cumulative for the Project).

2.2 Accounting Manual

The accounting manual is an integral part of the financial management manual of the project. It is to be prepared by the Finance Manager in accordance with **local accounting legislation** and will become effective after it has been approved by the Project Director. The accounting manual is to be reviewed and updated once a year.

When developing the accounting manual, it is essential that the Finance Manager and the Accountant are familiar with the following:

- Methodological Norms on accounting and financial reporting in the budgetary system approved by the Order of the Minister of Finance
- The Financing Agreement and the requirements as per the IFAD Handbook on Reporting and Auditing of IFAD's funded projects.
- The features and user manual of the procured accounting software.

The accounting manual should as a minimum address the following subtopics:

Chart of Accounts

Chart of Accounts and Methodological Norms on accounting and financial reporting in the

budgetary system approved by the Order of the Minister of Finance No. 216 of 28 December 2015

Budgeting and budgetary control

The project budget will be recorded in the budget module of the accounting software.

Recording and processing of transactions

Whenever a transaction takes place under the Project, it should be recorded and processed using the accounting software that meets the project's specific accounting requirements. Processing of payments is discussed in detail in section 8 of this manual.

The recording of transactions under the Project follows the Cash basis of accounting with allows for the recognition of cash inflows in the period they are received and the reporting of expenses in the period those expenditures are paid.

Individual records of transactions are treated as source documents. For the project accounting purposes, the following source documents are considered:

- Purchase orders/ Contracts
- Purchase invoices
- Service invoices
- Consultants/engineers' reports

All transactions occurred should be registered in the accounting software in accordance with the date of occurrence and under the form of journals. The journal should contain sufficient and detailed information about the date of the transaction, its type, amount and reference to the source document. All the transactions should be entered on the accounting software using the principle of double entry, which means that each transaction should be recorded twice, once on the debit side of the transaction and once on the credit side of the transaction. The accounting software will automatically process those transactions and post them to the ledger accounts, which are accounts where all transactions of similar type are recorded. This processing of transactions also allows for the production of timely reports.

The accountant should reconcile the project accounts on a monthly basis. In case certain adjustments of entries in the accounting process have to be made, the accountant should produce a memorandum in which the reasons and the way the adjustment has been made is explained. The memorandum will be authorized by the Project Director after being cleared by the Finance Manager.

Bank account reconciliations

The accountant will need to perform monthly bank account reconciliations between the different accounts. The reconciliation is discussed more in detail in section 6.3 of this manual.

Withdrawal of funds

The accountant will be responsible for preparing withdrawal applications to be submitted to IFAD. The necessary procedures are explained in section 7 of this manual and in the IFAD Loan Disbursement Handbook.

Financial reporting:

The accountant is not only in charge for recording the financial transactions on a daily basis but also for summing up the expenditures made under each component and sub-component and for each activity under those and posting the data on accounting/financial reports on a periodic basis during the reporting periods specified in the Letter to the Borrower and in the Financing Agreement. The accountant will also need to keep track and report on the availability of project funds in the different accounts (designated accounts, project accounts) as well as the commitments made by the CPIU. The produced reports will be approved by the Project Director after being cleared by the Finance Officer. The different financial reports are discussed more in detail in section 9 of this manual.

Fixed asset register

The accountant needs to maintain a fixed asset register recording all fixed assets in the fixed asset module of the accounting software. Fixed asset management is discussed more in detail in section 8 of this manual.

Period for which records are to be kept

The accountant needs to file the original records in an organised way to be maintained by the CPIU/LP for a minimum 10 years after the project completion. Record management is discussed more in detail in section 4 of this manual.

Access Levels

The access to the accounting system should be governed by the privileged metrics defining the levels of access by different users: (i) active use for inputting/editing of data; (ii) read-only use; or (iii) no-access. This would allow a separated and controlled access to the Accounting module (i.e. Journal recording, posting to the General Ledger). Each accounting transaction records the user's ID, preventing unauthorized access to the system and an adequate level of protection against the input of false data or the destruction of the records. At the same time, the data-sharing nature of the system involves a strict coordination and active data exchange among its various users (primarily the CPIU). In this respect the system should ensure the reliability in information storage and fast data processing.

Revision of accounting manual

The accounting manual is to be reviewed and updated once a year.

B. 3.0 Records Management

Financial records must be created and preserved for every financial transaction performed under the project. Financial records are defined as any financial information including written, computer data, internal forms, e-mails, or any other form of storage information originated from the CPIU such as internal forms, journal vouchers financial reports (Monthly & quarterly) copies of checks and withdrawal applications etc. or received by the CPIU such as supplier invoices and receipts, bank statements, IFAD documents etc. within the framework of the project's official activities.



It is important to note that in accordance with the IFAD general conditions, the recipient/borrower has to maintain the original records for a minimum 10 years after the project completion.

3.1 Filing of the financial records

The accountant is responsible for filing the financial records created or received by the project. To fulfil this responsibility, the accountant must maintain chronological files in which the financial documents have to be filed for future reference. Filing should be performed daily to prevent the accumulation of papers and to ensure that the financial records are maintained in an up-to-date manner at all times. Each financial record should be filed under its code in a chronological order, with a sequential number assigned to every document. Any kind of additions or amendments to the financial document should be filed in a chronological order immediately following the principal document.

3.2 Storage of financial records

The financial records of the project should be stored in the CPIU office/borrower for a minimum 10 years after the project completion. The data should be stored within the accounting software, as paper copies, as scanned copies and as computer disc copies. The Financial Officer should allocate an appropriate storage area for the financial records in paper format and maintain them in locked cabinets, safe from water and fire, to which access is controlled and limited. The Financial Officer should also classify the financial records as "Confidential", or "General". All important correspondences should be filed.

3.3 Archiving of financial records

In order to prevent an unnecessary pile-up of files in a limited office space, the Finance Manager should make sure that the financial records are archived on a regularly basis. Once a year, the Finance Manager should make sure that the completed or inactive files are archived in a manner that will allow for easy retrieval of the files in case they are required at some future date.

3.4 Back- up procedures

To avoid the loss or damage of financial data, the information should be kept in two copies: i) at the computer server of the CPIU/LPA and ii) in the locked cabinets of the CPIU office. Only the Project Director, the Finance Manager and the accountant are allowed to access the financial records without authorization. The access of external persons is prohibited except for the auditors & IFAD staff.

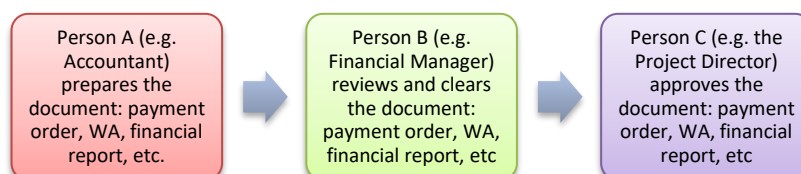
4.0 Internal controls

Designing, Installing, and maintaining a system of internal financial control is an integral part of the Financial management function. Internal financial controls aim to ensure i) efficiency, ii) reliability, of financial reports and iii) compliance with applicable laws and regulations including the conditions set forth in the financing agreement. The key features of the internal control system are summarised below:

- Segregation of duties;
- Authorization;
- Reconciliations and checks;
- Restricted access; and
- Monitoring and review.

4.1 Segregation of duties

An important element in any control system is the separation of those duties which would, if combined, enable one individual to record and process a complete transaction. It is the Finance Officer's responsibility to ensure that the following duties are segregated under the project: preparation, authorisation, execution, custody, recording and the operation of systems.



(Chart 7: Example of Segregation of duties)

4.2. Authorization

Authorization controls require the certification that a transaction or event is acceptable for further processing. Several types of authorization are in effect at the project, mainly in the procurement cycle, payment cycle, bank and cash management cycle including reconciliation. The Finance Manager should ensure that the authorizations of CPIU staff ensure efficient implementation while keeping the risk as low as possible. The authorization of project staff should be in line with their respective job descriptions.

4.3 Reconciliations and Checks

Reconciliations between independent, corresponding sources of data are a key control for identifying errors and discrepancies in balances. The Finance Manager should perform the following reconciliations each month:

- Bank reconciliation
- Reconciliation between system and special account receipts and payments statement
- Any reconciling or balancing amounts should be promptly cleared. Unusual or long outstanding reconciling items must be brought to the attention of the financial officer. The financial officer will review and sign all reconciliations as evidence of his review.

4.4 Restricted Access

All data, records and assets should be kept in a physically secure environment. This should cover safe keeping of finance records such as official order forms and bank details. In addition, any petty cash should be kept securely. Financial data and other records should also be protected in the form of back up procedures. All work should be regularly backed up and copy records stored securely off site

4.5 Monitoring and Review

As detailed in financial reporting section 9, periodic financial reports must be prepared and submitted to the fund. For the purposes of the internal control the same information should be prepared and monitored by the project Director on a monthly/quarterly basis. The reports should be prepared on a timely basis and should normally be available for distribution two weeks after the end of the reporting period to which they relate. The periodic reports should be reviewed by the Finance Manager and the project director as a minimum. Where necessary, corrective action should be taken to ensure the authorized budget and procurement plan is not exceeded.

C. 5.0 Flow of funds, cash and bank account management

The IFAD Loan will be disbursed over six years. The Loan Closing Date is the sixth anniversary of the date when the project was declared effective. IFAD disbursement procedures and the accompanied forms are outlined in detail in the Letter to the Borrower/Recipient and the IFAD Loan Disbursement handbook which should be read in parallel with this manual. Please refer to section 7 of this manual for more detailed information on the IFAD Disbursement procedures.

5.1 Flow of Funds, opening of special accounts and project accounts

Funds from the financing will be disbursed into two separate designated accounts denominated in USD and opened through the State Treasury of the Borrower/Recipient at the National Bank of Moldova for the IFAD Loan and the AP grant respectively.

The designated accounts shall be operated under Imprest arrangements.

The authorised allocation to the IFAD Loan designated account shall be of a maximum USD 3.3 million through three separate initial advances of which one up to USD 1.0 million specific to support the creation of the NCFM Stabilization Fund and a second up to USD 0.8 million for the NCFM Insurance Deposit Fund. The initial authorized allocation to the grant designated account shall be USD 0.5 million.

Withdrawal of the Financing shall follow three disbursement methods: advance withdrawal, reimbursement and direct payment. Withdrawal requests will be processed through the ICP-IFAD Client Portal by the Project CPIU. There will be no threshold for withdrawal applications under Advance Withdrawal and Reimbursement methods as aligned to on-going projects. Disbursement arrangements will be detailed in the Letter to the Borrower/Recipient in accordance with the Fund's General Conditions, the Financing Agreement and the IFAD's Loan Disbursement Handbook

The CPIU shall also open through the MOF-State Treasury separate project accounts in local currency (MDL) at the NBM:

- two project accounts to receive resources for eligible expenditures from the loan and the grant designated accounts respectively;
- one project account to provide counterpart government funding to cover duties, taxes and other services for project implementation,
- one project account to receive contributions from the beneficiaries.

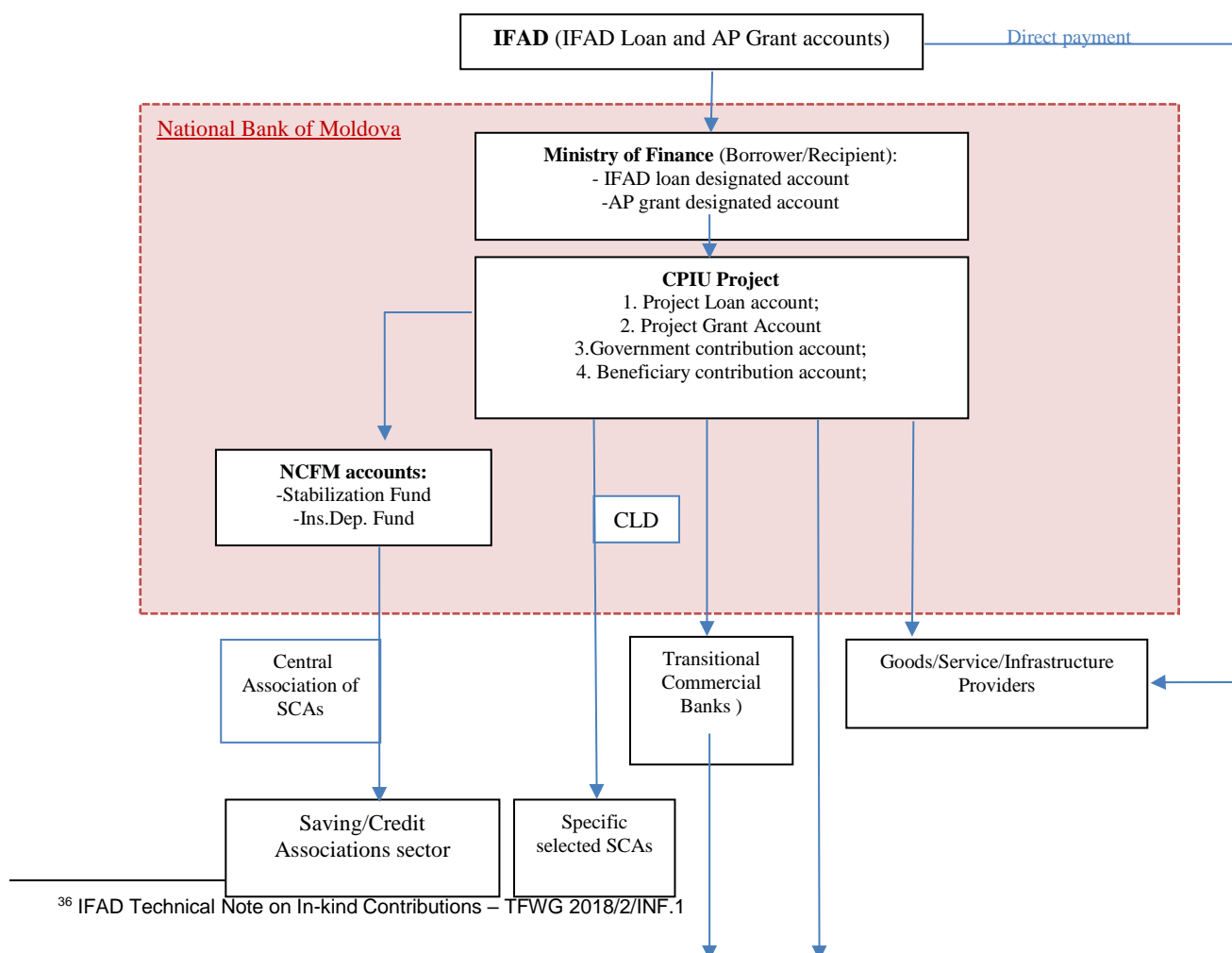
Funds from the IFAD loan and the AP grant cannot be used to pay duties and taxes. Government funding, cash and/or in-kind (i.e. tax exemptions) will be incorporated into the AWPB and the actual contribution accounted/registered in the CPIU accounting software. Contribution from the beneficiaries, cash and/or in-kind, will be incorporated into the AWPB and the corresponded value accounted/registered in the CPIU accounting software. Cash contributions shall be deposited in the beneficiary contributions Project Account and/or in-kind contributions shall be evaluated at the fair

market value, in accordance with the eligibility criteria detailed in the PIM and in accordance to IFAD recommendation³⁶ on in-kind contributions.

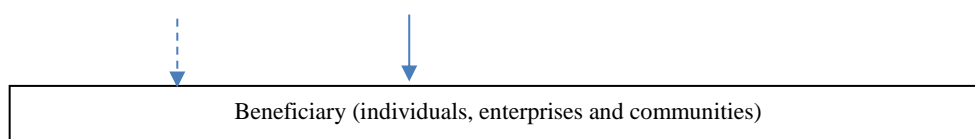
Beneficiaries shall access funds:

- from SCAs financed with credit line received through the NCFM Stabilization Fund mechanism (sourced from IFAD Loan);
- from selected SCAs directly financed with credit lines received by the CPIU (sourced from IFAD Loan);
- through credit lines from a commercial bank matched with a grant funded by IFAD (sourced from IFAD Loan);
- from the CPIU as a grant scheme on reimbursement basis for eligible expenditure (sourced from IFAD Loan, AP Grant);
- from the CPIU as grant scheme on advance basis via Transitional Commercial bank -like account (sourced from IFAD Loan, AP Grant).

(A transitional commercial bank account, or any similar mechanism, is meant as a bank account opened at a commercial bank in the name of a beneficiary from which funds can be withdrawn on a conditional basis only for specific expenses agreed upfront).
The flow of funds along project implementation, from IFAD to beneficiaries through Government systems, NCFM, Saving and Credit Association (SCAs) and external providers is described in the diagram below (Chart 8).



