

Republic of the Union of Myanmar

Fostering Agricultural Revitalization in Myanmar (FARM)

Final project design report

Main report and appendices

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Currency equivalents

Monetary Unit	=	Local Currency
USD 1	=	MMK 954
MMK 1	=	USD 0,00101

Weights and measures

1 kilogram	=	1 000 g
1 000 kg	=	2.204 lb.
1 kilometre (km)	=	0.62 mile
1 metre	=	1.09 yards
1 square metre	=	10.76 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres

Fiscal Year

1st April - 30th March

Abbreviations and acronyms

ADB	Asian Development Bank
AED	Agriculture Extension Department (<i>MOAI</i>)
AMD	Agriculture Mechanization Department (<i>MOAI</i>)
AMDA	Association of Medical Doctors in Asia
CARD	Center for Agriculture and Rural Development
CARI	Central Agricultural Research Institute
CARTC	Central Agricultural Research and Training Centre
CB	Cooperative Bank
CBM	Central Bank of Myanmar
CBs	Commercial Banks
CDZ	Central Dry Zone
CGAP	Consultative Group to Assist the Poor
COHRE	Centre on Housing Rights and Evictions
COSOP	Country Strategic Opportunities Programme (<i>IFAD</i>)
CPF	Country Programme Framework
DAR	Department of Agriculture Research (<i>MOAI</i>)
DOA	Department of Agriculture (<i>MOAI</i>)
DRD	Department of Rural Development (<i>MOLFRD</i>)
ED	Extension Department (<i>MOAI</i>)
EU	European Union
FAO	Food and Agriculture Organization
FARM	Fostering Agricultural Revitalization in Myanmar
FESR	Framework for Economic and Social Reform
FIND	Financial Inclusion for National Development
FPIC	Free, Prior and Informed Consent (<i>FARM</i>)
FPL	Food Poverty Line
GDP	Gross Domestic Product
GIZ	Gesellschaft für Internationale Zusammenarbeit
GOM	Government of Myanmar
GRET	Groupe de Recherche et d'Echange Technique
HDI	Human Development Index
HPI	Human Poverty Index
ICRAF	International Centre for Research on Agroforestry
ID	Irrigation Department (<i>MOAI</i>)
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IGA	Income Generating Activities
IHLCA	Integrated Household Living Conditions Assessments
IRRI	International Rice Research Institute
JICA	Japan International Cooperation Agency
KCs	Knowledge Centers (<i>FARM</i>)
KEXIM	Korea Export-Import Bank
KOICA	Korean International Cooperation Agency
LCS	Labour Contracting Society (<i>IFAD</i>)
LDC	Least Developed Country
LIFT	Livelihoods and Food Security Trust Fund
MADB	Myanmar Agricultural Development Bank
MAP	Making Access Possible
MDG	Millennium Development Goals
MDRI	Myanmar Development Research Institute
MEB	Myanmar Economic Bank
MICDE	Myanmar Industrial Crop Development Enterprise
MIDB	Myanmar Small and Medium Industrial Development Bank

MMK	Myanmar Kyat
MOAI	Ministry of Agriculture and Irrigation
MOBA	Ministry of Border Affairs
MOECAP	Ministry of Environmental Conservation and Forestry
MOF	Ministry of Finance
MOLFRD	Ministry of Livestock, Fisheries and Rural Development
MONPED	Ministry of National Planning and Economic Development
MOU	Memorandum of Understanding
MFI	Microfinance Institution
MNCWA	Myanmar National Committee for Women's Affairs
MSE	Microfinance Supervisory Enterprise
MSMEs	Micro, Small and Medium Enterprises
NCDP	National Comprehensive Development Plan
NGO	Non-Governmental Organization
NMTPF	National Medium Term Priority Framework
NPL	Non-Performing Loans
NPSC	National Project Steering Committee (<i>FARM</i>)
NPT	Nay Pyi Taw
OCC	Opportunity Cost of Capital
PACT	Partner Agencies Collaborating Together
PAR	Portfolio at Risk
PARDAP	Poverty Alleviation and Rural Development Action Plan
PB	Public Bank
PCU	Project Coordination Unit (<i>FARM</i>)
PL	Poverty Line
PLUP	Participatory Land Use Planning (<i>FARM</i>)
PWC	Project Working Committee (<i>FARM</i>)
RIMS	Results and Impact Management System (<i>IFAD</i>)
RSC	Rice Specialized Company
SADC	Specialized Agricultural Development Company
SBFIC	Savings Bank Foundation for International Cooperation
SCCs	Savings and Credit Cooperatives
SEE	State Economic Enterprises
SLA	Subsidiary Loan Agreement
SLRD	Settlements and Land Records Department (<i>MOAI</i>)
TPCC	Township Project Coordination Committee (<i>FARM</i>)
UMFCCI	Union of Myanmar Federation of Chambers of Commerce and Industry
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNGTG	United Nations Gender Theme Group
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
VFMG	Village tract Facilitation and Monitoring Group (<i>FARM</i>)
WB	World Bank
WFP	World Food Programme
WONM	Women Organization Network of Myanmar
WRUD	Water Resources Utilization Department
WUG	Water Users Group (<i>FARM</i>)
YAU	Yezin Agricultural University

Map of the project area

Republic of the Union of Myanmar

Fostering Agricultural Revitalization in Myanmar (FARM) Project

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 10/01/2014

Executive Summary¹

Summary and Objectives

The project will introduce regional and global best practices to develop a sustainable and scale-able model for smallholder agriculture and rural development across Myanmar's central dry zone. It will support land consolidation and development, productive infrastructure, agricultural and business services, flow of knowledge and capacity building to promote an inclusive development model in this zone. The project will directly benefit 37,600 households consisting of 183,400 people, for an average cost of USD 152 per beneficiary.

The project's goal is to improve the economic status of poor rural women and men in the project area. Its objective is to increase incomes of smallholder and landless households.

Components

Component 1: Agricultural Infrastructure. The project will contribute to the ongoing expansion of irrigated areas under the command of MOAI primary and secondary canals, with complementary investments in land development identified through a participatory process. The objectives are to: (i) improve equity of irrigation water distribution; (ii) create opportunities for crop diversification; and, (iii) improve field access (for machinery and transport). Areas for which land user rights have been approved and land titles issued (or are being issued) will be eligible for land development. Farmer empowerment will be fostered, particularly in scheme operation and maintenance.

Component 2: Agricultural and Business Services. This component includes two sub-components: (i) investing in knowledge, and, (ii) financing growth.

Sub-component 2.1: Investing in Knowledge. The project will promote a conducive environment for rural households to access services and technologies which enable them to improve their productive and economic activities. It will support: (i) the creation of a pluralistic participatory extension service platform which provides support to farming households; and, (ii) services to landless entrepreneurs to start/develop rural micro-businesses. The expected outcomes are enhanced skills and increased incomes of farming and landless households.

Sub-component 2.2: Financing Growth. The project will foster enabling conditions for the growth of sustainable rural micro-businesses and SMEs. Two competitive grant funds will be established, the first in support of rural businesses operated by landless households, and the second in support of value chain integrators (the latter to be replaced by a PPP modality when producers' organisations are developed). Access of smallholders and the landless to financial services will be improved by attracting MFIs to the area and by promoting contract farming; and financial intermediaries such as savings and credit groups will be fostered.

Background and Rationale

The Government has requested IFAD to finance agricultural operations in Myanmar. The first project to be designed (FARM) under the 2013-15 PBAS cycle aims to create a sustainable and scaleable agricultural development model for the central dry zone. It adopts an inclusive development methodology which combines the smallholder irrigated land development model of MOAI with investment in services and financing for smallholders and landless households.

¹ The direct design approach has been applied for the design of FARM. The project design team leader is Mr Omer Zafar, country programme manager, closely supported by Ms Audrey Nepveu de Villemarceau, lead technical advisor. The final design mission consisted of Mr Omer Zafar (design team leader), Mr Thierry Mahieux (mission leader and rural finance specialist), Mr Jens Kristensen (agriculturist), Mr Rudolph Cleveringa (senior technical adviser - water, IFAD PTA), Mr Paul Harrison (economist), Mr Tin Htut Oo (adviser), Mr Shankar Kutty (financial management and procurement expert), and Ms Thiri Wai (country programme facilitator).

Project design has benefitted from the valuable inputs of: (i) APR peers, namely Youqiong Wang, Henning Pedersen, Stefania Dina, Sun Yinhong, Anura Herath, and Qaim Shah; (ii) CPMT members, namely Audrey Nepveu De Villemarceau, Tom Anyonge, Maria Hartl, Xuan Gao, Irene Li, Brian Baldwin, Ganesh Thapa, and Tawfiq El-Zabri; (iii) PTA staff covering the relevant sectors of FARM intervention.

The project is compliant with relevant IFAD policies, strategies and guidelines. In particular: (i) its goal and objective are aligned with the *Strategic Framework 2011-2015* in terms of market-driven smallholder development and non-farm rural business growth; (ii) its targeting strategy is consistent with the *Targeting Policy* approach of focusing on economically active poor rural women and men in farming and landless households; (iii) its investments in rural economic growth are compliant with the *Rural Finance Policy* promotion of inclusive financial systems to improve the access of the rural poor to financial services; (iv) its participatory approach to land consolidation is consistent with the *Land Tenure Policy's* focus on the principle of free, prior and informed consent; and, (v) its environmental impact assessment for infrastructure is aligned with the *Climate Change Policy* on proper adaptation and mitigation measures.

The project is consistent with Myanmar's COSOP 2014-18, the goal of which is to contribute to reducing rural poverty, specifically of smallholders, the landless, ethnic groups and other marginalised groups. The COSOP defines three Strategic Objectives (SOs) for engagement. SO1 aims to *empower rural women and men to access agricultural resources, technologies, services and markets*. SO2 aims to *create business and employment opportunities for rural women and men*. SO3 aims to *promote social and economic empowerment of marginalised groups, particularly ethnic groups*. FARM directly addresses SO1 and SO2.