³⁶ IFAD Technical Note on In-kind Contributions – TFWG 2018/2/INF.1



(Chart 8: Flow of funds of the project)

5.3 Bank reconciliation

The Finance Manager must perform monthly reconciliations between the designated accounts and the project accounts balances recorded on bank statements and local cash book balance, recorded on the system. Performance of the monthly reconciliation should follow the following steps:

- i) Designate Account balances recorded on bank statements on reconciliation date is taken as starting figure;
- ii) Add reimbursements/replenishments/other deposits that have been processed and are due to designated account, but not yet recorded on bank statements;
- iii) Subtract undelivered cheques. Any long-outstanding cheques should be identified and investigated
- iv) Following these adjustments, the bank statement and accounting system cash totals should agree. Any remaining difference should be reported and investigated;
- v) The completed bank reconciliation statement should be signed by the finance controller; and
- vi) The reconciliation should be reviewed and countersigned by independent finance team member who understands the reconciliation process.
- vii) Reconciliation of the designated account will be submitted to IFAD with every request for replenishment to the DA.



Please refer to annex XII (also form 104 of the Disbursement handbook) for a standard Designated Account Reconciliation Statement

D. 6.0 IFAD Disbursement Eligibility and Procedures

The IFAD disbursement procedures are governed by the Letter to the Borrower (LTB) and the IFAD Loan Disbursement Handbook (LDH), which will be sent to the CPIU upon project entry into force (EIF). The LDH is also available on the IFAD web-site³⁷.

In accordance with the IFAD disbursement procedures, between the date of entry into force of the Financing Agreement and the Financing Closing Date, the project may request withdrawals from the IFAD Grant for eligible expenditures.

Eligible expenditures are defined in the IFAD General Conditions Section 4.08. The Financing shall be used exclusively to finance expenditures meeting each of the following eligibility requirements:

³⁷ IFAD LDH: <https://www.ifad.org/en/document-detail/asset/39635782>

- The expenditure shall meet the reasonable cost of goods, works and services required for the Project and covered by the relevant AWPB and procured in conformity with the Fund's Procurement Guidelines.
- The expenditure shall be incurred during the Project Implementation Period, except that expenditures to meet the costs of winding up the Programme may be incurred after the Programme Completion Date and before the Financing Closing Date.
- The expenditure shall be incurred by a Programme Party.
- If the Agreement allocates the amount of the Financing to categories of Eligible Expenditures and specifies the percentages of such Eligible Expenditures to be financed by the Financing, the expenditure must relate to a category whose allocation has not been depleted and shall be eligible only up to the percentage applicable to such category.
- The expenditure shall be otherwise eligible in accordance with the terms of the Financing Agreement.
- The Fund may from time to time exclude certain types of expenditure from eligibility.
- Any payment prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, shall not be eligible for financing by the Financing.
- Any payments to a person or an entity, or for any goods, works or services, if making or receiving such payment constitutes a coercive, collusive, corrupt or fraudulent practice by any representative of the Borrower/Recipient or any Project Party, shall not be eligible for financing by the Financing.

All expenditures must be supported by sufficient supporting documentation as stated in the LTB and the LDH (please see section below on supporting documentation).

As stated in the LTB and the LDH, three standard disbursement procedures may be used for withdrawal of financing:

Procedure I

Advance withdrawal (using imprest accounts or revolving funds with replenishment to a bank account(s) designated to receive financing resources in advance). This modality is used to advance and/or replenish funds to a bank account as designated by the borrower. The Fund may place a limit on the amount to be advanced and/or replenished. Relevant details on the modality – which is project specific – are agreed between the borrower and the Fund, and detailed in the LTB.

Procedure II

Direct payment. This modality is used for eligible project expenditures to be paid directly by IFAD, generally for large contracts, to suppliers, contractors, consultants or third parties, as authorized by the borrower.

Procedure III

Reimbursement. This is applicable when eligible project expenditures, reimbursable under the financing, have been pre-financed by the borrower. Such reimbursements are expected to be claimed no later than 90 calendar days from the date of payment by the borrower.

6.1 Evidence of Authority to Sign Withdrawal Applications

The Fund requires the Borrower/Recipient's representative, as designated in the financing agreement, to provide satisfactory evidence of the authority and authenticated specimen signatures of the individuals who will sign WAs on behalf of the borrower. This evidence must reach the Fund before the first WA is presented by the borrower and should be the original (photocopies, facsimiles or other means of transmission are not acceptable). A sample template is provided in annex 1 of the disbursement handbook. Each WA should be signed by such duly authorized individuals, and the Fund must be notified of any change in the signatories authorized to withdraw funds from the loan/grant account.

The Fund must also be notified of the designated signatories for operating any designated and/or programme or other accounts, including changes thereto, whether or not these authorized signatories are included in the financing agreement. Such changes, as effected during the life of the project, must be communicated promptly to the Fund. The borrower, guided by the sample in annex 1 of the disbursement handbook, should provide the names and specimen signatures of the newly appointed

signatories and include the date when such change is to take effect. The original of such changed documentary evidence is to be provided to the Fund.

6.2 The Designated Account

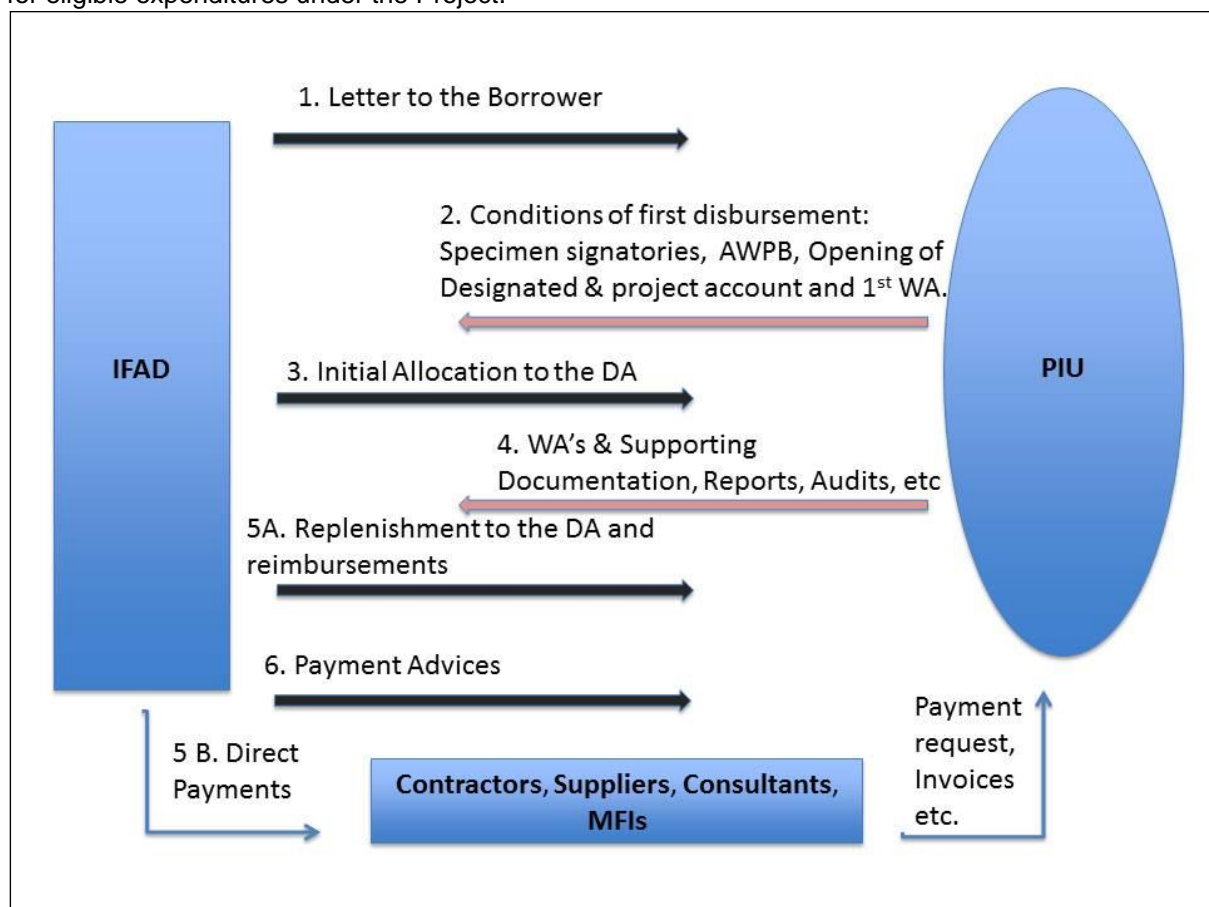
The flow of funds for the Project starts with the opening of the project Designated Accounts (DAs), denominated in US Dollars, in the National Bank of Moldova, in accordance with the Funds requirements identified in the Financing Agreement and the Letter to the Borrower/Recipient. The Finance Manager is responsible for opening and managing the Designated Account including receiving on a monthly basis the DA Statements of Account from the bank and reconciling it against CPIU records. Disbursements from the DAs should be recorded in the CPIU account records as of the date they are made, that is when the checks are issued.

6.3 Withdrawal of Financing Proceeds and Supporting Documentation

Based on the Letter to the Borrower and the Disbursement Handbook, the withdrawal of all Project financing proceeds (direct payments to contractors from IFAD, and to reimbursements and replenishments to the designated account) is done through the use of Withdrawal Applications (WA) - form 100 in the disbursement handbook.

It is the Finance Officers and the accountant's responsibility to make sure that the WAs are correctly prepared, the documentation is complete and submitted to IFAD in a timely manner. The necessary forms and supporting documentation to be attached to the WA (form 100) are outlined in detail for each disbursement method in section 3 of the LDH.

Upon Project entry into force and after sending to IFAD, the letter designating the two officials authorized to sign Withdrawal Applications (WA) with their names and specimen signatures, the Finance Manager will prepare the first Withdrawal application together with the necessary supporting documentation requesting the IFAD to transfer the initial advances to the designated accounts up to the ceilings specified in the Letter to the Borrower/Recipient. Disbursements from the DAs may then start for eligible expenditures under the Project.



(Chart 10: Withdrawal of IFAD Funds)

For the subsequent WAs, prepared by the accountant, the financial must ensure that the right supporting documentation is attached to the WAs before providing clearance. When submitted supporting documentation to IFAD should be copies the while the original documentation is to be retained by the CPIU and securely located to enable inspection by IFAD representatives and auditors for a period of at least 10 after the project completion date in accordance with the IFAD General conditions.

As specified in chapter 3 of the IFAD disbursement handbook, for all payments (Works, goods, consultants' and other services) the following supporting documentation is required:

- a) The signed contract or confirmed purchase order (Showing the specified amount that is due paid. If this has been sent earlier to the fund a reference to the accompanying letter or document should be given in a footnote to the relevant Application summary Sheet –form 100)
- b) The bank guarantee for advance payment, as specified in the contract documents
- c) The bank guarantee for performance, as specified in the contract documents
- d) Copies of communications sent by the IFAD country programme manager to the lead project agency (LPA) providing the IFAD's no objection (post or Prior) to the contract award, and
- e) Evidence of payment.

For payments of goods, in addition to a-e:

- f) Supplier's invoice duly certified for payment by the project director – specifying the goods, their quantities and prices
- g) Bills of lading or similar documents; and
- h) As appropriate, the certificate of delivery (to include condition of goods to delivery)

For Payments of Consultants' and other services, in addition to a-e:

- i) The supplier's or consultant's claim, duly certified for payment by the project director and showing sufficient detail. If such Services relate to the importation of goods (for example, freight and insurance payments), adequate reference should be given to enable IFAD to relate each of these items to specific goods whose cost has been or is to be financed by the financing closing date; and
- j) As appropriate, a certificate of delivery of satisfactory services

For progress and retention payments of civil works in addition a-e:

- k) the claim if the contractor, including a financial progress report, stating the work performed and the amount due;
- l) A certificate-signed by the project consultants or owner's representative, if any, or by the borrower's chief engineering officer or resident supervising engineer assigned to the project, to the effect that the work performed is satisfactory and the payment claimed is due in accordance with the terms of the contract, and
- m) A copy of the contract payment monitoring form signed in original by the certifying officer.

Together with each WA received for replenishment to the designated account, the project must submit the designated account reconciliation Statement, prepared by the accountant for the same reporting period in which the eligible expenditures are being claimed. This form needs to be accompanied by bank statements of the designated account and that of any other operating, district, project accounts ensuring that the closing bank balances for all these accounts correspond to the balances at the end of the same reporting period as indicated in the WA period.

In order to minimize transaction costs, the Finance Manager must make sure that withdrawals from the loan and/or grant account shall be made in amounts of no less than US\$ 20,000 or its equivalent, or such other amount as IFAD may designate in an advice to the borrower from time to time.

6.4 Use of Statements of Expenditures (SOE) and SOE Thresholds

The statement of expenditure (SOE) procedure is normally used for those expenditure types where it is impracticable or unduly burdensome to require submission of full documentation. However, the supporting documentations for the Statements of Expenditures must be maintained by the CPIU and

made available for review by IFAD supervision missions upon request and to external auditors during their annual review of project accounts to enable issuing of an independent audit opinion.

Details regarding the use of the Statement of Expenditure (SOE) are provided in section 4 of the IFAD Loan Disbursement Handbook. In accordance with the Letter to the Borrower/Recipient the SOE threshold applies for all project expenditures.

There will be no SOE threshold for TRTP for withdrawal applications under Advance Withdrawal and Reimbursement methods.

The SOE thresholds above may be amended by the Fund during the course of project implementation.

6.5 Foreign exchange conversion in preparing withdrawal applications.

When claiming expenditures in local currency in Withdrawal Applications (forms 101, 102 and 104) or preparing a financial report, it is important to use the prevailing rate (historical exchange rate) at the time of transfer of funds from the Designated Account (denominated in EUR) to the local currency account. This type of conversion is also called the First in First out (FIFO) basis.

The historical exchange rate/FIFO basis of converting is to be used in the following two cases in particular:

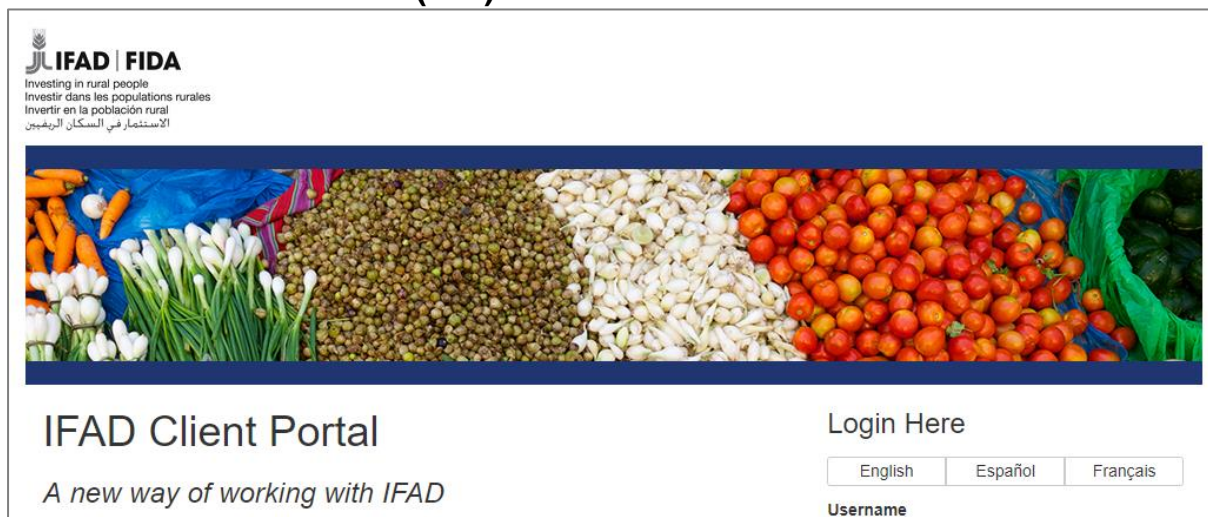
- When preparing a designated account reconciliation as part of a WA or a financial report, the closing balance of the local currency account(s), and any expenditures already incurred in local currency but not yet claimed must be converted to the denomination currency of the designated account using the historical exchange rate/FIFO basis of converting.
- When preparing withdrawal applications (form 101 and 102) the expenditures incurred in local currency (or any other currency than the denomination currency of the designated account) and claimed in the WA, must be converted to the denomination currency of the designated account using the historical exchange rate/FIFO basis of converting.

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6.6 Refund of Withdrawals

If the IFAD determines that any amount withdrawn from the Loan and/or Grant Accounts was not used for the purposes indicated or will not be needed thereafter to finance Eligible Expenditures, the Borrower/Recipient shall promptly refund such amount to the IFAD upon instruction by the Fund.

6.7 IFAD Client Portal (ICP)



The IFAD client portal (ICP) enables the project to:

- access real-time financing information on country portfolios as well as operational and financial information related to projects

- submit Withdrawal Applications directly and obtain electronic approvals required both from concerned ministries and IFAD
- manage banking instructions electronically
- create and download relevant reports

The project may submit electronic copies of its withdrawal applications and maintain hardcopies for audit purposes.

E. 7.0 Processing of payments

The Project will mainly finance, small works (rural roads, irrigation infrastructure etc.), consultants' services (design, supervision and studies), goods (office supplies, computers, cars), microfinance in the form of grants and credit as well as CPIU operating costs (salaries, travel expenditures etc.). Last section outlined how the CPIU will receive funds from IFAD to cover the incurred expenditures related. This section will outline the different steps involved in the outflow of funds from the CPIU to the Contractors, Suppliers, Consultants etc. The procurement process of these items, including the hiring process for consultants is detailed in the project procurement manual.

7.1 General instructions

For all payments, the Finance Manager should ensure that the following steps are performed:

- i) Preparation of Payment request voucher. A payment request voucher should be prepared for each payment.
- ii) Validation of invoice. The following validation checks should be performed by the Finance Manager on invoice:
 - Invoice arithmetically correct; and
 - Quantity and price recorded on invoice should be checked back to contract, order, certification of completion/delivery

If there is any discrepancy identified, it should be raised with the vendor prior to proceeding with invoice processing,

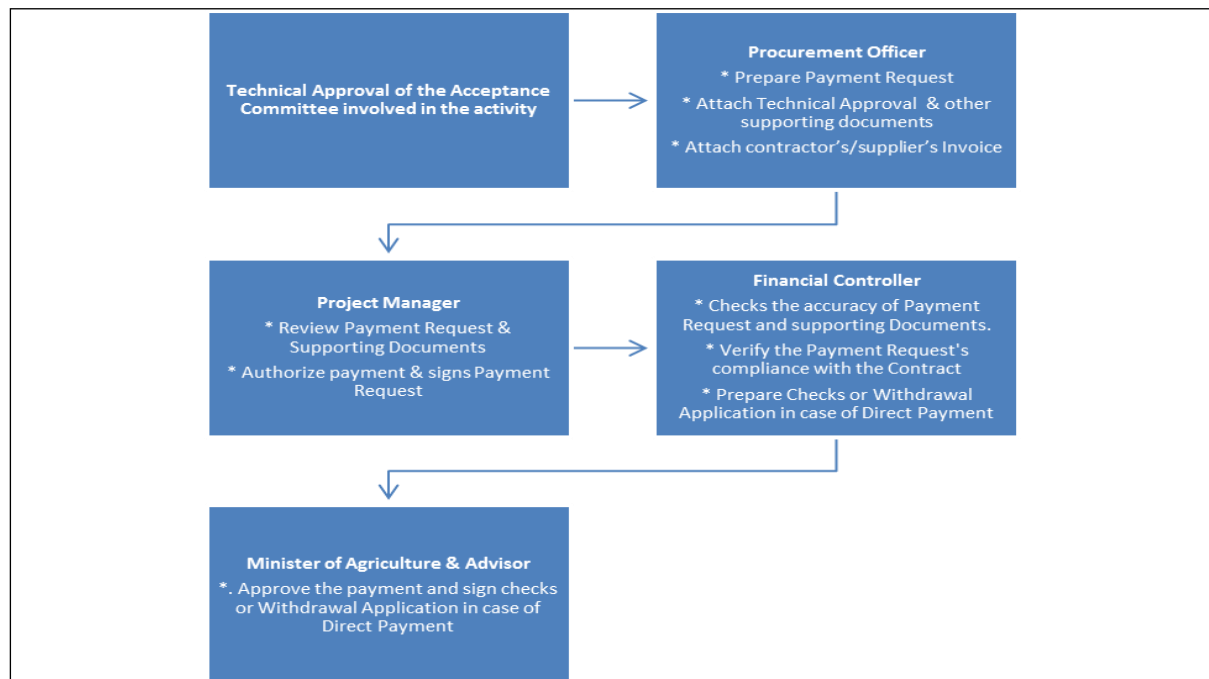
- iii) Supporting documentation: the following documents should be attached to the payment voucher to support validation:
 - Copy of invoice;
 - Copy of letter of approval from technical committee or the specialist, minister;
 - Copy of purchase order, goods received note and contract if applicable; and
 - Copy of required guarantees

All vouchers are authorized by the Minister after signatures of the Finance Manager, Project Director the and General State Secretare of the MADRM

7.2 Processing of payments for Civil Works and Goods

Project will incur expenditures related to works under Components 1 b. -) in the form of rural roads, irrigation infrastructure etc. and goods.

The Expenditure Cycle for works and goods is detailed in the following chart:



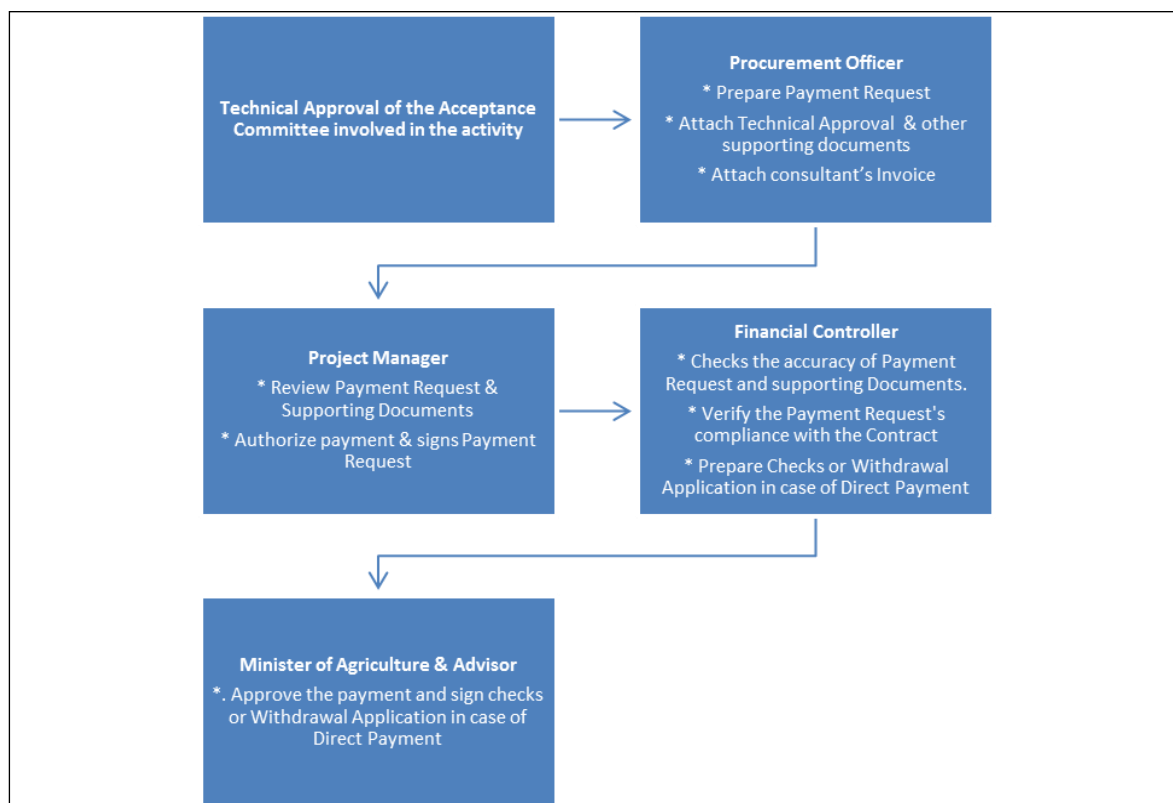
(Chart 12: Processing of payments for Works and Goods)

Before releasing the payment to the contractor or supplier, the Finance Manager will make sure the following processes are followed:

- A. The quantity of goods is checked back to the purchase order and to contract and bid award letter (if applicable). The committee members, assigned by steering committee/LPA after being assured that quality of goods is compliant with the contract conditions deliver an accepted delivery sheet or a compliant report to the Procurement Officer. The Finance Manager will ensure that the Procurement Officer provides all the necessary documents including the invoice and the acceptance/compliant report before proceeding with the payment.
- B. The condition of the goods are reviewed for any damage or impairments. Damaged goods are to be identified and returned to the supplier/replaced. If any goods are rejected or returned to the supplier because they are not as ordered or are of sub-standard quality, the Finance Manager should be notified. Finance Manager must keep a central record of all goods returned to suppliers and maintain a separate record of all goods and equipment delivered by suppliers by contracts funded by the IFAD financing.
- C. All the works, are to be monitored by an architect or engineer. It is good practise to assign the architect/engineer responsible for the design to monitor and assess the works of the contractor. The architect or engineer is responsible for sending compliant reports/certificate of completion to the Procurement Officer in the CPIU which includes the percentage of completion of the construction and if the construction materials are compliant with the contract conditions and specifications. A request for payment is prepared by the Procurement Officer to be send to the Finance Officer. The Finance Manager will ensure that the payment request includes all the necessary documents including the invoice and the compliant reports/certificate of completion before proceeding with the payment to the contractor for the completed phase.

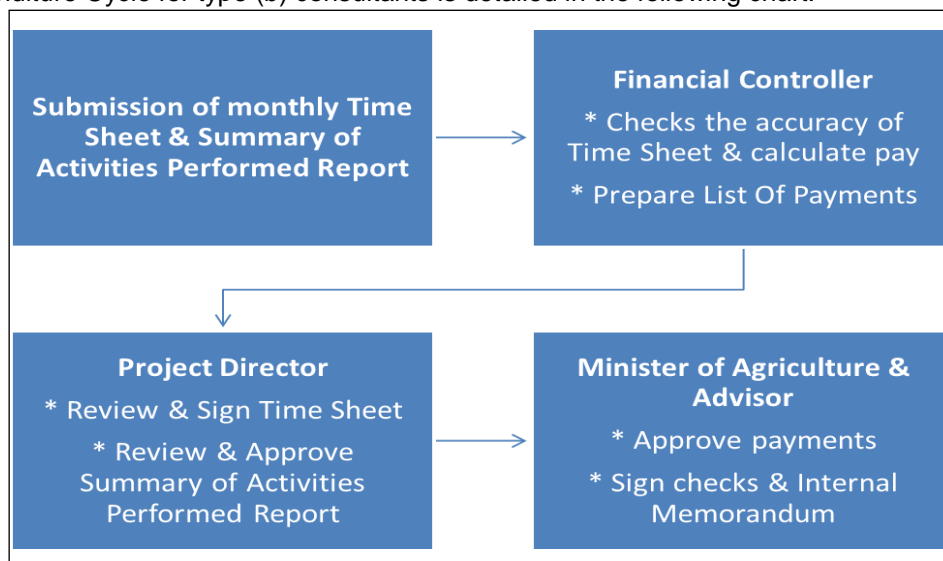
7.3 Processing of payments for Consultants' Services

Under the Project there are two types of consultants' services; a) Consultants with a lump sum contract, and b) Consultants with a time based contract. For type (a) consultants, payments will be made against the delivery of outputs as detailed in their contracts. For type (b) consultants, payments will be made against the submission of a time sheet and a summary of activities performed. CPIU members will be paid against the submission of a monthly time sheet. The Expenditure Cycle for type (a) consultants is detailed in the following chart:



(Chart 13: Processing of Payments for consultants - type A)

The Expenditure Cycle for type (b) consultants is detailed in the following chart:



(Chart 14: Processing of Payments for consultants - type B)

Before releasing the payment to the consultant (firms), the Finance Manager will undertake the following steps:

- A) The consulting services reports are monitored by technical committees, assigned by the steering committee/LPA for the purpose of evaluating the deliverables submitted by the consultant (firms). Therefore the Finance Manager will ensure that no payment to the consultant is prepared unless an approved committee report or letter of approval received from the committee assures that the deliverable submitted by the consultant is compliant with the contract conditions, these documents should be passed first through the Procurement Officer.
- B) The consulting services reports are monitored by the specialist responsible for the activity for the purpose of evaluating the deliverables submitted by the consultant (Individual Consultant). Therefore the Finance Manager will ensure that no payment to the consultant is prepared unless an approved report received from the specialist assures that this report is compliant with the contract terms and conditions, these documents should be passed first through the procurement officer.

All Supporting Documents and Internal Forms must be retained at the CPIU Office and must be maintained and archived in accordance with the maintenance of records section of this manual.

7.4 Processing of Payments for Office Supplies and Other Operating Costs

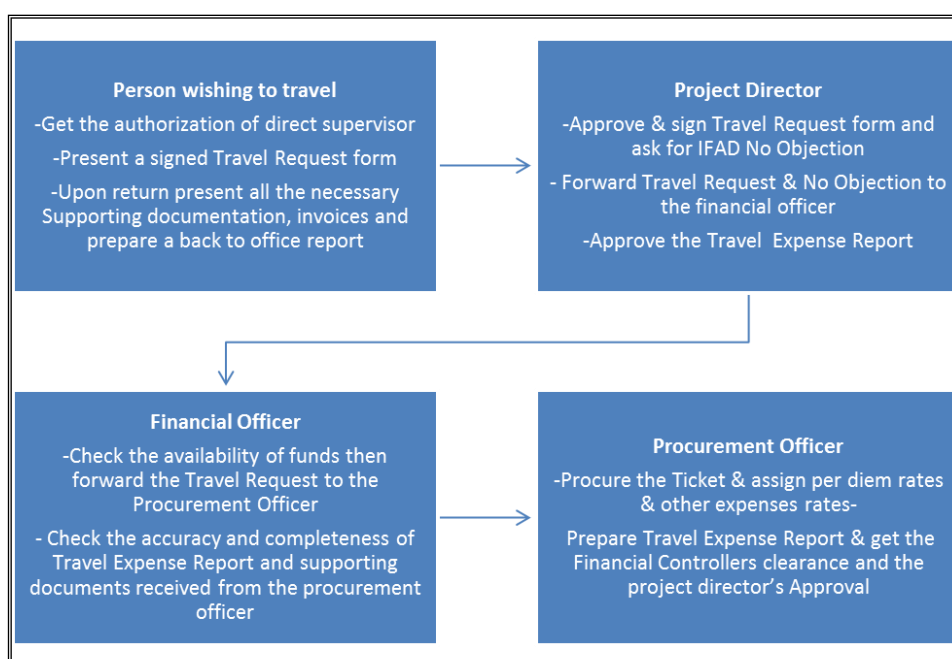
The payment for office supplies and operating cost will be against the preparation by the procurement officer of a serially numbered checklist evidencing the receipt of office supplies, and the presentation of the Purchase order and supplier invoice. The Finance Manager will compare the information on the checklist to the purchase order and supplier invoice, then sign the checklist. The payment for services is against the presentation by the supplier performing the service of a service invoice.

At the end of each month, the Finance Manager will prepare a serially numbered "List of Payments" that detail all the incurred costs for office supplies and operating costs during the month and present it to the project director for review and authorization. After the project director's authorization of the payments, the Finance Manager will prepare the checks and send them to the project director who will prepare an "Internal Memorandum" detailing the check numbers, amounts, suppliers and explanation of payments. The "Internal Memorandum" and the checks will be presented to the Minister of Finance and his Advisor to approve the payments and sign the checks.

(Chart 15: Processing of Payments for Office supplies and operating costs)

7.6 Travel Arrangements & Processing of Travel Related Expenditures

Under the Project there is a budget allocated for workshops and study tours as well as staff training courses. The following chart summarizes the transaction cycle that should be followed to get approval for the travel and the expenditures related to it:



(Chart 16: Processing of Payments for Travel and Training)

7.7 Financing of Rural Finance schemes

The Project will incur expenditures related to activities under Component 2 “Entrepreneurship Finance” (sub-component “Affordable Credit”)

7.7.1 Matching grants to farmers/entrepreneurs

The Project would provide beneficiaries with grants of up to 40% of the investment costs, matched with bank credits. The financing will follow the below steps in accordance to the eligibility criteria and procedures set in the PIM-Rural Finance Manual

- The CPIU identifies Eligible Partner Financing Institutions (PFI)
- PFI identifies beneficiaries/grantees eligible for the financing scheme (loan+matching grant) and stipulate an individual financing agreement. The Beneficiary opens an account (transitional commercial bank-like) at the PFI which is conditional to the purpose of the financing request.
- PFI applies for the matching grant to the CPIU providing documentary evidence of the approved financing.
- CPIU-Rural Finance Officer review the application and provides technical clearance.
- CPIU-Finance Manager reviews the accuracy and completeness of the application and confirms the availability of funds.
- CPIU-Project Director enters into an agreement with the PFI for the individual financing and instruct the Finance Manager to dispose the transfer of the grant funds to the PFI
- The PFI transfers the grant funds to the beneficiary account
- The beneficiary shall withdraw funds from the account conditional to the investment purpose set in the financing agreement.
-

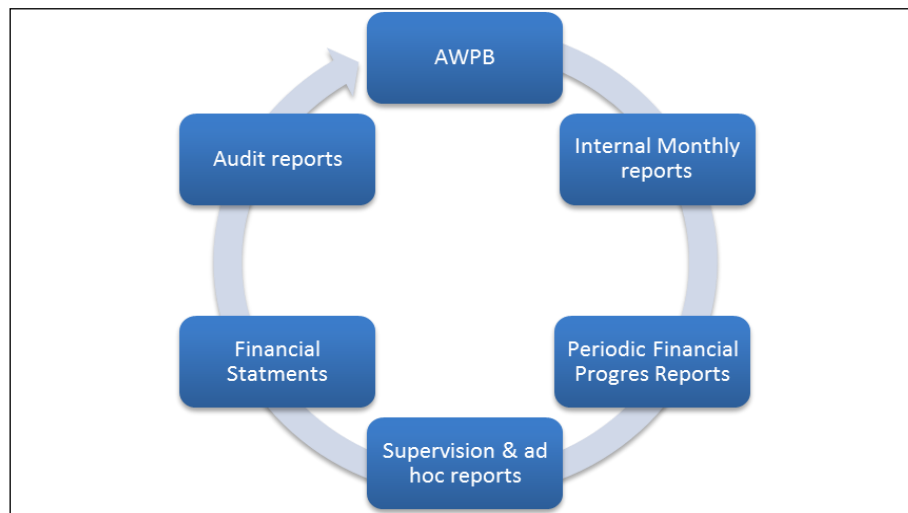
7.7.2 Credit lines to SCAs

The Project would provide selected Saving and Credit Associations (SCAs) with credit lines in order to facilitate downstream on-lending to farmer/entrepreneur beneficiaries. The financing will follow the below steps in accordance to the eligibility criteria and procedures set in the PIM-Rural Finance Manual

- The CPIU identifies selected eligible SCAs
- The SCA identifies a beneficiary eligible for the financing scheme and stipulate an individual financing agreement. The Beneficiary opens an account at the SCA which is conditional to the eligible purpose set in the agreement.
- SCA applies for a direct credit line from the CPIU by providing documentary evidence of the approved financing.
- CPIU-Rural Finance Officer review the application and provides technical clearance.
- CPIU-Finance Manager reviews the accuracy and completeness of the application and confirms the availability of funds.
- CPIU-Project Director enters into an agreement with the SCA for the individual financing and instruct the Finance Manager to dispose the transfer of the financing amount
- The SCA transfers the credit line to the beneficiary account
- The beneficiary shall withdraw funds from the account conditional to the investment purpose set in the financing agreement.