Rural Context, Geographic Area of Intervention and Target Groups

Emerging from 50 years of isolation, Myanmar has embarked on a comprehensive path of political and economic reforms that aims to introduce elements of popular representation in the political sphere, foster economic growth and inclusive social development, improve the business environment, attract foreign investment and reduce poverty.

In line with Government request, the project area consists of: (i) the command areas of six irrigation schemes in Nay Pyi Taw Union Territory amounting to 87,183 acres within the area of five townships; and, (ii) an additional 25,000 acres of rainfed lowlands and uplands located around these townships. The project therefore covers an aggregate area of 112,183 acres (45,400 hectares) which constitutes 45% of the cultivated land in the five townships.

The target group consists of poor rural women and men in the project area. Specifically, it covers: (i) women and men farmers in the command areas of six targeted irrigation schemes; (ii) women and men farmers with landholdings only in rainfed areas; (iii) poor landless women and men who are interested to invest in rural micro-businesses. Women-headed and ethnic groups' households will have priority in planning and implementation. The project adopts an inclusive targeting approach encompassing geographical targeting, self-targeting, direct targeting, and social and gender inclusion.

Benefits

The project will directly benefit about 37,600 households (183,400 people). Of these, some 29,250 households (142,720 people) are expected to be within the IFAD target group of poor households, with an average per capita income of about USD 0.8 per day. They include: (i) smallholder households on 10,000 acres of irrigated land selected for development; (ii) other smallholders in selected command areas and on associated rainfed land; (iii) poor landless micro-entrepreneurs, particularly in households with unemployed young women and men; (iv) those benefitting from the employment opportunities created, such as incremental agricultural jobs, infrastructure-related jobs, micro-businesses employment and value chain employment; (v) short-term incremental workers involved in construction of knowledge centres.

Implementation Arrangements

A Project Coordination Unit will be responsible and accountable for project management and achievement of results. It will be an autonomous entity reporting to the national steering committee, and will be located in Nay Pyi Taw. Its structure will reflect project components, and it will have a certain level of financial autonomy. It will be managed by a project director (senior officer seconded from MOAI) with delegated authority who can commit MOAI as lead project agency; all other managers and staff will be recruited through a competitive process from the private and public sectors. TA will be provided to build staff capacities.

Project activities will be implemented through partnerships with relevant line agencies, NGOs, service providers and the private sector. Partners and service providers will be appointed on performance-based contracts, with performance assessed by the PCU and beneficiary representatives. The specific implementation arrangements are detailed in the design report.

Costs and Financing

The total project cost, including duties, taxes and contingencies, is estimated at USD 27.8 million over a six-year project implementation period. It will be financed by an IFAD loan of USD 18.7 million (67% of total cost), an IFAD grant of USD 0.8 million (3%), a Government contribution of USD 5.3 million (19%), private sector resources of USD 2.4 million (9%), and beneficiary contribution of USD 0.6 million (2%).

Risks

The project's risks and mitigation measures are detailed in the design report. Its main risks are political risk, land tenure risk, and poor governance risk. These are mitigated by a mutual accountability framework, a set of assurances to be negotiated with Government, and strong capacity building of MOAI in advance of project start up (through a separate grant).

Environment

The project is not expected to have any significant negative environmental impact and is classified as environmental Category B. A comprehensive environmental and social review note is included in the final design document as an Appendix.

Knowledge Management, Innovation and Scaling-Up

The project's operational experiences will create valuable knowledge to be captured by the PCU and utilised to generate lessons and best practices to be shared with national institutions and partners. The results of project support for sustainable activities for smallholders and the landless, developing alternative cropping patterns, strengthening farmers' knowledge, improving natural resource management, and expanding access to microfinance and rural finance will be widely publicised. Once documented, the FARM project model of sustainable agricultural development may be scaled up across the central dry zone. The project will share knowledge and experiences with the wider community of development practitioners in Asia and the Pacific through the IFADAsia knowledge management portal.

It should be noted that ***the design of the FARM project is already being scaled up*** by other partners. The World Bank plans to invest USD 100 million in October 2014 in three locations of the central dry zone (Mandalay, Sagaing, Bago) replicating the FARM project design.

Logical Framework

Results Hierarchy	Measure	Source	Assumption
Goal/Development Objective: Economic status of poor rural women and men in the project area improved.	<ul style="list-style-type: none"> Net income of farming households will be increased by USD 400 per annum in real terms 		
Specific Objective: 59 000 households in 5 townships of Nay Pyi Taw Union have higher incomes and improved nutrition	<ul style="list-style-type: none"> Net annual income of farming HHs increased from about USD 1,300 to USD 1,700 across the whole 112'000 acres (approx. 37,600 HH of which at least 29 000 HH are classified as moderately poor, poor or very poor) Landless HHs average food expenditure increased by USD 20/month 20% shift in relative asset ownership for 2 poorest quintiles (RIMS relative measure) 	RIMS impact survey, Focus groups discussions	Programme successes are replicated, scaled-up Public sector governance is improved
Outcome 1: Land and water resources sustainably managed	<ul style="list-style-type: none"> Access to water all year secured for 3,300 HHs Field to roadside haulage costs reduced by 15% Post-harvest losses reduced by 20% for each crop 	HHs surveys, Focus group discussions Comparative data of beneficiaries and control group	Farmers with free crop choice
Output 1.1: 10'000 acres of irrigated land consolidated and improved in 3 schemes	<ul style="list-style-type: none"> 20 PICs established and block development plans agreed 10'000 acres levelled 340 km of tertiary canals completed 180 km of drainage network completed 200 km of farm roads completed 3'400 small hydraulic structures built 	NGO progress reports, ID/MOAI records, PIC and UNOPS completion of work certificates, GPS and satellite pictures Farmers' grievance records	NGO recruited to assist in adopting PLUP & FPIC approaches <i>Risks:</i> – Lack of skills, equip. for land consolidation – Political interference in land consolidation works
Output 1.2: 3 300 farms re-titled and delineated	<ul style="list-style-type: none"> 3,300 land users' rights re-issued and 3,300 land users' documents signed Earth bunds and PVC turnouts constructed on 3,300 farms to delineate plot boundaries 	SLRD records, Township and village tracts records	<i>Risk:</i> Land confiscation by GoM
Output 1.3: 165 Water Management Organizations functional	<ul style="list-style-type: none"> 165 Water Users' Groups registered At least 2 members of each WUG trained by project 20 Labour Contracting Societies established Cost recovery scheme developed for each WUG At least 200 HHs accessing hydropower electricity 	WUGs admin. records LCSs admin. records Training documents/data, Service provider/Supplier administrative records	

Results Hierarchy	Measure	Source	Assumption
Outcome 2: Skills of farming and landless HHs enhanced, employment improved, relevant value chains upgraded	<ul style="list-style-type: none"> Yield increase by 15% on trad. crops after 3 years At least 3,100 HHs benefit from job opportunities Farmgate price of rice increased by 20% At least 20% of farming HHs adopting high value crops in consolidated land Sale of at least 50% of high value crops on contractual basis 	KCs administrative records, Surveys, SMEs records, Rural businesses records	KCs become focal points for commercial and technical partnerships
Output 2.1: 55 Knowledge centers established and functional	<ul style="list-style-type: none"> 55 Knowledge centers rehabilitated/constructed 55 extension officers from Ministry of Agriculture and irrigation seconded to project At least one meeting per month per KC with farming HHs, suppliers, buyers, processors and other service providers 	MOAI records, NGO progress report, MOAI work certificates, KCs logbooks/records, Input suppliers records, Surveys and focus groups	Farmers allowed free crop choice MOAI extension officers remain in project area Input suppliers finance demos
Output 2.2: 4 900 Rural businesses for landless entrepreneurs sustainably implemented	<ul style="list-style-type: none"> At least 250 CIGs set up for landless entrepreneurs At least 2 training courses per CIGs At least 4,900 business plans submitted to financial institutions and financed at affordable cost 	NGO progress reports CIGs admin. records MFI records	<i>Risk:</i> No NGO actively engaged to assist landless entrepreneurs in NPT
Output 2.3: Value chains strengthened	<ul style="list-style-type: none"> At least 6 value chain analyses undertaken At least 7 processing plants established in project area (1 for rice and 6 for high value crops) At least 20% of project-assisted farming HHs engaged in contract farming 	NGO progress reports, SMEs registration record, SMEs by-laws, SMEs financial statements	SMEs/entrepreneurs interested in contract farming with farming HHs
Outcome 3: Financial environment for creation/expansion of sustainable and profitable rural businesses improved	<ul style="list-style-type: none"> At least 5,000 incremental HHs accessed microfinance products in project area Farming HHs' indebtedness down by 50% by PY4 At least 60% of rural businesses and 80% of SMEs operating after 3 years Selected MFI financially sustainable At least 90% of LSCIs financially sustainable 	MFI/NGO records, Commercial bank records, PCU financial statements, LSCIs records	Commercial banks and MFIs have resources to lend to beneficiaries Financial institutions are actively targeting FARM villages
Output 3.1: Rural businesses and SMEs accessed sustainable financing	<ul style="list-style-type: none"> 4,900 landless entrepreneurs financed 7 entrepreneurs financed for processing SMEs USD 1.4 mln disbursed as grants for SMEs and USD 2.1 mln as contribution from entrepreneurs USD 0.84 mln disbursed as grant for rural businesses and USD 0.28 mln as contribution from landless entrepreneurs 	PCU financial statements Commercial banks and MFIs financial statements SMEs and rural businesses financial statements	MFI and commercial banks agree to finance rural businesses and SMEs to complement project grant

Results Hierarchy	Measure	Source	Assumption
Output 3.2: Access to rural finance improved	<ul style="list-style-type: none"> Activities of at least 10,000 HHs financed in project area At least 1 MFI/NGO with license operating in project area USD 0.95 mln provided to MFI/NGO as investment grant and/or loan for financing activity PAR < 10% after 3 years 	MFI/NGO progress reports, MFI/NGO financial statements, SMEs financial statements	MFI willing to deepen outreach in NPT <i>Risk:</i> Political interference hindering loan repayments
Output 3.3: Microfinance outreach extended to at least 5000 households	<ul style="list-style-type: none"> At least 1 MFI/NGO with license to assist HHs At least 55 Savings and Credit Institutions PAR < 5% One third of SCI leaders are women 	LSCIs financial statements, MFI/NGO financial statements, NGO progress reports,	NGO willing to promote Savings and Credit Institutions <i>Risk:</i> Lack of sufficient capitalization to reach sustainability

I. Strategic context and rationale

a. Country and rural development context

Country Economic Background. Myanmar is the largest country in Southeast Asia covering 676 578 sq. km, bordering China to the north and east, Lao PDR and Thailand to the east and India and Bangladesh to the west. The Bay of Bengal lies to the west and the Andaman Sea to the south. There are three distinct topographical areas - the western ranges, the central plains and the eastern hills. The Ayeyarwady delta region and the Sittaung and Thanlwin basins make up the central plains with extensive alluvial lowlands and a lengthy dry season.

Myanmar's population in 2011 was estimated at 60.4 million, with a density of 89 per km and an annual growth rate of 1%. About 70% of the population is rural (down from 73% in 1995 indicating very slow urbanization). It is ethnically diverse, with 8 major ethnic groups, 135 sub-groups and 108 different ethno-linguistic groups. The population is estimated to be 68% Burmese, 9% Shan, 7% Karen, 4% Rakhine, 3% Chinese, 2% Indian, 2% Mon, and 5% Kachin, Kayah, and Kayin. Myanmar is one of the poorest nations in South-East Asia, and the 2013 Human Development Report ranks the country 149th among 186 nations rated, with an HDI of 0.498.

Myanmar's GDP in 2011 amounted to over USD 55 billion, averaging USD 916 per capita. The GDP growth rate was 5.5% while the inflation rate was reportedly 4.2%. In 2010, the agriculture sector accounted for 36% of GDP (down from 60% in 1995), the service sector 38% (up from 30% in 1995), and the industry/manufacturing sector 26% (up from 10% in 1995).

Rural Poverty. Rural poverty in Myanmar is largely a function of lack of resource endowments. Although there is no official poverty line, poverty and social deprivation are known to be widespread. The Ministry of National Planning and Economic Development (MONPED) working with UNDP and other agencies and NGOs, has carried out two Integrated Household Living Conditions Assessments (IHLCA) in 2004-5 and in 2009-10. They provide a number of measures of poverty: (a) the *food poverty line* or the amount of money necessary to pay for a consumption basket to meet the caloric requirements of household members; (b) the *poverty line* or the amount of money necessary to cover consumption expenditure to meet basic food and non-food needs; (c) the *poverty gap index* that measures the intensity of poverty; and (d) the *share of poorest 20%* in consumption. In 2005, an estimated 32% of the population lived below the poverty line, falling to 26% five years later. Between 2005 and 2010, those living below the food poverty line decreased from 10% to 5%. Other measures of poverty also showed improved results over these five years; the poverty gap ratio declined by 35% whilst the consumption share of the poorest quintile increased from 11% to 12%.

National health statistics indicate high levels of deprivation, particularly for women. In 2010, the maternal mortality rate was 200 per 100,000 live births while the infant mortality rate was 44.8 per 1,000 live births. These national statistics mask significant regional and rural/urban differences. The poorest states, such as Chin (73% living below the poverty line), Shan East (51%) and North (52%), have far higher levels of poverty and social deprivation than areas such as Yangon, Kayin and Mon.

The rural poor typically consist of the landless (between 35% and 53% of the rural population in different parts of the country) and those with access to small and marginal landholdings, usually below 2 ha (almost 5 acres). The rural poor suffer from inadequate food, nutrition and essential non-food items. Rural poverty is linked to resource endowments; poor agricultural households on average farm less than 2 ha of land, while non-poor households farm an average of 3 ha. Fewer poor agricultural households (9%) own farm equipment than non-poor ones (19%). Most of the poorest live in the central dry zone (where soils are sandy, rainfall low and population density high) or hill tracts populated ethnic groups, which are remote, have limited arable land and are affected by conflict.

Due to conflicting results and serious data inconsistencies, the IHLCA report cautions on the interpretation of data on poverty levels and trends, in particular on the magnitude of the decline of poverty. The diagnosis does not break down data for the Nay Pi Taw region which was established in

2011 but treats it as part of Mandalay region. Mandalay has a rural poverty incidence of 32% in comparison to a nationwide rural average of 29%. Government is committed to reducing rural poverty to 16% by 2015.

The main characteristics of rural poverty in Myanmar are presented in Figure 1.

Figure 1: Rural Poverty in Myanmar - Characteristics

<p>Who are the rural poor?</p> <ul style="list-style-type: none"> ➤ smallholders owning < 2 acres of irrigated cultivable land and < 2 acres of rainfed cultivable land; ➤ sharecroppers or tenants; ➤ landless households dependent on livestock activities and/or casual labour; ➤ households with high dependency ratios (e.g. adult unable to work or disabled); ➤ women-headed households; ➤ young women and men living in extended households; ➤ ethnic minorities.
<p>Where are the rural poor?</p> <ul style="list-style-type: none"> ➤ in rural areas with a greater ethnic minority population, and in the central dry zone; ➤ in rural areas of high population density and very small holdings; ➤ concentrated in dispersed settlements with inadequate access to services; ➤ in remote mountainous or hilly areas; ➤ often dependent on seasonal or long-term migration to urban areas.
<p>Why are they poor?</p> <ul style="list-style-type: none"> ➤ high vulnerability to shocks: price volatility, climate change, sudden loss of land, disasters, water shortage; ➤ inadequate access to knowledge and technology; ➤ poor quality and limited/improper application of inputs; ➤ very limited access to financial services; ➤ lack of access to land, markets or employment opportunities; ➤ limited access to local organisations; ➤ social and ethnicity considerations.
<p>What are their coping strategies?</p> <ul style="list-style-type: none"> ➤ out-migration (overseas; in-country); ➤ high dependence on casual wage labour; ➤ borrowing from relatives, local traders, pawnshops; ➤ decapitalization.

Food Insecurity. Food insecurity is closely correlated with poverty, and is categorised in four dimensions: food availability, food access, food utilization, and stability of access to food. While Myanmar produces enough rice to meet its consumption needs, there are major problems with access to food for vulnerable groups across the country. There are also discrepancies across and within states and regions with respect to food deficits. Shan, Kachin and Chin states are the most food insecure, with a very high food poverty level of 40% in Chin state, 21% in northern Shan state and 20% in eastern Shan state. The headcount index of food poverty is generally higher in rural than urban areas. Poor infrastructure, restrictions on movement of food commodities and restrictive market policies prevent the transport of food commodities from surplus to deficit areas. Constraints affecting the ability of farming households to feed themselves include inadequate access to land and services. Households relying on market purchase to obtain food depend on having sufficient income, the existence of markets and the efficiency of markets to deliver food at affordable prices. In summary, there is widespread chronic and acute food insecurity resulting from poorly functioning markets, poor transportation infrastructure and lack of non-farm employment opportunities.

Agriculture. Myanmar is an agricultural country richly endowed with land and water resources and favourable climates for agricultural production. The agriculture sector constitutes the core of the economy, represents 36% of GDP, employs 61% of the working population, and contributes over 16% of export earnings. In a normal year, the country produces enough food to supply its people and exports the surplus. Of the 67.7 million ha in Myanmar, the cultivable land represents 17.6 million ha

(26%), of which only about 70% are actually farmed (12.3 million ha)². The remaining land area is accounted for by reserved forests (18%), other woodland (25%) and others (31%).

Myanmar's share of agriculture in GDP has remained high over the past 40 years, indicating insufficient structural transformation of the economy. In 2010-11, total GDP growth was 5.5% while GDP growth in industry and services reached 6.5% and 6.3% respectively, compared with only 4.1% in agriculture. Despite its share of GDP and its importance for employment and livelihood, agriculture appears to have been neglected in terms of public expenditure; a significant part of MOAI's budget is allocated every year to irrigation infrastructure to the detriment of extension services or research.

Over the past two decades, the Government has focused on achieving rice self-sufficiency. As a result, the rice cultivated area has increased by 19% (from 6.3 to 7.6 million ha of which 6.6 million ha of monsoon paddy and 1.0 million ha of summer paddy), and production increased by 33% (reaching 29 million MT in 2011 with an average yield of 3.8 MT/ha) due to improved extension services, introduction of improved high yielding varieties of rice, and delivery of improved seeds and fertilizers. The area sown with pulses increased over the past two decades from 1.7 to 4.0 million ha, with production now reaching 5.5 million MT at an average yield of 1.35 MT/ha. Since 1995, the sesame cultivated area increased by 38% and production by 126%, while the groundnut cultivated area increased by 56% and production more than doubled. Chili production grew over the past two decades from 30,000 to 118,000 MT, onion from 263,000 to 1.1 million MT and garlic from 97,000 to 213,000 MT. Producers and other commodity chain stakeholders are organized in twenty three private agricultural associations by the Union of Myanmar Federation for Chambers of Commerce and Industry (UMFCCI), including paddy producers; rice and paddy traders; rice millers; pulses, beans and sesame seeds merchants; and onion, garlic and culinary crops producers and exporters.

Investment in agriculture is constrained by limited access to inputs, particularly seeds and fertilizers. Domestic supply remains far below demand, and imported fertilizers are often adulterated. Most farmers use low-quality seeds of mixed varieties producing a high proportion of low-value broken rice. While the production of seeds and planting materials is almost the exclusive responsibility of the DOA, some rice specialized companies (RSCs) are now initiating certified paddy seed production and distribution through contract farming arrangements in designated areas. RSCs provide seasonal loans and inputs that farmers pay back in-kind after harvest at prevailing market prices. Farmers benefit from a guaranteed market and access to credit, resulting in improved crop productivity and quality. Some specialized agricultural development companies (SADCs) are providing the same services to farmers growing oil seeds and pulses.