F. 8.0 Financial Reporting

Periodic financial progress reports are a formal requirement of the IFAD Financing Agreement. Sufficient information must be made available about what money is spent on, how much is spent and what the results are. The major financial reports include the following: AWPB, monthly financial reports, periodic financial progress reports, supervision reports, annual financial statements and audit reports.



(Chart 17: Project Financial reporting cycle)

In addition to the AWPB, supervision reports and audit reports (discussed in detail in section 2, 11 and 12 of this manual), the Finance Manager will ensure that the following financial reports are prepared in a timely manner and submitted to IFAD in due time (applicable to reports 2-4 only):

1. Monthly financial reports for CPIU internal use only. These reports will be verified during IFAD supervision missions.
2. Periodic (semi-annual) progress reports, to be provided to IFAD within 45 days after the reporting period
3. Annual financial statements, to be provided to IFAD within 4 months after the end of the project fiscal year.
4. Annual financial statements audited by an independent auditor acceptable to the Fund and in accordance with internationally accepted auditing standards and terms of reference cleared by IFAD, to be provided to IFAD within 6 months after the project fiscal year (explained in detail in section 11).

8.1 Monthly Reports

In accordance with best practises, the Finance Manager will prepare monthly financial reports based on the accounting system to aid management decision and control. The monthly management accounts will include the following.

- Monthly Budget Execution Report, summarising the budget-actual comparison of the expenditures incurred, component-wise and category-wise. The report will also include a list of commitments entered into and still to be paid, by component and by category.
- Bank Reconciliation Statement (please refer to annex XIII or form 104 of the Disbursement handbook)



Please see a sample of the above mentioned report in annex IV

8.2 Periodic Progress Reports

Semi-annual progress reports should be submitted to IFAD no later than 45 days after the end of reporting period during the programme implementation period.

The importance of the periodic progress reports lies in the fact that they provide IFAD with sufficient information to determine whether the funds disbursed to the project are being used as intended, the project implementation is on track and the budgeted costs will not be exceeded. The financial information should be linked to the information on physical progress and procurement to give assurance that the financial and physical progress are consistent.

The Periodic Progress Reports include the following:

- **Project Statement of Cash Receipts and Payments by Category:** This report summarizes the sources of project financing, with the uses of funds in accordance with the disbursement categories foreseen in the Financing agreement with the Fund. This report also states the cumulative expenditures from the start of the project until the date of the report as well as the cash flow forecast for the following semi-annual period.



The standard format for the presentation of this report is provided in Annex V: Table 1.

- **Uses of Funds by Project category:** This report details the project expenditures by each expenditure category or sub category and by financier.



A sample of a Uses of Funds by Project category is provided in Annex V: Table 2

- **Uses of Funds by Project Activity:** This report details the project expenditures by each component or sub-component consistent with those foreseen in the Financing Agreement. The total planned, actual and cumulative expenditures in this report should correspond to those mentioned in the uses of funds section of the “Sources and Uses of Funds” report presented above.



A sample format for this report is provided in Annex V: Table 3

- **Cash flow forecast:** This report summarizes the cash inflow and outflow for the following semi-annual period and is explained in detail in section 9.3.



A sample of a Cash Flow Forecast is provided in Annex V: Table 4

- **Designated Account Reconciliation Statement**



Please refer to annex XIII (also form 104 of the Disbursement handbook) for a standard Designated Account Reconciliation Statement.

- **SOE-Withdrawal Application Statement:** This report summarizes the claimed and received WA from IFAD during the reporting period.



A sample of a SOE-WA statement is provided in Annex V: Table 5

- **Contract Expenditures:** This report details all the contracts signed and amounts paid during the quarter by category.



A sample format for this report is provided in Annex V: Table 6

- **Physical progress report:** This report summarizes the quantitative physical progress made in achieving overall objectives and links them to project expenditures by component and by category. This report should also contain a narrative part on the strategic direction for the next planning cycle as well as the main financial problems encountered.



A sample format for this report is provided in Annex V: Table 7

8.3 Cash Flow Forecast

Preparing periodic cash flow forecasts is essential to ensure the project has sufficient funds to meet its commitments (expenditures to contractors, service providers, suppliers of goods, salaries of the CPIU staff, operating and maintenance cost of the CPIU such as rent, electricity, internet etc.) as they fall due. It is the Finance Officers responsibility to prepare periodic cash flow forecasts by undertaking the following steps:

1. Determining the opening balance of the time period
2. Determine (as accurately as possible) all the cash inflow already secured from different sources during the time period on a monthly basis.
3. Determine (as accurately as possible) all the payments due during the time period on a monthly basis.
4. Based on the calculation (steps 1-3) determine the estimated cash need for time period in question.

When preparing the cash-flow analysis, key sources for information include the AWPB (up-to-date), the procurement plan (up-to-date), disbursement timetable of all signed contracts and historic expense reports for CPIU management costs as these can be assumed to stay relatively constant over the implementation period.

Based on the estimated cash flow needs, the Finance Manager in consultation with the Project Director will prepare and submit for approval the required withdrawal applications in a timely manner in order to ensure sufficient liquidity and avoid any delays to the project implementation.



Sample of a cash flow forecast is provided in annex V, Table 4.

8.4 Annual Financial Statements and Audit Reports

IFAD requires that the financial statements are prepared in accordance with IFRS/IPSAS or IPSAS cash. (National Standards are also acceptable as long as they meet the minimum requirements) and that the annual statements are provided to IFAD within four months after the end of the fiscal year. In accordance with the Project Design Report, the project will prepare its financial statements in accordance with IPSAS cash.

The project financial statements should include the following information:

- Project Information and performance,
- Statement of project management responsibilities,
- Statement of cash receipts and payments (by category and by financier),
- Statement of cash receipts and payments (by component),
- Statement of comparative budget and actual amount,
- Statement of Special Account movements,
- Statement of Special Account Reconciliations,
- SOE-Withdrawal Application Statement and Notes to the Financial Statements.

It is important to note that IFAD financing proceeds should be disclosed separately from the other financiers (donors, government, beneficiaries etc.). It is also important to note that where the project consists of more than one entity the lead-CPIU must provide consolidated financial statements.

G. 9.0 Fixed Asset Management

Fixed asset management is an important process that seeks to track fixed assets for the purposes of financial accounting and to ensure preventive maintenance, and theft deterrence. Adequate Fixed asset maintenance also increases the sustainability of the project.

There are three elements in fixed asset management that require the attention of the Finance Manager

- Purchase of equipment
- Setting up and maintaining an asset register including verification
- Setting up a plan for disposal and/or handover of the asset once the project is completed

9.1 Purchase of Equipment

All procurement and payments for project equipment will be processed in line with the guidance provided in the procurement section of the PIM. The accountant financial officer should assign a unique, sequential asset number to all furniture and equipment items purchased (excluding minor items such as stationary). This must be clearly labelled on each item. Each item of equipment must be recorded in the fixed asset register

9.2 Asset Register

The accountant must maintain a register of all (material) project equipment. This will be recorded on the asset management module of the accounting software. The asset register should record the following information for each individual piece of equipment: 1) Asset description, 2) Asset number, 3) Serial number of the item, 4) Officer responsible for asset.

9.3 Asset Verification Review

The Finance Manager must ensure that a verification count of all equipment recorded in the fixed asset register is performed at least once a year. This should include the following checks:

- Verify that all equipment is still held in the location recorded on the register; and
- Check that equipment is still in a reasonable state of repair.
- Discrepancies between the verification exercise and the fixed asset register should be investigated. Where assets are missing or seriously damaged, they should be removed from the asset register. The removal should be formally documented and approved by the financial officer and by the LPA.

The verification review must be performed by different staff from those who use the equipment, to ensure adequate segregation of duty.

9.4 Vehicle Maintenance and Fuel

The drivers are required to record all trips and fuel refills in a logbook and collect all the supporting documentation (invoices etc.). The vehicle logbook provides control over the use of the cars as well as fuel consumption. Fuel distribution is handled by the accountant. Fuel is purchased on an as-needed basis by giving coupons to the drivers who must use the selected fuel station. The CPIU is billed by the station twice a month. Unused coupons are kept in the office safe in the custody of the Accountant. For official missions, a special cash provision is given to mission leaders to allow them to purchase fuel (at reputable gas stations) during the trip.

The safety of cars is the responsibility of the recipient staff members and drivers assigned to the vehicles. Consequently, they must ensure that the cars are parked in a secure area when not in use or outside working hours. The drivers are required to monitor the maintenance of their assigned vehicles under the supervision of the CPIU. The drivers must notify the CPIU of maintenance needs so that the cars can be serviced on a timely basis. The cars must always be taken to the selected CPIU garage for repairs and maintenance

The accountant should on a monthly basis review the mileage and fuel usage as well as any undertaken service as reported in the log book of each car and compare these with the official invoices and travel authorizations etc. to make sure the numbers are accurate.

An insurance policy must be taken by the CPIU to ensure all cars and passengers against all risks, including damage, theft, fire, as well as injury and property damage to third parties. The insurance must also cover the same risks when the cars are used by the recipient staff members outside of normal working hours.

H. 10.0 Audit Arrangements

The project audit is an ex-post review of financial statements, records of transactions & financial systems; It examines the adequacy of accounting systems & procedures, capacity to maintain appropriate accounts & documentation of the project/grant expenditures. The objective of the project audit is to provide credibility and assurance of accountability.



In accordance with the IFAD general conditions and the IFAD guidelines for project audits, the PIU must have its financial statements audited by an external auditor acceptable to IFAD. The Audited financial statements need to be sent to IFAD no later than 6 months after the end of the fiscal year. The detailed instruction regarding project audit are outlined in the [IFAD Handbook for Financial Reporting and Auditing of IFAD Financed Projects](#) (IFAD Handbook).

Additionally, the IFAD funds transferred to the NCFM/Transitional commercial bank accounts to be part of the audit and that the auditors are granted full access to all documentation as may be required.

10.1 The Audit Cycle and Appointing the Auditor

The complete audit cycle can be divided into the three main roles carried out by the Finance Manager/CPIU, the Auditor and IFAD.

The CPIU and the financial officer will:

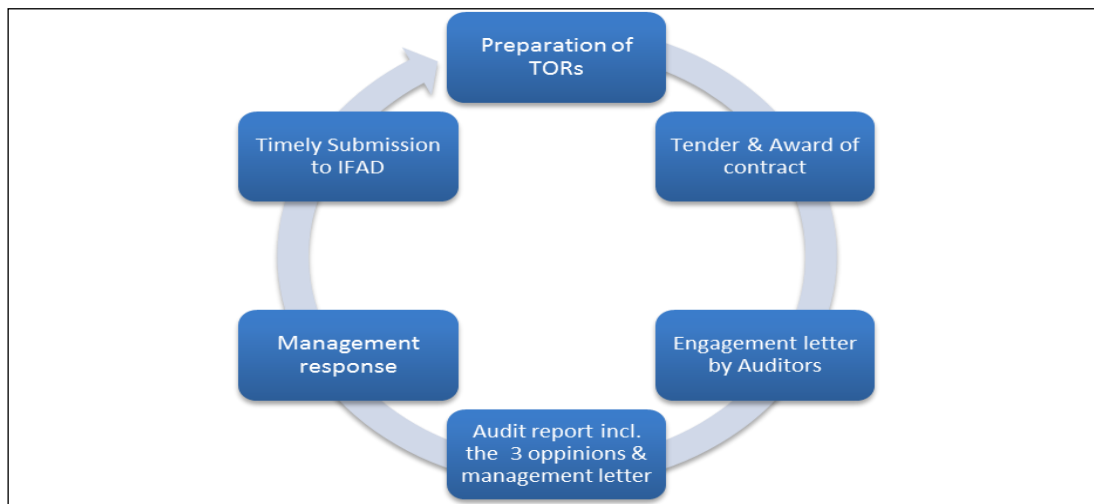
- Timely prepare TORs of the Audit and submit these to the Fund for no objection,
- manage the selection process of the auditor (if relevant)
- and appoints the auditor.
- Prepare the financial statements for reporting period
- Make available all the financial information necessary to the auditors.
- PMU should respond to the audit findings and recommendations.
- Submit the audit report to the fund no later than 6 months after the end of the project fiscal year.

The Auditor will:

- perform the audit work including the three audit opinions
- Indicate any ineligible expenditures
- Provide a management letter

The Fund will:

- Provide a non objection to the auditors TORs
- Monitor timely submission and review of audit reports
- Follow up on remedial action\apply sanction and /or remedies if relevant including suspension of disbursement and or cancellation of loan balance (Legal Notice is sent to the LPA after 3 months of delay. Suspension of disbursement to the project after 6 months delay.)



(Chart 18: Project Audit cycle)

When appointing the auditor the financial officer will need to ensure that the following steps are followed:

- a) Financial Manager/CPIU prepares TORs for the auditor and sends it to IFAD for review and no-objection.
- b) IFAD communicates “no objection” to borrower.
- c) Financial Manager /CPIU r initiates the procurement process using the agreed TORs.
- d) Financial Manager/CPIU informs IFAD of the name of proposed auditor and the procurement process followed for the selection.
- e) IFAD communicates “no objection” to borrower on the selection of proposed auditor upon performance of the necessary due diligence.
- f) Financial Manager/CPIU appoints the auditor.
- g) The auditor appointed normally issues a formal engagement letter

The B/R should attempt to finalize the procurement process at least thirty days before the start of the financial year. The auditor should be appointed before the start of the financial year to be audited.

10.2. TORs of the Auditors and the Engagement letter

When preparing auditors TORs the financial officer should address the point outlined below:

- a) Description of the employing project authority or entity;
- b) Term of the auditor's engagement, namely whether it is for a fiscal year or some
- c) other period;
- d) Description and the timing of the financial statements and other material to be provided by project management for the audit;
- e) Terms for delivery of the audit report;
- f) Specification that the audit be carried out in accordance with internationally accepted auditing standards;
- g) Provision of a management letter;
- h) Statement of access to project records, documents and personnel available to the auditor;
- i) Details regarding submission of a proposal and work plan by the auditor.

Furthermore, the contents of the TORS should include:

- a) A description in the TORs of the entity engaging the auditor and whether it is acting on behalf of or is a constituent part of a larger entity
- b) Legal and general descriptions of the project and the LPA, in sufficient detail to enable the auditor to understand their nature, objectives and activities.

The following additional information should also be considered:

- c) Organizational charts;
- d) Names and titles of senior managers;
- e) Names and qualifications of officers responsible for financial management, accounting and internal audit;
- f) name and address of any existing external auditor, if a change is made;
- g) Description of information technology facilities and computer systems in use;
- h) and
- i) Copies of the latest financial statements, financing agreement, minutes of financing negotiations, project design document, and annual work programme and budget, if it is available.

The auditors are required to provide a formal engagement letter confirming their acceptance of the appointment and outlining the methodology, scope and responsibilities under the audit. The borrower's representative will sign and return a copy of the letter to the auditor.



A sample of an engagement letter is provided in the IFAD Handbook..