Agriculture is also constrained by weak extension services. Agricultural extension is provided by the Agriculture Extension Department (AED). Extension staff is inadequate in number and quality. In 2011-12 AED included 428 field extension officers and 3,085 village managers. Field extensionists rotate quickly, and do not stay more than 3-4 years in one location. There is little orientation towards the problems of farmers, and insufficient budgetary resources prevent field visits and hinder sharing of knowledge. Extension is focusing on transfer of technologies aiming at increasing yields rather than maximizing return on farmers' investments. Of particular concern is the lack of operational interaction between the Department of Agriculture Research (DAR) and extension, which contributes to the overall 40%-50% yield gap between research and farmers' achievements. Most extension messages are centrally designed and mechanically implemented by field staff over a diverse range of agro-ecological and socio-economic conditions, without proper consideration of farmers' needs and limitations, or market requirements.

Agricultural production is further hampered by high post-harvest losses. Processing facilities that help reduce waste and add value are still lacking for most crops. Smallholder farmers and private entrepreneurs have limited awareness of systematic post-harvest handling practices in commercial application. On irrigated lands, the quasi-absence of farm roads also generates post-harvest losses.

² Based on the 2010 Myanmar Census of Agriculture (MCA) carried out by MOAI.

The Government disseminates information every two weeks on agricultural prices and market flows through radio, television and newspapers. The Myanmar Business Coalition, a NGO established by traders and businesses, has established a market information system maintained by local traders and using FM radio stations. The Myanmar Agri-Business journal of MOAI, the Farmers' Journal and the Agro-cyclopedia Journal (private newsletter) are providing farmers with information on updated seed technology, cultural practices, GAP systems, and integrated pest and disease management. The Farmers Channel of Myanmar Radio and Telecommunication also provides agricultural information.

Irrigation. Irrigation infrastructure has been significantly expanded since 1989, targeting paddy-producing areas in the delta and central dry zone. A summer paddy programme, which is at the core of MOAI's activities, was introduced in 1992. The availability of irrigation water during the dry season has been instrumental to the extension of summer paddy areas and increased cropping intensities. The typical highly fragmented pattern of small bunded basins (0.25-0.30 acre) with irregular shape and at slightly different levels characterizing rice production under rainfed conditions is widespread in the irrigated rice growing areas. Irrigation water is discharged from the plots nearest to the canal outlets to the lower plots in a plot-to-plot water distribution and drainage system. The flow is controlled by upstream users by temporarily lowering and raising the earth bunds. Practically rice is the only crop that can be cultivated under these flow and drainage conditions. In a recent effort to capitalize on gravity irrigation schemes financed during the past decade, with a vision of modernizing paddy rice cultivation, MOAI has developed model farms with improved field roads and tertiary irrigation and drainage networks spanning a total of 6,000 acres built since 2010. In model farms a comprehensive approach to land consolidation and development is being tested, including new water distribution and management (by ID), land levelling (by AMD), realignment of plot boundaries (by beneficiaries) and re-issuance of land titles (by SLRD), in line with the new Land Law. Model farms are easily accessible across Nay Pyi Taw Union Territory and are effective in raising farmers' interest to modernise their production methods as water security for multiple cropping, access and drainage are improved. Land losses (6%) due to land conservation and development activities have been well accepted by affected farmers, as the gains more than offset 'losses' and hardship.

The Irrigation Department (ID) and the Water Resources Utilization Department (WRUD) are responsible for irrigation, including collecting water taxes. Distinct divisions of the ID are responsible for the design, construction and maintenance of irrigation facilities down to tertiary level, while Water Users' Groups (WUGs), built on existing Village Water Committees, are responsible for building field ditches and for operation and maintenance of ditches and tertiary canals. The ID is also responsible for carrying out hydrological, geological and topographical surveys, while the WRUD is responsible for supplying irrigation by pumping water from rivers, streams and groundwater sources.

There is no policy, strategic or institutional framework that sets out the rights and obligations of irrigation stakeholders. WUGs are currently informal groups that are largely self-formed to manage water along tertiary canals. In the case of complaints members often approach the field staff of the ID as individuals, there is no system of formal sanctions and rules that govern the groups. The amount of water tax collected has reportedly declined every year, but the data is anecdotal at best. The process of collecting the water taxes is difficult because of fragmented ownership and a lack of clarity over titles. The ID had passed responsibility for collecting water taxes to SLRD as the latter maintains land records, but both have stopped serious collection attempts until the land titling process is complete. In addition, sanctions are difficult to apply, partly because of the lacking legal framework and partly because the Government is not expected to turn off irrigation due to the policy of food security through irrigated rice production.

There is an obvious need to synergize farmer-agency relationships in irrigation, based on their complementary roles in system management and mutual accountability³. An important component of this is the capacity building of WUGs and farmers. Key constraints include the lack of an enabling environment, which normally requires: (i) a stakeholder dialogue and consensus building process;

³ *Review of Access to, and Management of, Water Resources in the CDZ*, commissioned by LIFT to the International Water Resources Institute (January – June, 2013).

(ii) an enabling legal framework in which the legal status, membership, rights and responsibilities of members are clearly stipulated; and (iii) a capacity building and support programme.

Land. In March 2012, the legislature enacted a new Land Law⁴ that sets out amended rules for “*the right to work farmland*” whilst retaining ownership of all land by the Government. The new law officially reintroduces the concept of private ownership, i.e. land tenure rights, which can now be sold, traded, or mortgaged. However, all land remains the property of the state and can be nationalized by Government if necessary. The new law reduces some protections for farmers, for example allowing land to be repossessed if they fall into debt. Government also retains overall control of the transfer, mortgage or inheritance or land tenure rights; as well as the right to determine which crops are to be grown on agricultural land and to repossess the land if farmers do not comply. The Settlement and Land Records Department (SLRD) has completed issuing land tenure rights certificates to farmers in the Nay Pyi Taw region. Restrictions imposed on land use rights increasing tenure insecurity and strict conditions placed on the choice of cropping pattern hinder long-term investment in agriculture.

Despite the average size (relatively large) of arable land per capita compared with neighbouring countries, most cultivated land is farmed by smallholders, with an average landholding of 2.4 ha (almost 6 acres). According to data from the agricultural census of 1992-93 and 2003, and the IHLCS of 2009-10, the number of agricultural landholdings has steadily increased over the last 20 years, from 2.7 million in 1992-93 to 4.4 million in 2009-10. Landholding size varies across regions (Table 1).

Table 1: Landholding size in Nay Pyi Taw region and Myanmar

Land distribution	No land	<1 acre (<0.4 ha)	<2 acres (<0.8 ha)	<4 acres (<1.6 ha)	>4 acres (>1.6 ha)
In the Central Dry Zone	42,6%	2,5%	12,8%	21,6%	20,5%
In Myanmar	49,9%	2,2%	15,8%	16,3%	15,8%

Landlessness. A critical rural issue is landlessness which includes the landless poor as well as marginal farmers. The Agriculture Census (2003)⁵ gave the proportion of rural households ‘*not having access to land*’ as 35%-53% of all rural households in different parts of the country. The 2003 census figures are supported by a recent survey by LIFT (2012) of 4,000 households in 3 agro-ecological zones⁶, which found that 50% of households nationally are landless. The 2010 agriculture census found that nearly 50% of agricultural households, i.e. over 2.4 million households, had marginal landholdings of less than 2 ha. In upland areas, landlessness is often worse, with for example more than 50% of landless households in 12 of the 19 townships in Kachin state, according to the Center on Housing Rights and Evictions. High landlessness and, at the same time, availability of some 6.7 million ha of unused land seems paradoxical. Recent Government initiatives such as the new “*Vacant, Fallow and Virgin Lands Management Law*” combined with economic, social and political reforms address the inability of the landless to resettle in such areas. In Nay Pyi Taw, the landless constitute 27.5% of those working in agriculture as wage labourers on land farmed by larger-scale farmers, or working as casual labourers in non-agricultural activities. Landless have little access to knowledge and finance. As a result, very few landless people are able to start income generating activities.

Gender. Buddhist customary law and the 2008 Constitution provide equal rights to women and men. However, women are not well represented in the political and higher level administrative sphere outside the traditional areas of social services, health and education. At the local levels (districts, townships, villages) there are few women representatives, particularly in key decision-making bodies. The prevailing cultural disposition is towards a stereotypical gender division of roles, with women closely associated with domestic activities, although they are quite dominant in decision-making and often have ownership of assets. The five-year National Plans for economic and social development

⁴ Source: Farmland Law enacted by the Pyidaungsu Hluttaw under Order No.11/2012 dated 30 March.

⁵ As quoted by WFP/FAO/EC (2007) *Identification and assessment of the poor, food insecure and vulnerable in the Myanmar*.

⁶ LIFT Baseline Survey Results, July 2012.

have not adequately addressed the issue of gender inequality, and there has been limited attention to the disproportionate burden of poverty and militarisation that falls on women. In addition, systems for collecting gender-disaggregated data and monitoring women's welfare and gender are poorly developed and narrowly focused on reproductive functions.

There has been considerable progress in recent years to mainstream gender. The Department of Social Welfare is the focal point for gender and in 2011 prepared a "National Plan of Action for the Advancement of Women 2011-2015". A key objective is to see women contribute increasingly to current decentralisation reforms in order to play a greater role in decision-making at the local level as well as in productive sectors. The Myanmar National Committee for Women's Affairs is a national mechanism for the promotion of women's rights, a UN-led Gender Theme Group was formed in 2009 to mainstream gender in humanitarian and development operations, and a Gender Equality Network is a leading network of civil society, national and international NGOs, UN agencies and technical resource persons on gender issues. The Women Organizations Network of Myanmar was formed in 2008 to coordinate local and national women groups and organizations, and now has a network of over 29 local women groups and organizations.

The experience of gender integration in rural and livelihood projects in Myanmar has been generally positive. In particular, women are the main recipients in many micro-finance schemes aimed at supporting income generation, such as those managed by PACT. The design mission found women's groups to be highly effective, and established gender roles can be challenged to enable women to have greater access to and control over resources. It is noted that over 50% of extension agents are women; the project should be careful not to lose them during implementation.

Financial institutions. The financial sector is small and underdeveloped. Access to financial services is very limited, and only 2.5% of outstanding loans are in agriculture. Four state-owned banks and 19 private banks dominate the sector, supervised by the Central Bank of Myanmar. There are 1,625 credit cooperative societies established under the Ministry of Cooperatives, 318 licensed MFIs established by international partners and local associations, 60 specialized agriculture development companies, and informal lenders, including traders and input suppliers. There is only one state-owned insurance company in Myanmar, small in scale and outreach, which doesn't operate in the agricultural sector. There are no credit bureau, no microfinance APEX body, and no microfinance association (although there is a microfinance working group composed of PACT, World Vision, GRET, Save the Children and AMDA). There is no microfinance training institute. Payment systems are undeveloped; ATMs were introduced in 2013 while credit cards were introduced in late 2012.

Expanding financial inclusion and microfinance especially in rural areas is closely related to the development of the formal financial sector. Currently several factors inhibit financial sector growth and outreach to the unbanked population: (i) interest rate caps set by the Central Bank: 8% on deposits and 13% maximum lending rate; this curtails their ability to lend profitably to low-income segments; (ii) deposits limited to 25 times paid-up capital limiting the ability of banks to mobilize more savings; (iii) liquidity ratio of 20% resulting in a shift to more profitable segments, such as to larger traders and construction companies, and further limits credit access to smaller enterprises and micro-clients; (iv) collateral requirements preventing much of the population to access loans (although land use rights could theoretically now be mortgaged and used to borrow); (v) limited provision of insurance services; (vi) absence of diversification of banking products; the sector is largely confined to fixed deposits and one-year fixed-rate loans; (vi) limited prospects to use innovative technology to increase access. The potential for branchless banking is limited due to the monopolistic and undeveloped communication sector with a low mobile penetration rate of less than 5% of the population.

The Myanmar Agricultural Development Bank (MADB) is owned and supervised by MOAI. It is the major source of institutional credit for small farmers. However, it caters to only one-third of the farming population. It claims to have 1.4 million active borrowers, an outstanding loan portfolio of USD 84 million, and 1.7 million savers with deposits of USD 87 million (and subsidized resources extended by the Myanmar Economic Bank). Its NPL is reported to be on the high side (25%), and it incurs annual financial losses due to the subsidized interest rate. Although the law gives MADB a mandate to

provide diversified financial services to a broad spectrum of borrowers, in practice, it provides loans only to farmers for agricultural production. As rice farmers have been given top priority, they received about 81.4% of total loans in 2009-10 implying a high covariant risk. Seasonal loans (monsoon, pre-monsoon and winter loans) make up the bulk of its lending and are uncollateralized, with joint-liability from 5-10 group members. In principle, loan size is determined by borrower demand and capacity to repay; in practice, because of MADB's limited funds, the amount can be as small as USD 25-50 per ha, compared with an estimated production cost of USD 250-475 per ha, forcing farmers to fill the gap by borrowing from informal money lenders at 10%–20% interest per month.

Private commercial banks have shown little interest in microfinance and rural finance because they typically lack capacity and expertise and because of regulatory constraints. Although the new Bank Law will be more favourable for commercial banks, it is unlikely that they will enter into rural finance considering restrictions imposed on land tenure and cropping pattern choice.

Supervised by the Ministry of Cooperatives, the cooperative sector consists of one apex, 20 unions, 461 federations, and 10,751 primary societies (as at December 2012). Financial cooperatives are organized under the Union of Savings and Credit Federation, which has 41 savings and credit federations and 1,625 primary level societies. The Union does not have a microfinance license. It lends to primary societies at a flat 2% interest rate per month. Among thousands of primary-level societies, the Microfinance Cooperatives (142) and Agriculture Savings and Credit Cooperatives (896) are among the largest groups. It is noted that the cooperative movement has a mixed reputation due to poor governance, previous crises and a history of Government interference. Terms and conditions of loans extended by cooperatives are hardly suitable for agriculture financing.

Before the passage of the Microfinance Law in November 2011, only PACT UNDP was allowed to operate in Myanmar legally. All others operated without legal status, which prevented them from scaling up operations. Since then, many NGOs have received or will soon receive MFI licenses. The leading institutions (GRET, PACT, Save the Children, World Vision) have reached over 467,000 active borrowers with an aggregate loan portfolio of over USD 63 million (average loan outstanding of USD 136); PACT accounts for about 80% of the portfolio. New entrants include IFC supporting ACLEDA of Cambodia to open a microfinance bank, and several green-field MFIs supported by LIFT. The geographical distribution of MFI/NGO operations remains uneven, with the majority in the south and south-east. MFIs/NGOs are supervised by the Microfinance Supervisory Committee.

Sixty specialized agricultural development companies (SADC) provide value chain finance for rice production (a bundled package including TA, seeds, fertilizers, rice milling, sales contract, and cash/in-kind lending at 2% per month). They lend about USD 50 million each season to about 200,000 farmers. SADCs are typically owned by a few Yangon companies with export experience and local large farmers, traders and millers. A typical borrower holds five to seven acres and receives a loan of USD 70-100 per acre, compared to the USD 50 per acre loan from MADB. An uncollateralized group lending methodology is used. SADCs report a 95% repayment rate over the past three years.

LIFT, a multi-donor trust fund, provides funding to several MFIs. It works with the World Bank on the Financial Inclusion for National Development (FIND) project which will primarily support the Microfinance Supervisory Enterprise through capacity building for microfinance supervision, training of staff to perform supervisory functions, and financial literacy and awareness. It will also work with UNCDF on the MicroLead project, and on the Making Access Possible diagnostic of Myanmar.

Farmer's indebtedness constitutes a serious problem in Myanmar, and the number of landless farm households is increasing. Working capital for farmers is exceedingly expensive for the small amounts provided by MADB, farmers having no other solution than borrowing the necessary balance from money lenders at a rate of interest incompatible with agricultural activities (ranging from 5 to 10% per month with an average around 7%). Bad harvests can mean that farmers need to sell their land to satisfy loan repayment and become casual labourers.

Policy, strategy and institutional context. Emerging from 50 years of isolation, Myanmar has embarked on a comprehensive programme of political and economic reforms that aims to introduce

elements of popular representation in the political sphere, foster economic growth and inclusive social development, improve the business environment, attract foreign investment and reduce poverty. The EU lifted its economic sanctions in April 2013 and the USA has suspended its bilateral sanctions. ASEAN is now fully re-engaged, and South-east Asian investment in the country is increasing rapidly. The major multilateral and bilateral institutions are starting to establish operations in the country.

Government's reform agenda is articulated around the adoption of an open market economy; improvement of socio-economic conditions and reduction of rural-urban gaps; protection of social and economic rights; development of infrastructure and delivery of basic services, including for ethnic groups; improvement of health and education standards; protection of human rights and freedoms; respect for the rule of law and an independent and transparent judiciary; respect for the role of media; good governance and public scrutiny of executive and legislative bodies; institutional capacity-building and human resource development; government's accountability, responsiveness and inclusiveness; and decentralization. Many of these policy priorities are likely to impact on the rural sector, particularly in terms of safeguarding fundamental rights, including those of farmers.

Government has started to put into place many of these proposals: an inclusive process of political reconciliation; the relaxation of restrictions on press freedom; a proactive legislature that has taken the lead in adopting important legislation; the expansion of basic freedoms; an accelerated peace process; a process of decentralisation; and, broad economic and governance reforms with a focus on equitable and inclusive growth, in particular through efforts to address poverty and promote rural development, including through land reform. Key legislation passed by Parliament over the past two years that impacts on social and economic development includes: a law on the environment and conservation; a law on farmland that provides for stronger land tenure rights; a law on microfinance; a law on the use of unutilised, fallow and waste land; and a law on foreign investment that updates the existing law of 1988, making the country more attractive for foreign investors. The Government has initiated the process of decentralization with the "*Ward or Village Tract Administration Bill*" to reform laws on local administration by introducing democracy through the election of local representatives and officials by secret ballot. The process of decentralization has significant implications for the role of local government in rural development and rural poverty alleviation. All in all, these reforms provide a sound basis for further social, political and economic development for the country⁷.

Serious lack of capacity in the public sector to implement policy decisions is a major constraint to the success of these social, economic and political reforms. Thus there is an urgent need to build capacity at all levels of governance, ranging from central government agencies to institutions at state, regional and township levels. There is also a need to translate policy decisions, such as the poverty alleviation and rural development action plan, into sectoral plans and strategies to be implemented by Government institutions. Development partners have helped Government to set up various Working Groups to assist with drafting and implementing these policies, strategies, sectoral approaches, and development plans (IFAD is a core member of the Agriculture and Rural Development Sector Working Group). Other major constraints faced by the public sector include the lack of robust and up-to-date operating systems and procedures, and excessively centralised decision making processes.

The agriculture sector comprises four sub-sectors: crops, livestock, fisheries and forestry. There are seven principal agencies responsible for agricultural and rural development, of which three have a direct bearing on the agricultural sector⁸: (i) Ministry of Agriculture and Irrigation (MOAI) responsible for crops, irrigation, agricultural credit and mechanization; (ii) Ministry of Livestock, Fisheries and Rural Development (MOLFRD); (iii) Ministry of Environmental Conservation and Forestry (MOECAF). Following Myanmar's five decades of isolation, MOAI (like other Ministries) is widely assessed as being weak in terms of human capabilities, technical capacities, fiduciary processes, farmer outreach and budgetary allocations. Its experiences with participatory approaches involving poor communities, small farmers and landless tenants are limited. It has little exposure to effective project management and execution in compliance with international standards and the requirements of external partners;

^{7/} *Reform in Myanmar: One year On*, Update Briefing No 136, International Crisis Group, April 2012.