10.3 The Audit Report

The Audit Report must include the following elements which should also be reflected in the auditor's TORs:

- An opinion on the Project's financial statements
- A separate opinion on the eligibility of expenditures included in the WA /Statement of Expenditure procedure
- A separate opinion if the use of the Special Account/Designated Account is in compliance with the financing agreement
- In addition to the audit report, the independent auditor will prepare a management letter. This will include comment and recommendations on the adequacy of the financial management system, and on the system of internal control. The management letter should also include a follow up section on the status of implementation of previous years recommendations

I. 11.0 IFAD's Financial Management Supervision

The project will be subject to extensive supervision from IFAD during the whole implementation period to ensure that the CPIU fiduciary requirements are completed on time and to minimise the project's fiduciary risk.

If financial arrangements of the CPIU are deemed acceptable, IFAD will rely on them to provide assurance that the financing proceeds are being used for the intended purposes. In the case that IFAD identifies weaknesses in the financial arrangements, it will require the CPIU/LPA to take the appropriate measures to mitigate those risks e.g. changing the design and operation of internal control processes or modifying the disbursement arrangements for an operation.

The IFAD supervision of the project includes the following measures:

- Monitor of timely submission of audit reports and review of these reports
- Verify compliance to audit recommendations and recommendations made by past supervision missions.
- Monitor the submission of timely periodic financial reports and review of these reports

- Monitor disbursements rate and the quality of the received Withdrawal Applications
- Annual or semi-annual financial management supervision missions.

11.1 Supervision missions by the Fund

Throughout project implementation, IFAD will conduct annual financial supervisory missions to develop financial management ratings and ensure compliance with the IFAD's requirements. During the supervisory missions, IFAD will assess and monitor the adequacy of the CPIU/LPA financial management arrangements such as accounting, budgeting, internal controls, flow of funds, financial reporting and the auditing practices. The key findings and recommendations of the mission will be captured in the Aid Memoire.

When preparing for and during an IFAD supervisions mission, the necessary supporting actions by the Finance Manager will include the following:

- Update and make available for the mission, the project financial information and especially the incurred expenditures by component, by category and by financier as of the last day of the preceding month.



Please refer to annex VII for the financial tables required for the aid memoire

- Update and make available reports on the status of counterpart funding (has the Borrower/Lead Project Agency made available financing proceeds to the Project as planned?)
- Provide a walk through of the existing accounting system including its main modules, budgeting, accounting, financial reports, fixed asset register as well as the security settings in use.
- Facilitate checking of the internal controls, by system "walk through" to ensure that approved procedures are consistently being followed.
- Make available Withdrawal Applications, Statement of Expenditures and all supporting documentation regarding expenditures claimed under the SOE thresholds to facilitate the verifying of adequacy, completeness and validity of claims.
- Make available evidence of qualifications and educational background of the financial staff including, organogram of the PIU, CVs, TORs of each position and PIU training plan.
- Update and make available a complete a fixed asset register and facilitate sample test check of physical existence of the asset.
- Make available written procedures regarding financial operations such as processing of transactions, financial administration manual, accounting manual, fixed asset maintenance and records management as well as the lead project agency's anticorruption policy and whistle blowing procedures.
- Prepare and make available the updated bank account reconciliation statement and bank account statements for all designated and project accounts.
- Arrange meeting with the auditors and any other selected party requested by the mission.
- Make available all necessary documentation and contracts regarding procurement not subject to prior review.
- Provide an update on the actions taken regarding past audit recommendations as well as action points outlined in the past aide memoires.

- Make available the most recent AWPBs, annual and semi-annual reports
- Participate in report writing if necessary.

J. 12.0 Project Completion and Closing

The project completion date is defined in the financing agreement and the project closure date is 6 months thereafter. The following is relevant to period before project completion up to project closure:

<div> <div> <u>STEP 1</u> Prior to the project completion date </div> <div> <u>STEP 2</u> Between project completion and closure </div> <div> Subsequent to project closure date </div> </div>		
<div> <div>Project completion date</div> <div>Project closure date</div> </div>		
STAGE 1	STAGE 2	STEP 3
Up to the project completion date	Between project completion and closure	Project closure date
<ul style="list-style-type: none"> ▪ Submit an advance recovery plan to IFAD, indicating how the advance will be recovered up to project closure (in line with financing agreement) (request template for plan from IFAD) ▪ Agree on the audit scope of work with NAC and submit to IFAD for no objection ▪ Incur eligible expenditure up to the project completion date 	<ul style="list-style-type: none"> ▪ Commencement of the final audit ▪ Auditor performs the final audit in line with scope of work approved by IFAD ▪ Incur winding up expenditure only (cost of audit, staff salaries, operating costs, project completion report) ▪ Submit final withdrawal application and recover advance via this process ▪ Develop an asset handover and disposal plan (include up to date fixed asset register, indicate condition of all assets and to which entity the assets will be transferred). 	<ul style="list-style-type: none"> ▪ Submit final audit report on or before the project closure date ▪ Submit project completion report on or before the Financial Closure Date (as required in the financing agreement) ▪ Confirm the final withdrawal application with IFAD ▪ Return outstanding advance if applicable (if due and not recovered via recovery process) ▪ Closure of the grant with IFAD

A notice is sent to the Borrower at least six months prior to the PCD to advise that all applications must be submitted before the closing date, and to remind the Borrower that expenditures incurred and commitments made after the PCD will not be honoured, except for authorised expenditures during the "Winding Up Period" (from PCD to Financing Closing Date). This means that goods are delivered, civil works are completed and services are rendered on or before such date.

After the financing closing date, IFAD informs the Borrower of the formal closure of the loan/grant account, provides a history of disbursement transactions and cancels the unused loan/grant balance. A re-amortisation plan should be sent where relevant.

Asset handover plan

The plan should develop report outlining the following for the purposes of handing over project assets to the identified beneficiaries:

- The value of all the assets bought under the project
- Summary of the current condition of the assets,
- To which entity, will the assets be transferred to and on which date and for what purpose.
- List the assets that will be disposed and the reason for being disposed.



Please refer to annex VIII for a sample recovery plan.

K.

13.0 Useful links

Document	Link
<i>IFAD financial management e-learning</i>	https://www.ifad.org/elearning_cfs/
<i>IFAD anticorruption policy</i>	https://www.ifad.org/en/document-detail/asset/40189695
<i>How to report any alleged wrongdoing to the Office of Audit and Oversight</i>	https://www.ifad.org/en/document-detail/asset/39629358
<i>IFAD Handbook for Financial Reporting and Auditing of IFAD Funded projects</i>	https://www.ifad.org/documents/38711624/39421009/IFAD+Handbook+for+Financial+Reporting+and+Auditing+of+IFAD-Financed+Projects/133b165d-15c7-4f79-8217-aef95b79dd67
<i>IFAD Loan Disbursement Handbook</i>	https://www.ifad.org/web/guest/document-detail/asset/39635782
<i>IFAD Financial Administration Manual</i>	https://www.ifad.org/web/guest/document-detail/asset/39637251
<i>IPSAS Cash Standard</i>	https://www.ifac.org/publications-resources/revised-cash-basis-ipsas
<i>ICP page</i>	https://icp.ifad.org/
<i>ICP support</i>	icpsupport@ifad.org

Annex I: Sample Job descriptions related to Financial Management and Administration

A. Finance manager

Under the direct supervision of the Project Director, and within the framework of projects appraisal reports and loan/grant agreements, responsible for the financial and administrative management of the PIU, including Accounting, Budgeting, financial reporting, internal controls, auditing arrangement, flow of funds and the efficient management of projects resources. Specific duties:

- Prepare together with the Project director the Annual work plan and budget and the budget and financing plan in particular.
- Master IFAD key documents such as, the disbursement handbook, procurement guidelines and handbook, IFAD guidelines for project audits, the Financing Agreement (FA) and the Letter to the Borrower (LTB).
- Develop and maintain an efficient accounting system and reliable internal control procedures and guidelines for financial reporting and recordkeeping.
- Responsible for the preparation, review and monitoring of projects budgets including financing plan, procurement plan (together with the Procurement Officer), and staff development plan (together with the training focal point)
- Prepare/verify all withdrawal applications for submission to IFAD, and ensure the availability of funds for all planned activities. Manage the projects bank accounts, approve and co-signs all payments.
- Prepare and provide financial reports including the sources and uses of funds statement, incurred expenditures by component, expenditure category and financier, designated account reconciliation statement, fixed asset list and cash flow forecast etc. for submission to the Project steering committee, MADRM and IFAD on a semi and annual basis, and maintain all records in a form appropriate for audit.
- Lead the process of contracting an external audit firm to conduct an independent audit of the annual project accounts, ensuring that annual audits are carried out within the specified timeframe.
- Develop and maintain a system of financial control over all expenditure incurred by implementing partners.
- Supervise and coordinate the work of staff placed under his/her direct authority.
- Review and regularly update the Financial Manual of the CPIU.
- Develop together with the Financial accountant the Accounting manual of the CPIU.
- Responsible for the organization and supervision of the CPIU office, assets, logistics, and all administrative matters.
- Undertake any other activities assigned by the Project Director.

B. Accountant

Under the direct supervision of the Finance Manager; specific duties include:

- Assist the Finance Manager in the implementation of a sound financial management system.
- Prepare financial reports, including monthly funds reconciliation, and monthly, quarterly, semi-annual and annual expenditure statements;
- Prepare transaction vouchers, and input all transactions into the CPIU accounting system before submission to the Finance Manager for approval;
- Process all payments, ensuring that CPIU procedures are strictly adhered to;
- Process monthly payroll, payment of salaries to staff and project contributions;
- Assist the Finance Manager in the preparation of withdrawal applications;
- Prepare cash flow forecasts as required;
- Assist in the preparation and monitoring of annual operational budgets
- Functional supervision and training of Accounts & Administrative Assistants in CPIU.
- Maintenance of a well organized and up-to-date filing system for accounting and financial records as well as an fixed asset tagging system;
- Perform physical inventory of project assets each year;
- Assist the Finance Manager in the preparation of the accounting manual of the CPIU
- Provide assistance to the external auditors as required;
- Undertake any other activities assigned by CPIU management.

Table 1-4: Sample Budget and Financing Plan

	Total		Financing Source				
Component	Local	USD	IFAD Loan	IFAD Grant	Government (Budget)	Government (Tax)	Beneficiaries
Total							

	Total		Financing Source				
Category	Local	USD	IFAD Loan	IFAD Grant	Government (Budget)	Government (Tax)	Beneficiaries

Total		

Summary table 3: Planned Project Expenditures by Component and Expenditure Category

Component								
Category								Total
Total								

Table 4: Detailed Tables per Component, Expenditure Category and Financier

		Items					Timeline					Financing Source				
Category	Description of activity by Component/subcomponent	Unit	Unit cost	Quantity	Total	Physical Outreach	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total	IFAD Loan	IFAD Grant	Gov. (Budget)	Gov. (Tax)	Benef.

Table 5: Sample Procurement Plan

Table 5: Procurement plan																						
									Preparation of Tendering Process		Bidding Process					Evaluation Process				Contract		
Component	Subcomponent/Activity	Item	Unit	Quantity	Unit cost estimate (USD)	Total cost estimate (USD)	Financing Source	Procurement Method	Bid Document	IFAD no objection	Publication (date)	EOI	Response Time	Closing Date	Opening Session	Bid/quote evaluation (date)	Prior review required	Final report	No Obj	Notification of Award	Signature	End Date
WORKS																						
item1																						
item2																						
GOODS																						
item3																						
SERVICES																						
item4																						

Table 6: Sample Staff Development Plan

Table 6: Staff Development Plan								
Category	Component	Name and description of person(s)	Description of training activity	Proposed trainer/training institution	Location of the training activity	Estimated cost of the training activity (USD)	Additional costs (e.g. travel, accommodation, DSA)	Financing source
IV. Training and Workshops	4. Programme Management	Financial controller of the PIU	Financial Management Course	ITC/ILO	Turin Italy	4 000	3 500	IFAD Loan
IV. Training and Workshops	4. Programme Management	Administrative assistant of the PIU	advanced course in English	Professional Language Institute	Local	2000	na	IFAD Loan

Annex III: Sample chart of account

Chart of Accounts and Methodological Norms on accounting and financial reporting in the budgetary system approved by the Order of the Minister of Finance No. 216 of 28 December 2015. The Chart of Accounts is integrated with the economic classification of the budget.

Annex IV: Sample Monthly Budget Execution Report

6. Monthly Budget Execution Report												
			ACTUAL			Planned/Budgeted			Variance			Commitments Entered (not paid) To - Date
			Current Quarter	Year-To Date	Cumulative To-Date	Current Quarter	Year-To Date	Cumulative To-Date	Current Quarter	Year-To Date	Cumulative To-Date	
Cash Payments per Component												
1-	Component 1											
		Sub Component 1.1										
		Sub Component 1.2										
		Sub Component 1.3										
2-	Component 2											
3-	Component 3											
4-	Component 4											
Total												
Cash Payments per Expenditure category												
	Category 1:Works											
	Cactegory 2: Goods											
	Category 3: Consultancy Services											
	Category 4: Credit line											
	Category 5: PIU cost											
Total												

Annex V: Sample Periodic Financial Progress Report

Table 1: Sample Statement of Cash Receipts and Payments by Category

1. Statement of Cash Receipts and Payments by Category (all financiers)		
	Reporting Period (Semi-annually)	Cumulative
	US\$	US\$
Receipts		
IFAD Loan Designated Account	R	R [^]
IFAD Loan Direct payments	S	S [^]
IFAD GrantX Designated Account	T	T [^]
IFAD Grant YDesignated Account	U	U [^]
Government Funds	V	V [^]
Beneficiary Funds	Y	Y [^]
Total Receipts	P=R+S+T+U+Z+V+Y	P[^]=R[^]+S[^]+T[^]+U[^]+Z[^]+V[^]+Y[^]
Category I.	a	a [^]
Category II.	b	b [^]
Category III.	c	c [^]
Category IV.	d	d [^]
Category V.	f	f [^]
Category VI	g	g [^]
Total Payments	O=a+b+c+d+f+g	O[^]=a[^]+b[^]+c[^]+d[^]+f[^]+g[^]
Foreign Exchange difference	X	X[^]
Receipts less Expenditures	=P-O+X	=P[^]-O[^]+X[^]
Opening Cash Balance	L	L[^]
Comprising		
IFAD Loan Designated Account		
IFAD Loan Direct payments		
IFAD GrantX Designated Account		
IFAD Grant YDesignated Account		
Project Account		
Counterpart Accounts (for government and beneficiary funds)		
Closing Cash Balances	=L+P-O+X	=L[^]+P[^]-O[^]

Table 2: Financial performance per expenditure category and financier

2. Summary of Expenditures by Loan Categories and By Financiers (USD)													
Loan Category	Description of category	Financing Source (USD)											
		IFAD Loan		IFAD Grants		Government (budget)		Government (Tax)		Beneficiaries		Total	
		Reporting period	Cumulative	Reporting period	Cumulative	Reporting period	Cumulative	Reporting period	Cumulative	Reporting period	Cumulative	Reporting period	Cumulative
I	Category I.												
II	Category II.												
III	Category III.												
IV	Category IV.												
V	Category V.												
VI	Category VI												
Total													

Table 3: Financial performance per component and per financier

Republic of Moldova
Talent Retention and Rural Transformation Project (TRTP)
Annex 2: Financial Management Arrangements to the PIM

3. Financial performance by financier by component (USD '000)																																
Component	IFAD loan						IFAD grant						Government (Budget & tax)						Beneficiaries						Total						Total Allocation per design report	Revised allocation
	Reporting period			Cumulative			Reporting period			Cumulative			Reporting period			Cumulative			Reporting period			Cumulative			Reporting period			Cumulative				
	Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual	Variance		
Component 1																																
Sub-component 1																																
Sub-component 2																																
Sub-component 3																																
Component 2																																
Component 3																																
Component 4																																
Total																																

M.

Table 4: Project Cash Flow Forecast

		5. Semi-annual cash flow forecast					
		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Cash Inflow							
IFAD Loan							
IFAD Grant							
Government							
Beneficiary							
Other Sources							
Total Cash Inflow		0	0	0	0	0	0
Cash Outflow							
Category 1							
Category 2:							
Category 3:							
Category 4							
Category 5:							
Total Cash Outflow							
Net Cash flow							
Opening Balance							
Funds Available							

Table 5: SOE-Withdrawal Application Statement

5. Statement Of Expenditures Withdrawal Application Statement						
By category of Expenditures in Local Currency						
WA submitted to IFAD						
Category	Category Description	WA n..	WA n..	WA n..	WA n..	Total
1	AAAA	xx	xx	xx	xx	xx
2	BBBB	xx	xx	xx	xx	xx
3	CCCC	xx	xx	xx	xx	xx
<i>Total</i>		xx	xx	xx	xx	
In USD equiv/		xx	xx	xx	xx	
Rejected from IFAD		xx	xx	xx	xx	
<i>Net Reimbursed</i>		xx	xx	xx	xx	
WA pending submission to IFAD						
Category	Category Description	WA n..	WA n..	WA n..	WA n..	
1	AAAA	xx	xx	xx	xx	
2	BBBB	xx	xx	xx	xx	
3	CCCC	xx	xx	xx	xx	
<i>Total</i>		xx	xx	xx	xx	

Withdrawal applications are submitted for reimbursement to IFAD using the historical exchange rate of the transfers to the Operating Account.