⁸ The other ministries handling rural areas are the Ministries of Cooperatives, Home Affairs, Industries, and Border Areas.

and its administrative processes are outdated. Its coordination capacities are minimal, and its eleven departments⁹ work in silos. Decision making lacks transparency and internal procedures are unclear. Monitoring is poor and data reporting is unreliable, resulting in inconsistent institutional actions.

The Nay Pyi Taw Accord for Effective Development Cooperation agreed between Government and Development Partners (in early 2013), promotes transparency, collaboration and local ownership and management of development efforts. The Accord establishes a coordination structure between Government and partners to ensure development assistance brings maximum benefits to Myanmar, by supporting the implementation of strategies defined by Myanmar.

National Rural Poverty Reduction Strategy. Although Myanmar does not have a poverty reduction strategy *per se*, national development plans have served that purpose in support of Goal 1 (poverty reduction) of the MDGs. Moreover, the Government is putting into place a more coherent approach to development with the introduction of the long term National Comprehensive Development Plan (NCDP) and the Framework for Economic and Social Reform (FESR) that were unveiled at the Myanmar Development Cooperation Forum in January 2013. The FESR sets a direction for the continuing reform process and articulates its broad goals as well as its medium term objectives. It provides a bridge between the reforms and the twenty-year NCDP, and focuses on a policy agenda for the next three years that will define potential “quick wins” to be implemented to deliver tangible and sustainable benefits to the population. The NCDP, FESR and PARDAP thus provide the umbrella for the agricultural sector through the National Medium Term Priority Framework 2011-2014 (NMTPF) and the Country Programme Framework 2012-2016 (CPF) agreed by Government and FAO. These sectoral plans should address the rural poverty reduction priorities of the national plans for inclusive growth through their seven priority outcomes. The first priority is to increase agricultural production to ensure food security, which includes measures for poverty reduction, while the sixth is to improve rural livelihoods by helping communities to harness their physical, natural and human capital. The areas for action for the first priority outcome include ensuring food security in deficit regions by empowering farmers to control resources and access opportunities, by improving governance and promoting access to irrigation water, and by promoting income and employment generation. However, the NMTPF and resulting CPF do not specifically target assistance to disadvantaged groups such as the poor, women, the landless and ethnic groups.

The Government is a signatory to the Global Summit on the Millennium Declaration and has reiterated its commitment to reducing poverty to 16% by 2015, half the 2005 level. In this context, the PARDAP focuses on eight priority tasks: (i) agricultural production; (ii) livestock and fisheries; (iii) rural productivity and cottage industries; (iv) micro saving and credit enterprises; (v) rural cooperatives; (vi) rural socio-economy; (vii) rural energy; and (viii) environmental conservation. It targets investments in rural poverty reduction to meet the needs of the rural poor and landless, and aims to strengthen services, such as extension and research, that in the past showed limited responsiveness to farmers’ needs. The PARDAP further guides the formulation of sectoral plans for each of these priority tasks so as to reflect the underlying principles. These plans, which are currently being formulated, will need to define explicit actions for tackling rural poverty and targeting disadvantaged groups. The strategic documents outlined above link national development plans and the reform agenda, and underpin the *Fifth National Economic and Social Development Plan 2011/12-2015/16*; together these provide a vision for the country to become a peaceful, modern and developed nation. The immediate objectives outlined in this plan include: (i) infrastructure development; (ii) development of border areas; (iii) development of rural areas; (iv) poverty alleviation; (v) achieving MDGs 1 and 7; and, (vi) maintaining good economic foundations and financial conditions. This Plan, coordinated by the National Planning Department of MONPED, will also guide the formulation of the rural development strategy and action plan by the Department of Rural Development of MOLFRD in coordination with relevant agencies.

⁹ Departments of Agricultural Planning, Agriculture; Irrigation, Agriculture Mechanization, Settlement and Land Records, Water Resources Utilization, Agricultural Research, Surveys; and the Myanmar Agricultural Development Bank, the Yezin Agricultural University, and Myanmar Industrial Crop Development Enterprise.

b. Rationale

While Myanmar became a member state of IFAD in 1990, it has not received an IFAD loan to date. It has however participated in two regional grants covering the greater Mekong sub-region. In July 2011, OSC (2011/21/APR) endorsed the first COSOP for Myanmar together with pipeline entry for a new project to be financed by IFAD. However, due to elections in late 2011, establishment of the new Government in early 2012, and sweeping reforms instituted in 2012, the pipeline project could not be processed during the 2010-2012 PBAS cycle. In November 2012, IFAD approved a small country grant which aims to strengthen the capacity of the Department of Rural Development to implement the PARDAP; this grant has been signed by both parties and is now operational. In December 2013 IFAD approved a small country grant to UNOPS for building the project management capacity of the MOAI.

The 2013-2015 PBAS allocation for Myanmar is USD 36.8 million, and Myanmar is presently eligible for loans on highly concessional terms. The country programme for the cycle will consist of the updated COSOP, two investment projects and several small grants. The updated COSOP and the FARM project will both be submitted to the Executive Board in April 2014, while the second project will be designed in 2014 and submitted to the Executive Board in December 2014 or April 2015.

The MONPED, on behalf of Government, has formally requested IFAD to finance agricultural operations in Myanmar. IFAD and MOAI have agreed in principle on a two-project approach. The first project – FARM – focuses on creating a sustainable and scaleable agricultural development model for the central dry zone. It will be implemented in selected townships of Mandalay region (Nay Pyi Taw union territory), for subsequent scaling up across the zone as appropriate. Guided by IFAD's *Strategic Framework 2011-2015* focus on a comprehensive development approach serving poor rural women and men, the *Targeting Policy* focus on inclusive targeting to create an enabling environment for rural poverty reduction, and the *Rural Finance Policy* focus on promoting inclusive financial systems to improve the access of the rural poor to financial services, FARM adopts an *inclusive development methodology*. At the community level, it combines the smallholder irrigated land development model initiative of MOAI with investment in livelihoods support for rainfed farmers and landless households. It introduces several innovations in Myanmar's context: a participatory approach to land development; provision of a range of services and knowledge resources for smallholders and the landless; and, the building of institutional, technical and operational capacities at community, township and state levels.

In this context, it is worth noting that *the design of the FARM project is already being scaled up* by the World Bank, which plans to invest USD 100 million in October 2014 in three locations of the Central Dry Zone (Mandalay, Sagaing, Bago) replicating the FARM project design.

The second project, to be designed in 2014, will focus on climate-smart smallholder agriculture development, agribusiness linkages and non-farm enterprises, and will utilise lessons learned during the design process of the FARM project. It is expected to cover selected areas of the Eastern states and to target smallholders and ethnic groups.

At the current stage, agriculture sector modernization is fundamental for improving national food security and re-establishing Myanmar's competitiveness as a major agricultural producer and exporter. With rapidly-evolving policy changes and reforms, and with increasing attention to the needs and demands of the population, the Government believes that timely delivery of IFAD support using an inclusive targeting approach will provide quick-wins and impact for the rural poor. FARM will apply the new Land Law by financing land consolidation and land titles for smallholder households, and promoting mechanization to overcome peak season labour constraints. It will also build on the new Microfinance Law by promoting a range of financial services, in line with financial sector reform. Most importantly, it will introduce best practices from elsewhere to develop a sustainable operational and scaleable model for smallholder agriculture and rural development across the central dry zone.

II. Project description

A. Project area and target group

Project Area. Nay Pyi Taw Union Territory is at the southern tip of the central dry zone, an area characterised by a large population of the poor vulnerable to climate change, with sandy soils, low rainfall and high population density. This is a priority area of the PARDAP and the Fifth National Economic and Social Development Plan; it is also a priority area for development partners such as UNDP. Nay Pyi Taw was part of the Mandalay region, which has a rural poverty rate of 31.6% and a rural food poverty rate of 6.5% compared with the national average of respectively, 29.2% and 5.6% respectively. Mandalay region makes the second highest contribution to national poverty and food poverty.

In line with Government request, the project area consists of: (i) the command areas of six irrigation schemes (Paunglaung, Chaungmange and Madan in Tekhina district; and Yezin, Ngalit and Sinthay in Ottra district) in Nay Pyi Taw Union Territory amounting to 87,183 acres within the area of five townships (Lewe, Ottrathiri, Pyinmana, Tatkon, Zeyathiri); and, (ii) an additional 25,000 acres of rainfed lowlands and uplands located around these townships (to be selected at project start up based on poverty and outreach criteria as well as on- and off-farm business potential). The project therefore covers an aggregate area of 112,183 acres (45,400 hectares) which constitutes 45% of the cultivated land in the five townships. Table 2 illustrates the total land area, the cultivated area, and the project area in the targeted townships.

Table 2: Project Area Characteristics

District/ Township	Total Land	Cultivated Land				Other Land	Project Area		
		Lowlands	Uplands	Other	Total		Command	Rainfed	Total
Ottra									
Ottrathiri	204 961	4 858	4 215	0	9 073	195 888	19 748		
Zeyathiri	147 225	12 384	10 532	61	22 977	124 248	11 748		
Tatkon	445 368	46 220	54 029	11	100 260	345 108	16 032		
Sub-total	797 554	63 462	68 776	72	132 310	665 244	47 528		
Tekhina									
Pyinmana	272 502	15 628	9 931	1 765	27 324	245 178	25 175		
Lewe	558 239	57 302	30 840	53	88 195	470 044	14 480		
Sub-total	830 741	72 930	40 771	1 818	115 519	715 222	39 655		
Total	1 628 295	136 392	109 547	1 890	247 829	1 380 466	87 183	25 000	112 183

Source: elaboration based on data from Nay Pyi Taw Council, SLRD

The five townships are inhabited by about 166,555 households consisting of 799,167 people, while the 82 village tracts located within the project area are inhabited by about 59,074 households consisting of around 286,303 people. Based on the socio-economic survey undertaken in July/August 2013, it is estimated that 31,000 households are farming on irrigated land (with some also cultivating rainfed areas), 3,000 households are farming exclusively on rainfed land, and 25,000 households are landless. Ethnic groups across the five townships account for less than 2% of households (mainly Kayah, Kayin, and Shan), and are concentrated in upland areas.

With respect to the socio-economic status of irrigated farming, rainfed farming and landless households in the project area, the survey found that in aggregate terms some 18% of households are better off, 21% are in moderate status (slightly above the poverty line but highly vulnerable to shocks), 24% are poor, and 37% are very poor (table 3). The IFAD target group will consist of the 61% of households below the poverty line, the 21% which are vulnerable (to prevent them from slipping into poverty); and the 18% who are better off (under the inclusive targeting policy).

Table 3: Socio-economic Stratification of Project Area Households

Household type	Better-off	Moderate	Poor	Very Poor	Total	% of Total
Irrigated farming households	33%	37%	28%	2%	100%	51%
Rainfed farming households	4%	15%	52%	30%	100%	7%
Landless households	3%	3%	14%	80%	100%	42%
Weighted average	18%	21%	24%	37%	100%	100%

Source: elaboration based on the socio-economic study, July/August, 2013

The socio-economic stratification of project area households is based on a set of characteristics as outlined in the Table 4.

Table 4: Indicative Characteristics of Project Area Households

Main Features	Better-Off	Moderate	Poor	Very Poor
HH distribution	18%	21%	24%	37%
Dependency ratio	Low	Reasonable	High	Extremely high
Ag. landholding (total/ irrigated in acres)	10.90/ 9.25	5.32/ 4.08	2.86/ 2.04	0.19/ 0.00
Cropping pattern	3 crops	3 crops	2 crops	2 crops
Average livestock holding	3 draught cattle, 1 pig, chickens	1 draught cattle, 1 pig (50% of HHs), chickens	1 draught cattle, 1 pig (50% of HHs), chickens	1 pig (33% of HHs), chicken
Household assets	Motorcycle, hand tractor, water pump, thresher/crusher, cart	Motorcycle, hand tractor, water pump, cart (50% of HHs)	Motorcycle and cart (<50% of HHs)	Bicycle (<50% of HHs)
Access to electricity	76%	73%	64%	37%
Education (completed primary/secondary for head of HHs)	60%/ 31%	54%/ 18%	40%/ 11%	29%/ 6%
Income/ year				
- Agriculture (production)	3,157	1,706	788	51
- Agriculture labor	-	28	206	305
- Other labor and employment	142	134	238	263
- Trade	338	175	38	22
- Other income	342	305	223	114
Total Income	3,979	2,348	1,493	756
- Income/ capita/ day	2.29	1.35	0.86	0.44

Source: elaboration based on the socio-economic study, July/August, 2013

Target Group. The project's target group consists of poor rural women and men in the project area. Specifically, it consists of: (i) women and men farmers in the command areas of the six targeted irrigation schemes; (ii) women and men farmers with landholdings only in rainfed areas; (iii) poor landless women and men living in village tracts in the project area and interested to invest in rural micro-businesses. Women-headed households and ethnic groups' households will be given priority in project planning and implementation.

The project's target group consists of 59,074 households with 286,303 people (Table 5). This includes the primary target group (moderately poor, poor and very poor households) and the secondary target group (better-off households).

Table 5: Project Target Group

Target group	Target area (acres)	Primary target (HH)	Secondary target (HH)	Total target (HH)	Total target (people)
HHs farming irrigated land					
- within improved irrigation scheme	10.000	2.211	1.089	3.300	16.104
- outside improved irrigation scheme	77.183	15.670	7.718	23.388	114.137
HHs farming rainfed land					
- on additional 25,000 acres	25.000	7.272	303	7.575	36.969
Landless HHs	0	24.066	744	24.811	119.093
Total	112.183	49.219	9.854	59.074	286.303

Targeting. The project's targeting strategy is based on several key elements outlined below.

- *Geographical targeting:* The poverty analysis concludes that whilst the central dry zone and the Mandalay region are below the national poverty line, Nay Pyi Taw Union Territory presents better livelihood opportunities for the rural poor (with higher rainfall and more irrigated lowland than is typical for the zone).
- *Enabling policy and institutional environment:* Selection of Nay Pyi Taw provides an opportunity to generate evidence-based strategies emerging from operations in support of an improved enabling environment for rural poverty reduction. Participatory land consolidation and water management requires land certification as a foundation; Nay Pyi Taw is the first region to complete the land certification process and is therefore an ideal place to generate lessons on best practice.
- *Self-targeting:* The goods and services to be financed by the project respond to the priorities, financial and labour capacities and livelihood strategies of the various segments of the target group (irrigated smallholders, rainfed farmers, the landless) as identified by the socio-economic study and the design mission.
- *Direct targeting.* The project will provide targeted support to: (i) irrigated smallholders through land development investments and access to services; (ii) rainfed farmers through access to services; (iii) the landless through investment support for micro-business activities.
- *Social and gender inclusion.* Self-targeting will be supplemented by measures to ensure that project services respond to priorities and capacities of poorer groups and women. These will include: (i) an inclusion and gender study to be carried out at project start up to detail needs, priorities, opportunities and governance representation systems; (ii) an inclusion and gender mainstreaming strategy and action plan based on stakeholders' workshops in the initial stages of implementation (the gender mainstreaming strategy will promote gender equity to ensure women's equitable access to, and control over, the resources and services provided).

c. Development objective and impact indicators

The project's goal is to improve the economic status of poor rural women and men in the project area. Its objective is to increase the incomes of smallholder and landless households.

The impact indicators to be applied for measuring project performance relative to its goal and objective will measure the incomes, nutrition and food security of targeted smallholder and landless households. At outcome level, this will include access to land and water resources, agricultural productivity and production, sale of agricultural output, access to technical and financial services, development of skills and knowledge, establishment of viable micro-businesses, and employment opportunities generated for rural women and men. These are detailed in the logical framework. The specific monitoring indicators will be prepared by the project in consultation with key stakeholders.

d. Outcomes/Components

The project's outcomes are as follows.

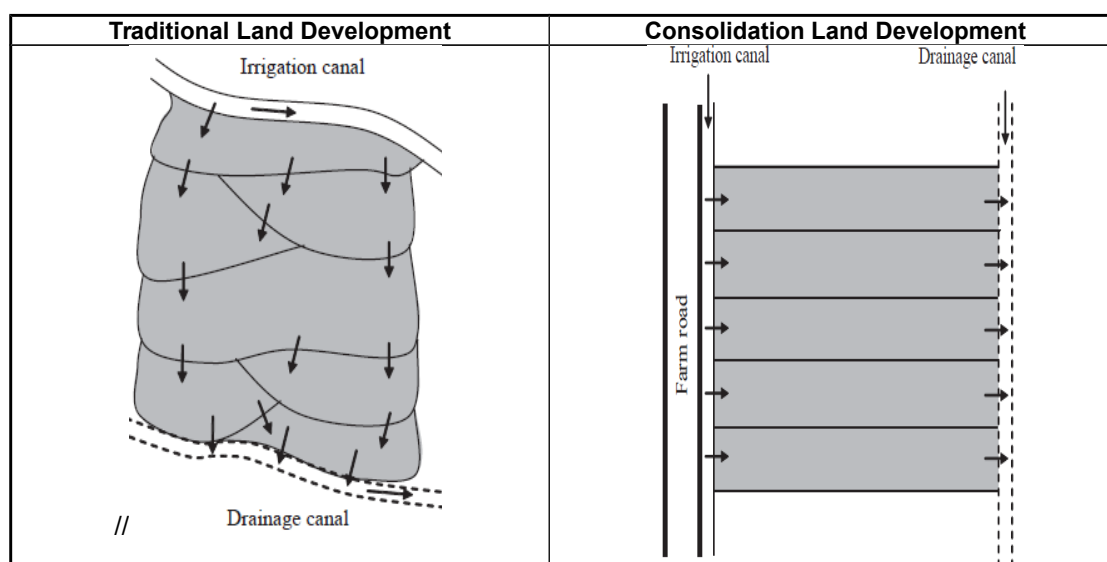
- Component 1: Agricultural Infrastructure: land and water resources sustainably managed;
- Component 2: Agricultural and Business Services: (i) skills of farming and landless households enhanced, employment improved, relevant value chains upgraded; (ii) financial environment for creation and expansion of sustainable and profitable rural businesses improved.

Components

Component 1: Agricultural Infrastructure. The project will contribute to ongoing expansion of irrigated areas under the command of primary and secondary canals (developed, or to be enhanced by MOAI), with complementary investments in land development identified through a participatory design process. The objectives are to: (i) improve the equity of irrigation water distribution; (ii) create opportunities for crop diversification; and, (iii) improve field access (for machinery and transport). Areas for which land user rights have been approved and land titles issued (or are in the process of being issued) will be eligible for land development under the project. Farmer empowerment will be fostered, particularly in scheme operation and maintenance.

Investments in land development will be made over the first four years of implementation, and will cover 10,000 acres primarily in the upstream sections of three irrigation schemes (Paunglaung, Chaungmange, Madan) which were prioritized by the Irrigation Feasibility Assessment mission of July 2013 based on sufficient availability of water during the dry season. Land development (ref. Figure 2) will include land consolidation and land titling, land levelling over the 10,000 targeted acres, about 340 km of tertiary canals (up to field edge), about 180 km of drainage networks, about 200 km of farm roads and about 3,400 associated small hydraulic structures (culverts, gated outlets, checks and end structures). Where required by site conditions, the project will also support the extension of about 10 km of roads, minor canals and related structures, as well as the re-sectioning of main drains and the construction of 10 gated-head regulators.