Expenditures partially or totally rejected by IFAD (if any) should be detailed here.

This statement should be reconciled with the Statement of Receipts and Payments

Table 6: Physical Progress Report

Table 7: Physical Progress Report										
Description of activities		Progress and Cost					Plan to completion			
Category		Physical Progress to date		Cost to date			Revised		Original	
		Actual	Planned	Actual	Planned	Actual as % of Plan	Total cost	Completion date	Total cost	Completion date
1. Works										
3. Consultancy services										
4. Training and Technical assistance										
5. Credit line										

N. Annex VI : Sample Terms of Reference for the Audit of Project XXXX

The following are the terms of reference ('ToR') on which **the LPA** agrees to engage **audit firm** 'the Auditor' to perform an Audit and to report in connection with the Agreement with the International Fund for Agricultural Development (IFAD) concerning **the project XXX** where in these ToRs the 'Contracting Authority' is mentioned this refers to **IFAD** which has signed the Agreement with the **Recipient/Borrower** and finances the services. The Contracting Authority is not a party to this engagement.

1.1 Responsibilities of the Parties to the Engagement

Recipient/Borrower refers to the entity that provides the services and that has signed the Agreement with the Contracting Authority.

- The PIU/LPA is responsible for providing a Financial Statements for the services financed by the Loan/ Grant and for ensuring that these Financial Statements can be properly reconciled to the PIU/LPA records and accounts in respect of these services.
- The PIU/LPA accepts that the ability of the Auditor to perform the procedures required by this engagement effectively depends upon the PIU/LPA providing full and free access to its staff and records and accounts.
- The PIU/LPA shall provide the auditors with all the necessary documentation to perform the assignment properly; in particular the following information shall be provided to the auditors before the beginning of the assignment:
 - a) Project Agreement;
 - b) Annual Progress Report;
 - c) Project Implementation Manual;
 - d) Financial Management Manual;
 - e) Organizational charts along with names and titles of senior managers;
 - f) Names and qualifications of officers responsible for financial management, accounting and internal audit.
 - g) Description of information technology facilities and computer systems in use and
 - h) Copies of the minutes of negotiations, the project design document, the annual work programme and budget and the letter to the borrower if available.

'The Auditor' refers to the Auditor who is responsible for performing the agreed-upon procedures as specified in these ToR, and for submitting a report of factual findings to the PIU/LPA.

The Auditor shall provide:

- **A separate opinion on Project Financial Statements (PFS)**

Minimum content of the PFS:

- a) Yearly and cumulative statements of sources and application of funds, which should disclose separately IFAD's funds, other donors funds and beneficiaries funds;
- b) Statement of sources and application of funds.
- c) Yearly and cumulative SOEs by withdrawal application and category of expenditures; reconciliation of the SA.
- d) Reconciliation between the amounts shown as received by the project and those shown as being disbursed by IFAD should be attached as an annex to the PFS. As part of that reconciliation the auditor will indicate the procedure used for disbursement (SA funds, letters of credit, special commitments, reimbursement or direct payment) and indicate whether the expenditure is fully documented or uses the Summary of Expenditures format.
- e) Notes accompanying the Financial statements
- f) Cumulative status of funds by category
- g) A statement of comparison between the actual expenditures and the budget estimates
- h) Full disclosure of cash balances and

- i) Other statements or disclosures relevant to the project .e.g. financial monitoring reports, credit lines etc.
 - **A separate opinion on the use of the Designated Accounts/Special Accounts (DA/SA);**
The auditor is also required to audit the activities of the DA/SA associated with the project including the initial advance, replenishments, interest that may accrue on the outstanding balances, and the year-end balances. The auditor must form an opinion as to the degree of compliance with IFAD procedures and the balance of the DA/SA at year end. The audit should examine: (i) the eligibility of withdrawals from the DA/SA during the period under review; (ii) the operation of the DA/SA in accordance with the relevant financing agreement; (iii) the adequacy of internal controls within the project appropriate for this disbursement mechanism; and (iv) the use of correct exchange rate(s) to convert local currency expenditures to United States dollars.
 - **A separate opinion on Withdrawal Application Statement / Statement of expenditures / Summary of Expenditures (SOEs);** the audit will include a review of SOEs used as the basis for submitting withdrawal applications. The auditor will carry out tests and reviews as necessary and relevant to the circumstances. SOE expenditures will be carefully compared for eligibility with relevant financial agreements, and the disbursement letter, and with reference to the project appraisal report for guidance when necessary. Where ineligible expenditures are identified as having been included in withdrawal applications and reimbursed, auditors will note these separately. A schedule listing individual SOEs withdrawal applications by reference number and amount should be attached to the PFS. The total withdrawals under the SOE procedure should be part of the overall reconciliation of IFAD disbursements described above. The auditor's opinion should deal with the adequacy of the procedures used by the project for preparing SOEs and should include a statement that amounts withdrawn from the project account on the basis of such SOEs were used for the purposes intended under the agreement.
 - **A separate management letter addressing the adequacy of the accounting and internal control systems of the Programme, including compliance with IFAD's Procurement Guidelines and such other matters as IFAD may notify the PIU/LPA to include in the audit.**
- The auditor is requested to:
- a) Comment on economy, efficiency and effectiveness in the use of project resources;
 - b) Comment on achievement of planned project results;
 - c) Comment on legal and financial obligations and commitments of the project and the extent of compliance or non-compliance thereof;
 - d) Comment on systems and procedures such as improvements in accounting, information technology or computer systems, and operations that may be under development, on which the auditor's comments are necessary to ensure effective controls;
 - e) Comment on other activities on which an auditor may consider it appropriate to report
- **Auditors shall certify :**
 - a) Whether the PFS are drawn up in conformity with international accepted accounting standards (IFRS or IPSAS)
 - b) Whether the PFS are accurate and are drawn up from the books of accounts maintained by the Project.
 - c) Whether the provisions of the Project Agreement are adhered to.
 - d) Whether Procurement has been undertaken by the Project in accordance with **Article VI** of the Project Agreement,, IFAD's Procurement Guidelines
 - e) Carry out a physical verification of any significant assets purchased and confirm their existence and use for project purposes.
 - f) Whether the project has an effective system of financial supervision or internal audit at all levels.

- g) Whether the expenditure claimed through SOEs are properly approved, classified and supported by adequate documentation.
- h) The Auditor is a member of the International Federation of Accountants (IFAC).

1.2 Subject of the Engagement

The subject of this engagement is the financial statements of the years **20XX, 20XY, and 20XV** for the **IFAD Loan XXX and Grant XXX..** The information, both financial and non-financial, which is subject to verification by the Auditor, is all information which makes it possible to verify that the expenditures claimed by the **PIU/LPA** in Financial statements have occurred, and are accurate and eligible.

1.3 Reason for the Engagement

The **PIU/LPA** Service Provider is required to submit to the Contracting Authority an Audit report produced by an external auditor.

1.4 Engagement Type and Objective

This constitutes an engagement to perform specific agreed-upon procedures following the IFAD Guidelines on Project Audits provided to the Auditors by the **PIU/LPA** in Annex 1 of these TOR. The objective of this audit is for the Auditor to verify that the expenditures claimed by the **PIU/LPA** in the financial statements for the services covered by the Agreement have occurred ('reality'), are accurate ('exact') and eligible and to submit to the **PIU/LPA** a report of factual findings with regard to the agreed-upon procedures performed. Eligibility means that expenditure have been incurred in accordance with the terms and conditions of the Agreement.

1.5 Scope of Work

1.5.1 The Auditor shall undertake this engagement in accordance with these Terms of Reference and:

- in accordance with the International Standard on Audit (ISA) to perform Agreed-upon Procedures regarding Financial Information as promulgated by the IFAC;
- In compliance with the Code of Ethics for Professional Accountants issued by the IFAC. Although ISRS 4400 provides that independence is not a requirement for agreed-upon procedures engagements, the Contracting Authority requires that the auditor also complies with the independence requirements of the Code of Ethics for Professional Accountants.
- In accordance with International Standards on Auditing and in line with IFAD's Guidelines for Project Audits.

1.5.2 The Terms and Conditions of the Agreement

The Auditor verifies that the funds provided by the Agreement were spent in accordance with the terms and conditions of the Agreement.

1.5.3 Planning, procedures, documentation and evidence

The Auditor should plan the work so that effective audit can be performed. For this purpose he performs the procedures specified the IFAD Handbook and he uses the evidence obtained from these procedures as the basis for the report of factual findings. The Auditor should document matters which are important in providing evidence to support the report of factual findings, and evidence that the work was carried out in accordance with ISA and these ToR.

1.6 Reporting

The report on this audit should describe the purpose and the agreed-upon procedures of the engagement in sufficient detail in order to enable the **PIU/LPA** and the Contracting Authority to understand the nature and extent of the procedures performed by the Auditor. Use of the financial and audit reporting is compulsory.

1.6.1 Periods covered

The reports on this audit should cover the following:

- a) **IFAD Loan XXX and Grant XXX** for the years 20XX
- b) **IFAD Loan XXX and Grant XXX** for the years 20XY
- c) **IFAD Loan XXX and Grant XXX** for the years 20XV

Reports covering items **a** must be delivered no later than 120 calendar days as of the date of signing the agreement.

Reports covering items **b and c** must be delivered within months after the end of the respective fiscal year .

Annex VII: Required Aide Memoire tables for IFAD Supervision missions

Table 1: Cumulative expenditures by component and Financier -as at DD/MM/YYYY (USD '000)

	IFAD Loan	IFAD Grant	Benef.	Government	Total
Total					

Table 2: Budgeted Expenditures and Performance against previous year's AWPB (USD '000)

	IFAD Loan	IFAD Grant	Benef.	Government	Total	Financial Performance (%)
Total						

Table 3A: Financial performance by financier - as at DD/MM/YYYY

Financier	Approval (USD '000)	Current (USD '000)	Disbursements (USD '000)	Per cent disbursed

Total

Table 3 B. Financial performance by financier by component - as at DD/MM/YYYY (USD)

	IFAD Loan			IFAD Grant			Government			Beneficiaries			Total		
	App r.	Actu al	%	App r.	Actual	%	App r.	Actu al	%	App r.	Actu al	%	App r.	Actu al	%
TOTAL															

TABLE 3 C: Expenditures by category - as at DD/MM/YYYY (USD)

Category description	Original	Revised	Expenditures	W/A pending	Balance	Per cent Spent
	Allocation	Allocation				
Total						

O.

P. Annex VIII: Sample recovery plan

Recovery Plan Designated Account								
IFAD Loan No.:				IFAD Loan Amount (SDR)		20 000 000.00		
Project Completion Date:		31-Dec-12		Loan Closing Date:		30-Jun-13		
Particulars Reporting Period	WA No.	Date	US \$	EUR	SDR	Unjustified balance USD		SDR
Authorized Allocation	1	18/01/2006	\$ 250 000.00	€ -	172 648.51	0.00		(77 351.49)
				€ -	172 648.51			
				0.00	#VALUE!			
			Exchange Rate:					
Justification:								
Ref. No.	WA No.	Date	Estimated WA value (SP)	Estimated WA value (USD)	Proposed Recovery %	Recovery Amount (USD)	Commulative Recovery Amount (USD)	Commulative Unjustified balance (USD)
1	40	21-Feb-12		111 832.56	45%	50 324.65	50 324.65	(50 324.65)
2	41	3-Mar-12		72 685.11	35%	25 439.79	75 764.44	(75 764.44)
3	42	5-May-12		74 685.11	35%	26 139.79	101 904.23	(101 904.23)
4	43	7-Jul-12		70 885.11	42%	29 771.75	131 675.98	(131 675.98)
5	44	5-Sep-12		64 885.11	40%	25 954.04	157 630.02	(157 630.02)
6	45	31-Dec-12		82 627.66	80%	66 102.13	223 732.15	(223 732.15)
7	46	10-Jun-13		26 065.11	100%	26 267.85	250 000.00	(250 000.00)
8								
				TOTAL		503 665.77 USD	250 000.00 USD	
In accordance with IFAD procedures, any amount unjustified at the time of loan closing date will be promptly refunded to IFAD.								
Prepared by:								
						15-Oct-11		
						Date		
Confirmed by:								
						Date		

Annex IX: Application for Withdrawal

FORM 100 - APPLICATION FOR WITHDRAWAL

1 **D Loan/Grant/Financing No.:** 2000000418

Application No.: 7

To: International Fund for Agricultural Development (IFAD)
Via Paolo di Dono, 44
00142 Rome, Italy

3 **Please indicate the disbursement**

4 **Please Justify:** US\$ 1 227 222,58
Currency Name Amount to be Paid in Figures

4 **Please Pay:** US\$ 1 227 222,58
Currency Name Amount to be Paid in Figures

We hereby apply for withdrawal from the Loan/Grant Account opened under the IFAD Financing Agreement and hereby certify as follows:

- A. The undersigned has not previously withdrawn from the Loan/Grant Account to meet these expenditures and has not and does not intend to obtain funds for this purpose out of the proceeds of any other loan/grant/financing.

The goods and services covered by this application have been or are being purchased and/or procured in

- B. accordance with the terms of the General Conditions for Agricultural Development Financing approved on 29 April 2009.

- C. This Application for Withdrawal covers a reporting period:

01-May-16 31-Jan-17
From (dd/mm/yy) To (dd/mm/yy)

The undersigned hereby certify that the expenditures for which replenishment is claimed in Form 102 A and 102 B are correct, for the Project as provided in the IFAD Financing Agreement. We certify that the expenditures incurred are within the statement of expenditure (SOE) thresholds and represent resources used in compliance with the principles of legality, regularity and sound financial management. We certify that the audit requirement

- D. outlined in article VIII and section 9.01 of the General Conditions will be complied with, and that the requirements for maintaining records and documentation for expenditures disbursed using the Statement of Expenditure (Form 102/A) modality and outlined in section 4.04(c) and (d) of the General Conditions, will be complied with. This includes, inter alia, that an annual audit will be carried out and that the documentation (including purchase orders, invoices, evidence of payment and delivery and any other relevant documentation

Details of Expenditure

5 **Name and Address of Contractor or Supplier**
(If different from Payee)
n/a

6 **Procurement Details**

a) Contract or Purchase Order No. and Date:
n/a

b) Description of Goods, Works or Services:
n/a

c) Currency and Total Amount of Contract:
n/a

d) Invoice Nos. and Net Amount of
Invoices Covered by this
n/a

7 **Withdrawal Details**

a) Category or Subcategory No.:
n/a

b) Percentage of Expenditures to be Financed by 11
xxx

Iurie Usurelu Vice Minister MAFI

Name(s) and Title(s) of Authorized Representative(s)

Victor Rosca, CPIU Director

Name(s) and Title(s) of Authorized Representative(s)

vetlana Brumarel, CPIU Accountant

Name(s) and Title(s) of Authorized Representative(s)

Payment Instruction

8 **Payee's Bank**

Name:

National Bank of Moldova

Address:

Republic of Moldova, Chisinau, Grigore Vieru 1 Blvd.

Account/IBAN No.:

MD37NBPAAB595410B00911AA

SWIFT Code - **NBMDM2X**

9 **Payee's Name and Address:**

MF-TT Chisinau State Treasure

Unitatea Consolidata pentru Implementarea Programelor IFAD

c/o Ministry of Agriculture and Food Industry,

Republic of Moldova, Chisinau, 162 Stefan cel Mare blvd.

10 **Correspondent Bank:**

(not required when using the Direct Payment procedure)

FEDERAL RESERVE BANK OF NEW YORK

New York, USA

Bank Code: **021087125**

SWIFT Code: **FRNYUS33**

Special Payment Instructions and References:

n/a

Signature(s) of Authorized Representative(s)

Signature(s) of Authorized Representative(s)

Signature(s) of Authorized Representative(s)

Annex X: Checklist for Withdrawal Application

IFAD Financing No. ----

WA No. ---

Reporting period [from --- to ---]

FORM 100 - APPLICATION FOR WITHDRAWAL	Yes or No
1. Sequential numbering of withdrawal application	
2. Withdrawal application amount tallies with sequentially numbered summary sheets	
3. Categories/subcategories charged according to schedule 2 of financing agreement	
4. Percentage of financing applicable for each category or subcategory	
5. Availability of funds in categories and the overall financing amount	
6. Currency of payment	
7. Completeness and accuracy of banking instructions	
8. Complete name and address of correspondent bank	
9. WA is signed by Authorized Representative	
STATEMENT OF EXPENDITURE	
1. Eligibility of expenditures claimed	
(a) Within SOE financial ceiling	
(b) Expenditures under specific category [-----] eligibility	
2. Form 102 signed by designated Project Accountant, Project Director, Authorized Representative	
3. Form 102 supported by signed Form 101 (for items reported in 2, but over the financial ceiling)	
DESIGNATED ACCOUNT – REPLENISHMENT REQUESTS	
1. Amount within ceiling figure agreed as a reasonable limit [-- US\$ or --]; or per AWP/B period	
2. Amount at least equal to 20 per cent of the agreed limit; or per AWP/B projected requirements	
3. Amount agreed sufficient to cover a specific reporting period (revolving fund option)	
4. Exchange rate used	
5. Completeness of designated account banking and account details	
6. Enclosed designated account reconciliation and bank statements	
SUPPORTING DOCUMENTATION (attached when/if required)	
1. Copy of contract	
2. Copy of invoice, certified by Project Director	
3. Copy of bank guarantee and performance guarantee (for advance payment)	
4. Copy of delivery receipt	
5. Copy of evidence of payment	
6. Completed Form 101	
7. Completed Form 102 (A or B)	
PROCUREMENT	
1. Copy of 'no objection(s)' provided by IFAD (attached)	
2. Copy of Contract Payment Monitoring Form(s) (attached)	
COMPLIANCE WITH CONDITION(S) FOR DISBURSEMENT	
1. In accordance with terms in section E of the Financing Agreement	
2. In accordance with terms in the Letter to the Borrower/Recipient	
EXPENDITURE INCURRED/COMMITTED BEFORE PROJECT COMPLETION DATE	
1. Expenditure verified as eligible:	
(a) contract signed before project completion date	
(b) goods delivered before project completion date	
(c) services completed and/or rendered before project completion date	

Remarks:

Prepared by: Project Accountant/ Finance Manager
Dated: _____

Certified by: Project Director
Dated: _____

Annex XI: Designated account reconciliation statement (Imprest account)

Republic of Moldova
Talent Retention and Rural Transformation Project (TRTP)
Annex 2: Financial Management Arrangements to the PIM

FORM 104/A - DESIGNATED ACCOUNT RECONCILIATION STATEMENT (IMPREST ACCOUNT)					
(IN THE DESIGNATED ACCOUNT DENOMINATION CURRENCY – IMPREST ACCOUNT OPTION)					
				WA No.:	
				7	
Project Title:	IRECRP		Reporting Period:	01-May-16	to 31-Jan-17
IFAD Financing No.:	2000000418				
DESIGNATED ACCOUNT:	(Bank Account No. 3261084036)				
BANK NAME:	National Bank of Moldova				
1	TOTAL ADVANCED BY IFAD			US\$	1 300 000,00
2	LESS TOTAL AMOUNT RECOVERED BY IFAD			US\$	
3	EQUALS PRESENT OUSTANDING AMOUNT ADVANCED TO THE DESIGNATED ACCOUNT (Line 1 less Line 2)			US\$	1 300 000,00
4	BALANCE OF DESIGNATED ACCOUNT PER ATTACHED BANK STATEMENT AS OF [DATE: [day/month/year]			US\$	72 377,12
5	PLUS BALANCE OF THE PROJECT ACCOUNT(S) (LISTED SEPARATELY)			US\$	400,30
	PLUS BALANCE OF SUB-ACCOUNTS (LISTED SEPARATELY)			US\$	0,00
	PLUS BALANCE OF CASH IN HAND			US\$	0,00
subtotal of 5					
TOTAL OF BANK BALANCES [DESIGNATED A/C, PA, SUB-ACCOUNTS & CASH IN HAND BALANCE] (Line 4 + Line 5)				US\$	72 777,42
6	PLUS TOTAL AMOUNT CLAIMED IN THIS WA NO. 7			US\$	1 227 222,58
7	PLUS TOTAL AMOUNT WITHDRAWN FROM THE DESIGNATED /PA/GRANT ACCOUNT AND NOT YET CLAIMED FOR REPLENISHMENT) or WAs pending submission			US\$	
REASON:	Eligible amount of expenditures for which a WA has not yet been prepared				
8	PLUS AMOUNTS CLAIMED IN PREVIOUS APPLICATIONS BUT NOT YET CREDITED AT THE DATE OF BANK STATEMENT AND/OR CLAIMED AFTER DATE OF BANK				
	APPLICATION NO.	DATE	US\$	AMOUNT	
			US\$		
			US\$		
			US\$		
			US\$		
subtotal of 8				US\$	
9	MINUS INTEREST EARNED (to be completed. If zero, please enter '0')			US\$	
10	TOTAL ADVANCE ACCOUNTED FOR (Line 5 * through Line 9)			US\$	1 300 000,00
11	EXPLANATION OF ANY DIFFERENCE BETWEEN THE TOTALS APPEARING ON LINES 3 AND 10			US\$	0,00
	e.g. Non-eligible amount to be refunded to the Designated Account			US\$	
	e.g. Calculation errors/errors in application of percentage financing			US\$	
	e.g. Counterpart financial resources to be reimbursed				
	e.g. Received exchange rate differences			US\$	0,00
12	DATE:	31-Jan-17	SIGNATURE:		
			Name in Full		
			Title in Full		

Republic of Moldova
Talent Retention and Rural Transformation Project (TRTP)
Annex 2: Financial Management Arrangements to the PIM

Annex XII: Statement of expenditures

FORM 102/A - STATEMENT OF EXPENDITURE: Civil Works, Goods, Consultancies, Salaries and Operating Expenses

(For replenishment of the Designated Account, justification of advance or reimbursement of prefinanced expenditures)

For the expenditures listed below supporting documentation is not required. However, for all expenditure items part of a contract with more than one disbursement, duly filled contract monitoring form (C-11) must be included in the Withdrawal Application.

Description of Category: Salaries and Allowances Date: 31-Jan-17

Reporting Period: 01-May-16 to 31-Jan-17 IFAD Loan/Grant/Financing No.: 200000418
From (DD/MM/YY) to (DD/MM/YY)

Category No.: VI Application No.: 7

15. SOE Threshold for the Expenditure Category: 50 000,00 USD Summary Sheet No.: 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Item No.	Full Description of the Payment	Name of the Payee/ Contractor, Supplier, Service Provider	Reference to the Relevant AWPB and Budget Line/Item	Contract and/or Invoice Number	Accounting Software Payment Voucher Number	Contract Value and Currency	Expenditure (Invoice Amount in Currency of the Payment)	Amount Reimbursable under IFAD Financing (Percentage of Total of Column 8)	Date of Payment	Rate of Exchange	Withdrawal Application Currency (Equivalent of Column 9 Claimed for Replenishment)	Payment Reference to Bank Account or Cash Book (e.g. value date or transaction ID)	Country of Origin and Other Remarks
1	CPIU Salaries and Allowances	CPIU Salaries Net Salary May	CPIU Salaries and Allowances		31-May-16		18 981,78	18 981,78	31-May-16	20,0088	948,67	31-May-16	Moldova
2	CPIU Salaries and Allowances	CPIU Salaries Net Salary Jun	CPIU Salaries and Allowances		30-Jun-16		17 672,05	17 672,05	30-Jun-16	19,8545	890,08	30-Jun-16	Moldova
3	CPIU Salaries and Allowances	CPIU Salaries Net Salary July	CPIU Salaries and Allowances		12-Aug-16		16 993,38	16 993,38	12-Aug-16	19,7725	859,45	12-Aug-16	Moldova
4	CPIU Salaries and Allowances	CPIU Salaries Net Salary August	CPIU Salaries and Allowances		5-Sep-16		14 981,40	14 981,40	5-Sep-16	19,7614	758,11	5-Sep-16	Moldova
5	CPIU Salaries and Allowances	CPIU Salaries Net Salary September	CPIU Salaries and Allowances		26-Sep-16		21 181,82	21 181,82	26-Sep-16	19,7937	1 070,13	26-Sep-16	Moldova
6	CPIU Salaries and Allowances	CPIU Salaries Net Salary October	CPIU Salaries and Allowances		31-Oct-16		234 865,70	234 865,70	31-Oct-16	20,0443	11 735,57	31-Oct-16	Moldova
7	CPIU Salaries and Allowances	CPIU Salaries Net Salary November	CPIU Salaries and Allowances		1-Dec-16		223 433,88	223 433,88	1-Dec-16	20,0443	11 017,18	1-Dec-16	Moldova
8	CPIU Salaries and Allowances	CPIU Salaries Net Salary December	CPIU Salaries and Allowances		27-Dec-16		266 681,70	266 681,70	27-Dec-16	20,0443	13 207,07	27-Dec-16	Moldova
Total							814 791,71	814 791,71			40 486,26		

16. Please provide a list of the supporting documentation maintained by the PMU for the expenditure items as an attachment to the Withdrawal Application.

*The undersigned hereby certify that the expenditures for which replenishment is claimed herein are correct, for the Project as provided in the IFAD Financing Agreement. We certify that the expenditures incurred are within the statement of expenditure (SOE) threshold of equivalent US\$XXX or Currency for this Category, and represent resources used in compliance with the principles of legality, regularity and sound financial management. We certify that the audit requirement outlined in article VIII and section 9.01 of the General Conditions will be complied with, and that the requirements for maintaining records and documentation for expenditures disbursed using the Statement of Expenditure (Form 102/A) modality and outlined in section 4.04(c) and (d) of the General Conditions, will be complied with. This includes, inter alia, that an annual audit will be carried out and that the documentation (including purchase orders, invoices, evidence of payment and delivery and any other relevant documentation evidencing the expenditures) will be retained for 10 years after the Closing Date of the IFAD Financing, and that such records and documentation will be made available to IFAD representatives for review on request.

Certified by: _____ (Project Accountant)

Certified by: _____ (Project Director)

Certified by: _____ (Borrower/Recipient)

(Authorized Representative)

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 9: Integrated Risk Framework (IRF)

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Risk categories	Risk Probability	Risk Impact	Mitigations/comments
1. Political and governance	Medium	Medium	<p>Risk: Political instability and a deepening crisis brought on by an inconclusive parliamentary election which can lead to delays in key decisions regarding the policy and regulatory objectives of the project. Mitigation: The rationale of the project investments as well as the policy support that is considered key is in line with the overall priorities of the agriculture and the financial sector in the country. The Ministry of Agriculture, the Ministry of Finance and the NCFM have suggested the key elements of design and are likely to continue to support the measures proposed.</p> <p>Risk: Recent changes in the structure of the Government has led to increase in responsibility of the Ministry of Agriculture which is not always commensurate with capacity of different Government agencies. Mitigation: The project will strengthen the capacity of MARDE through provision of technical specialists.</p>
2. Macroeconomic	Medium	Medium	<p>Risk: The closer trade ties that the country is forging with EU has led to increased competition for domestic produce. Mitigation: The project is helping smallholder producers undertake high value production with better chances of competition in the local and non-traditional markets.</p>
3. Sector strategies and policies	Low	Low	<p>Risk: The considerable reduced risk appetite after the fraud in the banking sector has made the GoM overly conservative and risk averse. Mitigation: The project will finance two funds to strengthen the SCA sector and enhance its performance and sustainability and protect the sector against undue risk.</p>

Risk categories	Risk Probability	Risk Impact	Mitigations/comments
4. Technical aspects of project or program	Low	Medium	<p>Targeting Risk: Projects in the past have not been targeted to the smallholders due to the ease with which the larger farmers and enterprises are able to adhere to the conditions of partnership and provide their share of cash contribution. In order to ensure that smallholders are not left out of the process of selection, additional weight is being assigned to the selection criterion to ensure their inclusion. In addition, some of the components are open only to youth entrepreneurs and women such as the entrepreneurship finance component. Mitigation: To ensure access to credit for poor households in rural areas, the SCAs are being provided a line of credit through the project. There is little risk that these funds will be captured by the elite, as the loan size is small and only the smallholders are interested in accessing them.</p> <p>Infrastructure Schemes Risk: Inadequate operation and maintenance arrangements of infrastructure schemes such as feeder roads and small-scale irrigation schemes. Mitigation: • Strict application by CPIU of selection criterion requiring adequate proposals for future O&M. Current track record is promising. • Construction of durable low-maintenance roads. • The CPIU brokers partnerships between municipalities (primarias) and the benefitting agribusinesses for regular road maintenance contributions. • Careful technical assessment and field verification of main infrastructure operation during the proposals' qualification stage. • Coordination with "Appele Moldovei" and WUAs for investment identification and the selection process.</p> <p>Infrastructure Schemes Risk: Sub-optimal infrastructure design quality procured by beneficiaries. Mitigation: • Compliance with technical norms and state regulations (licencing of designers and submission to state expertise). Infrastructure Schemes Risk: Limited potential for uptake of water efficient technologies due to lack of awareness about suitable technologies. Mitigation: • The project will create awareness and understanding regarding the use of water efficient technologies to enhance uptake. • The project will keep open the options for investment in appropriate alternatives to enable farmers to invest in CA techniques as well.</p> <p>Risk: Producer Groups and private sector partners are unable to forge equity partnerships. Mitigation: • The project will provide technical assistance, strong mentoring support and equity investments on behalf of smallholders to make them an attractive partner for the private sector.</p> <p>Risk: ODIMM collateral guarantees are unacceptable to private banks to provide credit to YEs and women. Mitigation: Negotiate with AIPA to establish a similar facility to underwrite the collateral arrangements with banks and influence ODIMM guarantee features and expedite the IFAD-EU guarantee fund mechanism.</p>

Risk categories	Risk Probability	Risk Impact	Mitigations/comments
5. Institutional capacity for implementation and sustainability	Medium	Medium	Risk: CPU salaries limit the recruitment of qualified candidates. Mitigation: Negotiate with GoM to review salaries or recruit part-time specialists.
6. Financial management	Medium	Medium	Overall FM Risk is deemed Medium due to complex flow of funds . The risk is expected to develop to low as project activities and mitigation measures are implemented. The FM modalities which have been proposed would allow to satisfy IFAD requirements.
7. Procurement	Medium	Medium	The standard Bidding Documents templates are very broad and shall be adapted by each procuring agency individually for each procurement, do not contain many provisions that IFAD requires. A more detailed analysis is presented in the Integrated Risk Framework additional annex.
8. Stakeholders	Low	Low	<p>Risk: Lack of interest of the stakeholders in participating in project activities. Mitigation: The project is expected to enhance the understanding of smallholders regarding the use of improved water efficient technologies and improved soil and water management practices through demonstration and sharing experience of CA techniques by users and impact of these on productivity and yield increases and resilience to climatic risks.</p> <p>Risk: Beneficiary capacity for upfront contribution . Mitigation: Government procedures generally do not allow for upfront provision of funds to beneficiaries and only allow reimbursement after it is secure that funds have been spent. This inhibits the selection of those without sufficient capital and delays implementation of activities. The way to mitigate this risk would be to use an escrow account operated by a partner bank which can hold the advance payment in the account until the transaction for the purchase of the equipment or the implementation of the investment is completed and the CPIU approves the payment of the final instalment. Banks are willing to offer these services at a small fee.</p>
9. Environment and social	Medium	Medium	Risk: Exclusion of smallholders, youth and women. Mitigation: The project has identified very clear targeting mechanisms and selection criterion and assigned added weight to selection of the intended target groups.
Overall	Medium	Medium	A range of measures are being proposed to enable the implementing agencies to manage the risks inherent in the country or those associated with the project design.

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex 10: Exit Strategy

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Annex 10: Exit Strategy

There are several key elements of the project's exit strategy that are associated with each of its key components. The investment in physical and water efficient infrastructure will be maintained by the municipal authorities and the individual users and agribusinesses who contribute to their investment and take over operation and maintenance of the schemes after completion. Thus the project will exit from the intervention at the end of the completion period until the commissioning. The project is expected to enhance demand for the use of water efficient practices through demonstration of efficient water use technologies. While the project will facilitate these through partial grants it is expected that the smallholder farmers would be able to assess these technologies and expand their use with their own resources from private sector suppliers. The funds from the AF grant will help to build the capacity of the academic institutions in developing and introducing modules for the promotion of conservation agriculture techniques in its curriculum. Thereafter these institutions will teach these modules themselves.

The investment in the Producer Groups and Associations is expected to be based on proper feasibility assessment and market demand in partnership with key market drivers and private sector entities. The capacity of the producer groups will be strengthened to enable them to partner effectively with private sector agencies who will ensure that the partnership is professionally managed and is linked to markets. The partnerships and working arrangements are expected to be designed in a manner that is sustainable and the project will exit from these arrangements once the partnerships are successful. However, it should be recognised that not all partnerships will be successful and that some of them may fail. Regardless there are lessons that will be derived for the future from both the successes and the failures.

The arrangements for provision of access to finance are expected to help build the confidence of the commercial banking sector to lend to small-holder farmers, YE and women. The project is not providing any lines of credit to commercial banks but simply strengthening the mechanisms that will enable more effective use of the arrangements that the GoM has put in place to stimulate rural growth by leveraging the support provided by AIPA and ODIMM. Increased awareness about these facilities will enable the project to exit from its facilitation and mediation efforts at the end of the project period. In cases where these arrangements are not working well, the project will help to identify the weaknesses and help them to strengthen them during the project period.

IFAD has through earlier investments worked closely with the National Commission for Financial Markets (NCFM) to develop a management information system that enables the Commission to track the key financial indicators with respect to SCA performance and assess their financial health. In addition, the NCFM will be provided technical assistance to develop a strategy for the future growth of SCAs and to assist in developing the regulatory framework. These measures will add to the sustainability of the financial sector. The project is expected to further contribute to the long-term sustainability of the SCA sector by providing mechanisms through which the NCFM can better supervise and regulate the sector through the provision of a Stabilization Fund and a Deposit Insurance Fund which will contribute to strengthening the SCAs. After initial support, the NCFM Funds are meant to become self-sustainable based on specific fees charged to SCAs. As the two Funds build up, the advanced amounts from the IFAD loan, after their utilization for the intended purpose of bringing stability in the non-banking financial sector, will be revolved back to the MoF through its Credil Line Directorate (CLD).

Republic of Moldova

Talent Retention for Rural Transformation

Project Design Report

Annex: Integrated Risk Framework Full Document

Document Date: 25/10/2019

Project No. 2000002242

Near East, North Africa and Europe Division
Programme Management Department

Annex 9: Integrated Risk Framework (IRF)

Table 9.1 Overall Risks

Risk categories	Risk Probability (H, M or L)	Risk Impact (H, M, L)	Mitigations/ comments
1. Political and governance			
Political instability and a deepening crisis brought on by an inconclusive parliamentary election which can lead to delays in key decisions regarding the policy and regulatory objectives of the project.	M	M	The rationale of the project investments as well as the policy support that is considered key is in line with the overall priorities of the agriculture and the financial sector in the country. The Ministry of Agriculture, the Ministry of Finance and the NCFM have suggested the key elements of design and are likely to continue to support the measures proposed.
Recent changes in the structure of the Government has led to increase in responsibility of the Ministry of Agriculture which is not always commensurate with capacity of different Government agencies.	M	M	The project will strengthen the capacity of MARDE through provision of technical specialists.
2. Macroeconomic			
The closer trade ties that the country is forging with EU has led to increased competition for domestic produce.	M	M	The project is helping smallholder producers undertake high value production with better chances of competition in the local and non-traditional markets.
3. Sector strategies and policies			
The considerable reduced risk appetite after the fraud in the banking sector has made the GoM overly conservative and risk averse.	L	L	The project will finance two funds to strengthen the SCA sector and enhance its performance and sustainability and protect the sector against undue risk.
4. Technical design of the project			
Targeting	M	M	<p>Projects in the past have not been targeted to the smallholders due to the ease with which the larger farmers and enterprises are able to adhere to the conditions of partnership and provide their share of cash contribution. In order to ensure that smallholders are not left out of the process of selection, additional weight is being assigned to the selection criterion to ensure their inclusion. In addition, some of the components are open only to youth entrepreneurs and women such as the entrepreneurship finance component.</p> <p>To ensure access to credit for poor households in rural areas, the SCAs are being provided a line of credit through the project. There is little risk that these funds will be captured by the elite, as</p>

			the loan size is small and only the smallholders are interested in accessing them.
Infrastructure Schemes: Inadequate operation and maintenance arrangements of infrastructure schemes such as feeder roads and small-scale irrigation schemes.	L	M	<ul style="list-style-type: none"> • Strict application by CPIU of selection criterion requiring adequate proposals for future O&M. Current track record is promising. • Construction of durable low-maintenance roads. • The CPIU brokers partnerships between municipalities (<i>primarias</i>) and the benefitting agribusinesses for regular road maintenance contributions. • Careful technical assessment and field verification of main infrastructure operation during the proposals' qualification stage. • Coordination with "Appele Moldovei" and WUAs for investment identification and the selection process.
Sub-optimal infrastructure design quality procured by beneficiaries.			<ul style="list-style-type: none"> • Compliance with technical norms and state regulations (licencing of designers and submission to state expertise)
Limited potential for uptake of water efficient technologies due to lack of awareness about suitable technologies.	L	L	<ul style="list-style-type: none"> • The project will create awareness and understanding regarding the use of water efficient technologies to enhance uptake. • The project will keep open the options for investment in appropriate alternatives to enable farmers to invest in CA techniques as well.
Producer Groups and private sector partners are unable to forge equity partnerships.	M	L	<ul style="list-style-type: none"> • The project will provide technical assistance, strong mentoring support and equity investments on behalf of smallholders to make them an attractive partner for the private sector.
ODIMM collateral guarantees are unacceptable to private banks to provide credit to YEs and women.	M	M	<ul style="list-style-type: none"> • Negotiate with AIPA to establish a similar facility to underwrite the collateral arrangements with banks and influence ODIMM guarantee features and expedite the IFAD-EU guarantee fund mechanism.
5. Institutional capacity for implementation and sustainability			
CPU salaries limit the recruitment of qualified candidates.	M	M	Negotiate with GoM to review salaries or recruit part-time specialists.
6. Financing			
Adaptation Funds may not be approved for the project.	L	H	The project has been designed in a manner in which the IFAD and AF funds complement each other for greater chances of success for obtaining the funds. As such, this represent a risk. Those aspects of the project will have to be redesigned at start-up in close coordination with the CPIU and the partner institutions if funding is not realised.
7. Procurement			
See below			
8. Stakeholders			
Lack of interest of the stakeholders in participating in			The project is expected to enhance the understanding of smallholders regarding the use of improved water efficient technologies and improved

project activities			soil and water management practices through demonstration and sharing experience of CA techniques by users and impact of these on productivity and yield increases and resilience to climatic risks.
Beneficiary capacity for upfront contribution			Government procedures generally do not allow for upfront provision of funds to beneficiaries and only allow reimbursement after it is secure that funds have been spent. This inhibits the selection of those without sufficient capital and delays implementation of activities. The way to mitigate this risk would be to use an escrow account operated by a partner bank which can hold the advance payment in the account until the transaction for the purchase of the equipment or the implementation of the investment is completed and the CPIU approves the payment of the final instalment. Banks are willing to offer these services at a small fee.
9. Environment and social			
Exclusion of smallholders, youth and women.	M	M	The project has identified very clear targeting mechanisms and selection criterion and assigned added weight to selection of the intended target groups.
Overall	M	M	A range of measures are being proposed to enable the implementing agencies to manage the risks inherent in the country or those associated with the project design.

Table 9.2 Fiduciary/Financial Management Risk Summary

Risk Category	Initial FM Risk Rating (H/M/L)	Proposed Risk Mitigating Measures	Residual FM Risk Rating (H/M/L)
A. Inherent Risks	MEDIUM		MEDIUM
<u>Country Level:</u> 1. TI rating at 33 (improving vs 31 in prior year) and Moldova ranking 117/180 countries in 2018. 2. Uncertainty/vulnerability in the Financial Sector (bank/non-bank lending) still persisting	Medium		Medium
<u>Entity and Project design:</u> 1. Strengthen financial inclusion through non-banking finance institutions (SCAs) 2. Strengthen financial inclusion through bank lending sector	Medium	-Financial support to the development of a) Stabilization Fund for SCAs b) Insurance Deposit Fund for SCAs through the NCFM non-banking sector regulating body; Endorse on-going governmental NCFM reforms (SCAs): a) Central Association (SCAs) development (board participated by the NCFM) b) set up of a Reporting software at SCAs (funded by a previous IFAD grant) c) NCFM setting up a new Accounting software to replace existing and be deployed to all SCAs; -Facilitate access to banks credit lines and governmental grant schemes	Low

		through (i) TA focused on improving entrepreneur business proposal formulation as well as coaching/mentoring and (ii) communication awareness.	
B. Project Control Risks	LOW		LOW
1. Organization & Staffing a) Relief the Finance Manager from excessive involvement in activities other than Financial Management (procurement/legal). b) Funds to be used for the intended purposes of the project.	Medium	a) Strengthen the Project Procurement Unit with an additional Senior specialist as well as hire a Consultant on legal matters (e.g. new contract template development) according to needs as they arise. b) CPIU's Financing Partners and Beneficiaries financed by the Project must respect eligibility criteria and guidelines as stated in the PIM and approved by relevant committees. Monitoring is to be carried out centrally by the CPIU.	Low
2. Budgeting a) Adequate budget capacity. b) Timely budget submission c) Rigid governmental framework for the budget modifications during the year.	Medium	a) Timely coordination of the CPIU with the relevant implementing agencies/partners to ensure that timely inputs are received, the Project Director will initiate the process 4 months before the budgets are due. b) realistic budget planning (including moderate contingencies to allow flexible adjustments during implementation); constant monitoring of variances actual vs plan, technical review and timely undertaking of corrective actions after approval. c) Propose to the MoA/MoF to inject more flexibility in budgeting procedures (through gov. procedural changes) to allow adjustment of the project's budgeted categories during the year to allow faster implementation/disbursement of the programme. d) Budgets to include all sources of financing separately and to show estimates by quarter. e) Interim financial reports showing progress against budgets to be submitted to IFAD semi-annually	Low
3. Funds Flow & Disbursements a) Uncertainty in the banking sector b) Adequate liquidity level.	Medium	a) Opening of the Borrower/Recipient designated accounts and the CPIU Project accounts at the NBM; b) Separate advances to Loan DA for the liquidity need of each of the NCFM's funds. c) Timely liquidity forecast based on quarterly phasing of the AWPB as well as expenditure monitoring. d) Flow of funds and withdrawal procedure detailed in the Financial Implementation Manual (as part of the PIM)	Low
4. Internal controls	Low	Internal controls are in place at CPIU ensuring proper segregation of duties and effective management control over expenditures.	Low
5. Accounting Systems, Policies & Procedures	Low	a) Maintain same CPIU accounting system/software/procedure in alignment to National Systems and IFAD requirements as is currently adopted by the CPIU for ongoing projects. b) Tailor Chart of Account to project component/categories as done for	Low

		ongoing projects	
6. Reporting & Monitoring	Low	<p>Maintain same dual reporting/monitoring procedure (both for National and IFAD requirements) as adopted for ongoing projects.</p> <p>IFAD reporting as follows:</p> <p>a) Data based on 1C accounting software</p> <p>b) FS prepared on cash basis as per IFAD Handbook on Auditing/Reporting requirements</p>	Low
7. Internal Audit	Low	<p>The IFAD Programme Steering Committee (IPCS) is the governing body participated by relevant ministries representatives which is providing policy and principles guidance.</p> <p><u>At CPIU level</u> a specific Internal Audit function is not established, however regular reporting on programme implementation and procedure setting/modification (revisions of the PIM) is flowing from the CPIU to the IPCS for revision/approval. The project will maintain same audit arrangements as current on-going programmes.</p>	Low
8. Auditing	Medium	<p>The Court of Accounts of Moldova is the Supreme Audit Institution (INTOSAI member, using National Standards of Auditing converging to INTOSAI criteria). CoA is auditing the consolidated financial statements of the Ministry of Agriculture which include the consolidated FS of all CPIU's programmes. This project will not be under the scope of a direct CoA audit but will be audited by independent firms acceptable to IFAD as is adopted per the ongoing programmes.</p> <p>External auditors focus should be extended to:</p> <p>a) the new financing facilities to be established at the NCRM (i) the Stabilization fund and (ii) the Insurance Deposit Fund</p> <p>b) any SCA which directly financed by the CPIU (not through intermediaries financing institutions).</p>	Low
Project Fiduciary Risk at design:			
OVERALL FM RISK		MEDIUM	LOW
* H=High, M=Medium, L=Low			

Table 9.3 Procurement Risk Matrix

	INITIAL RISK RATING	Medium		RESIDUAL RISK RATING
#	Description of Risk Feature - PEFA 2012-14	Rating	Remarks	Recommendation /Mitigation
A	COUNTRY RISK ASSESSMENT	Medium		
1	Legal and Regulatory Framework			

b	Existence of Standard Bidding Documents for Goods, Works and Services	Medium	The standard Bidding Documents templates are very broad and shall be adapted by each procuring agency individually for each procurement, do not contain many provisions that IFAD requires.	Using the WB Standard Bidding Documents
c	Transparency, Comprehensiveness and Competition in the legal and regulatory framework	Medium	(i) Among the main failings of the system can be mentioned such issues as the transparency, corruption and sector coverage of the Law. (ii) Also, the issue with explicit incorporation of provisions concerning the conflict of interest, corruption and fraud into the tender documentation was not resolved in the PPL. (iii) still has problems with transparency of independent administrative procurement review process for handling procurement complaints by participants prior to contract signature.	(i) and (ii) Using the WB tender documents, which have respective provisions concerning the conflict of interest, corruption and fraud. (iii) Using IFAD compliance system to avoid any possible influence from the officials to the complaints review process.
2	Accountability and Transparency			
a	Existence of an independent administrative procurement complaints system	High	Unfortunately, after two years of implementation of the new PPL, the complaint system is still not functional. Also, National Dispute Settlement Agency NDSA should ensure high level of transparency and independence, or else the worthiness of this institution will be low.	Using IFAD compliance system to avoid any possible influence from the officials to the complaints review process;
b	Country Corruption Perception Index score	High	According to the Transparency International the score is 33/100, where 0 is highly corrupt and 100 is very clean. Moldova is on the 117 place from 180 countries.	High level of supervision control required.
B	PROJECT INSTITUTIONAL RISK ASSESSMENT	Medium		
1	Capability in Public Procurement			
a	Existence of a Procurement Unit with at least 2 staff members	Medium	One procurement specialist doing both ongoing IFAD-funded projects. The attempting to hire the second Procurement specialist failure twice, because of the limited procurement personnel in the market.	To hire the Procurement specialist on the consultancy basis with experience in the procurement of works and consulting services according to the World Bank Procurement Guidelines. Sharing the time input with the WB project is possible.

b	Staff member(s) have at least 7 years experience in donor-funded public procurement	Medium	1,5 years of experience in procurement in donor-funded public procurement plus 7,5 years working in development of public procurement regulations at the Ministry of Finance of Moldova. Procurement Specialist needs further development.	To ensure the further development through procurement training of Goods&Works and Consulting Services in ILO, Turin, Italy.
c	What is the general quality of documents produced by the procurement office?	Medium	The Bidding Documents are very outdated. The BDs do not have the list of debarred firm to check the eligibility of the Bidder. Only Lump-sum type of contracts used for procurement of consultancy services.	To use WB BDs and the list of debarred firms published by the World Bank. The WB standard BDs will give the possibility to choose among Lump-sum and Time based types of contracts appropriate to the nature of the project activity.
2	Public Procurement Processes			
i	Procurement Methods			
c	Procurement methods consistent with IFAD Guidelines	High	Individual Consultants are selected using Least Cost Selection method, actually defined for selection of companies. IFAD Procurement Handbook does not have the description of procedures for selection of Individual Consultants.	For procurement of individuals to use Procurement Operation Manual for Moldova (clause 8,8) or the World Bank Guidelines (Section V - Selection of Individual Consultants).
ii	Procurement Planning			
c	Are Procurement Plans done using an effective format and choosing the appropriate selection methods	High	(i) Small value consultancy, even less than \$10 000 are selected using Quality and Cost Based Selection method. (ii) Combining the small activities in packages is not a general practice.	(i) To choose the selection methods appropriate to the estimated cost and duration of the assignment taking into account, a strategic approach to planning, combining and conducting procurement activities so as to minimize loss of time and resources. Efficiencies can be obtained through a combination of methods reflected in the Procurement Plan. For consultancy services less than \$100,000 consultants could be selected based on their qualification, if appropriate. (ii) Activities to be combined by geographical or thematically issues taking into account the capacity of the potential bidders/market players to meet tender requirements. In any case, combining or splitting of activities, whenever decided, should lead to the improvement of an existing level of competition.
iii	Procurement Processes			
n	Are all contracts awarded advertised publicly?	Medium	Advertised only the name of the successful bidder. No details of read-out or	To publish contract award information according to the WB template of publishing awards.

			evaluation prices are published.	
iv	Contract Administration and Management			
c	Is there an effective contract monitoring system/framework in place?	Medium	No special contract monitoring software exists. The tasks of contract monitoring are distributed among existing staff: Project Director, Procurement Specialist and Contract Administrator, who is responsible for acceptance of works/services and any contractual problems or requests for contract amendments.	To use any specialized contract monitoring software, like Smart Sheet, to control the completion dates of contracts, especially in case of works, possible extensions and expiry dates of the performance securities.
d	Is there a process to monitor delivery of goods/services/works to verify quantity and quality for further payment?	Medium	Different staff of implementation agency having the respective technical skills monitors the delivery of works/goods/services and sign the respective Delivery-Acceptance acts with the contractors/service providers/suppliers so that contractors/service providers/suppliers are not officially informed on the person/s, who monitors them.	To use the specialized clause in the contracts with hired consultants/contractors/suppliers to assign particular persons as Contract Administrators to monitor and accept the contracts deliveries for further payments.
g	Are contract disputes handled in accordance with a formal complaints/arbitration system?	Medium	There is no disputes usually occurs between client and contractors. Rare complains received from the contractors are responded in written with detailed explanations. However, no disputes are followed such responses.	To publish contract award notification according to the WB template of publishing awards in two weeks after award, before the signing the contract with successful candidate.