Figure 2: Schematic Diagram of Land Consolidation



Source: FARM – Irrigation Feasibility Assessment Mission Report, July 2013

Plans for land development will be prepared for contiguous areas (referred to as “blocks” of about 500 acres each, yet varying from 50 to 800 acres). A participatory land use planning (PLUP) approach will be applied, and executed by a NGO with proven experience in community mobilization and free, prior and informed consent (FPIC) approaches. Experiences across the region with similar activities will be assessed and applied as appropriate. The NGO will operate in coordination (‘task force mode’) with

the design, construction and maintenance teams of the ID, staff of the SLRD, the Project Implementation Committee (see below), township/village tract authorities and farmers. For each block, the project will support farmers to make informed decisions and to set up mechanisms for sharing any loss of cultivable land arising from the construction of roads, drains and tertiary canals. In addition to fostering consultation on the preferred routes for roads and canals, the project will help participating farmers to develop maps indicating the boundaries and ownership of the reconfigured plots, to serve as a basis for re-issuance of land titles after completion of construction works. Farmer concurrence with the proposed reallocation and reconfiguration of plots will serve as a pre-requisite for commencement of civil works. A Project Implementation Committee (PIC) at block level, composed of elected farmers' representatives, will monitor execution and carry out the acceptance of the works.

Project investment in land consolidation will comply with IFAD's *Policy on Improving Access to Land and Tenure Security*, in particular: (i) alignment with national priorities/strategies; (ii) adherence to the 'do-no-harm principle'; (iii) appreciation of existing agrarian structures and tenure systems; (iv) empowerment of the rural poor and their organizations; (v) forging of complementary partnerships; (vi) attention to the gender dimensions of land rights; (vii) adherence to the principle of free, prior and informed consent; and, (viii) support to production services and market linkages. The selection of the implementing NGO will specifically take into account its commitment and expertise in these areas. Operating procedures and criteria will be prepared through a consultative process with stakeholders at the outset of implementation, and emerging experiences and results may feed into national policy-making on land tenure.

Design works will be undertaken by ID as part of its normal functions, supported by technical assistance, and presented to the related construction, agricultural mechanization and maintenance units of ID as well as WUGs for validation. Civil works will initially be executed through direct contracts with ID on a block by block basis. This procurement and contracting modality is selected because of the absence of qualified contractors with experience in land development, combined with ID's robust capacity in executing such works. The emergence of appropriate private sector civil works capabilities will be reviewed annually by supervision missions. Where appropriate, the project may consider outsourcing maintenance work to Labour Contracting Societies (LCS), as in Bangladesh, to transfer financial benefits and empower marginalized people, especially women, youth and the landless.

The target levelling elevation in each sub-area will be determined by designers, based on a detailed topographic survey and soil analysis, and carried out using laser-supported hydraulic control to achieve high accuracy. Tertiary canals will be earthen embankments in compacted fill. The area served by a tertiary canal will be less than 50 acres, fractioned into smaller units by means of check structures along the tertiary canal. Roads along a tertiary canal and those connecting several tertiary canals will use different standard widths, but in all instances shall include a compacted sand/gravel mix top layer of at least 200mm. Hydraulic structures (checks, end structures, flumes, head regulators and culverts) will be constructed with plastered brick masonry for which ID has standard drawings. Where applicable, cheaper and faster to install and to maintain, polyethylene pipe systems may also be considered. Upon completion of roads, canals and drains, farmers will be responsible for raising earth bunds delineating plot boundaries based on plans agreed at the early stages of design. Farmers will also install the PVC piped turnouts across the bunds from the tertiary irrigation canals.

Land development investments will be cost-shared by IFAD and Government. IFAD will finance direct costs (fuel, lubricants, materials and labour - net of taxes), while Government will cover indirect costs (machinery work) in kind. An average direct investment cost of USD 740/acre is tentatively considered for land development works carried out through ID, based on a schematic design for land development of a 500-acre block and applicable unit rates for use of equipment, labour and materials. The cost of machinery work based on machine-hire rates is expected to account for about 30% of the direct cost of works. Official unit rates issued at district level and adopted norms on machinery output will be assessed by an international service provider at the beginning of each fiscal year.

The project will promote participatory farmer managed tertiary irrigation systems in line with IFAD's best practices in the region, and will ensure coordination with the water management activities of

other projects (such as those of LIFT and JICA) for methodological consistency. Currently, farmers are responsible for handling irrigation water distribution at tertiary level; however, they are organized in village water management committees with limited capabilities and responsibilities, and lack access to financial resources for O&M. The project will strengthen participatory water management by: (i) registering these committees into formal WUGs (of about 20 farmers each along a tertiary canal) in line with the evolving legal framework; (ii) strengthening WUGs in governance and technical aspects; (iii) supporting WUGs to establish cost recovery mechanisms for O&M and emergency repairs; and, (iv) empowering WUGs to channel their concerns on the timing and quantity of water delivery from ID, and to air any grievances. In the medium term, should the conditions be appropriate, the project may support WUGs to federate into water users' associations at secondary level, or to be placed within a broader cooperative structure. This form of project support for participatory water management, once successfully practiced in the model units of land consolidation and development, may be scaled up across the entire irrigated project area (87,000 acres).

Capacity building will be an important dimension of the development process. The project will strengthen ID's capacity to handle modern irrigation technologies (canal lining, pressurized systems) which have potential in the context of gravity irrigation schemes. An international service provider will be commissioned to organise study tours for ID managers and to provide training to ID technical staff at the Irrigation Technology Centre. Support will also be provided for assessment of the regulatory framework and for participatory water management. Similarly, smallholder groups, constituted around precision irrigation systems such as tube-well solar panel driven drip irrigation for high value market crops, will receive training in the construction and handling of their investments. The project will assist in obtaining the necessary licenses and registration in WRUD to secure reliable water supply.

Following the participatory planning phase for land consolidation and development commencing in PY1, physical works will be carried out from PY2 onwards, indicatively 4,000 acres/year in PY2 and PY3, and 2,000 acres in PY4. Based on each scheme's assessed potential it is expected that some two-thirds of the area developed will be in the Paunglaung scheme. The estimated direct beneficiary population will consist of about 3,000 farming households with an average irrigated land area of 3.3 acres each, of which about 61% are from the primary target group of poor and very poor households.

In addition to investments in land development, the project will pilot small scale investments in micro hydro turbines (under 25Kw) on main canals where feasible to supply electricity to households and to power income generating activities implemented by farming and landless households.

Component 2: Agricultural and Business Services. This component includes two sub-components: (i) investing in knowledge; and, (ii) financing growth.

Sub-component 2.1: Investing in Knowledge. The project will seek to develop a conducive environment for rural households to access services and technologies which enable them to improve their productive and economic activities. In this respect, the project will support: (i) the creation of a pluralistic participatory extension service platform which provides support to farming households; and, (ii) services to landless entrepreneurs to start and develop rural micro-businesses. The expected outcomes are enhanced skills and increased incomes of farming and landless households.

Demand for services. The socio-economic study, the mission's field visits, the discussions with MOAI, and analytical work all indicate that farming households and landless entrepreneurs continue to require and demand knowledge and a range of services to improve their productive and economic activities. This demand however is largely unmet, as MOAI's extension service has little rural outreach due to budgetary constraints. Knowledge transfer is limited and the adoption rate for new technologies and inputs is low. Furthermore, extension services focus on crop productivity, with little attention to commodity development, value chain upgrading, market access and linkages among stakeholders.

Supply of services. The project will organise the delivery of services to farming households and landless entrepreneurs. For farming households, services will cover crops currently produced as well as alternative crops to be introduced, and will focus on: (i) technology transfer, skills improvement and

knowledge development for productivity improvement; (ii) access to improved inputs and supplies; (iii) access to markets, market information and establishment of contractual linkages among value chain stakeholders (forward contracts, contract farming, outgrower schemes); and, (iv) access to financial resources through partner microfinance and/or rural finance institutions. For landless entrepreneurs, services will focus on: (i) upgrading technical skills to develop rural micro-businesses; (ii) provision of business management training; (iii) promotion of market-based approaches; (iv) fostering links with key actors (suppliers, traders, processors); (v) assisting to prepare business plans, loan applications and financial projections; and (vi) access to financial resources.

Knowledge Centres. Services for rural farming and landless households will be delivered through a network of *Knowledge Centres (KCs)* which will build on the existing structure of MOAI's extension service and officers. Fifty-five KCs will gradually be established across the project area to serve as focal points for the provision of services, supply of inputs, and collection and aggregation of outputs, thus facilitating links among value chain stakeholders (MOAI has already identified potential premises for these facilities across the project area). The establishment and operation of KCs will build on regional and global best practices¹⁰. KCs will share with these models a set of key principles: a decentralised and bottom-up approach; pluralism of actors in service delivery; promotion of partnerships, particularly public-private partnerships (PPPs); strong market orientation; and, vision for eventual cost recovery. Considering the novelty of this approach in the Myanmar context, KC services will be rolled out carefully and gradually in line with emerging operational experiences.

Project KCs are low-cost facilities to be set up on the basis of a PPP arrangement. They will be owned by MOAI, governed by an elected, gender-balanced Board representing all socio-economic categories of the rural population (as well as MOAI representation), and managed on day-to-day basis by a MOAI-seconded extension officer to be trained by the project for this purpose. While a multi-disciplinary team may be preferable, the cost implications would be far too high and the prospects for sustainability unacceptably low. Instead, the selected extensionist would manage the KC and mobilise the services required, utilising existing capacities in both the public and the private sectors. A financial mechanism will be elaborated for members to contribute to the costs of operation and maintenance.

Each KC will serve about 2,000 acres corresponding to about 500-650 farming households and an equal number of landless households. To facilitate the delivery of services and maximise their impact, farming households will be organised into gender-balanced common interest groups of about 20 members each, revolving around WUGs for irrigated farms and geographically for rainfed farms, as appropriate. Two or three group members will interface with the KC's manager and service providers, and then train and share information with other group members; a revolving mechanism will be set up for the annual selection of the leading group members. Training and other activities will be organized at KC-level on 500 acre blocks covering about 10 WUGs. Landless households will also be organised in common interest groups of about 20-25 people based on their activities.

KCs will coordinate agricultural demonstrations and trials at farming household level (selected based on willingness, land availability, skills) in collaboration with MOAI's Department of Agriculture Research (DAR), Yezin Agricultural University (YAU), and private sector companies (SADCs, RSCs, input suppliers, and other value chain actors). Four demonstrations/trials will be organised annually by each KC; the costs will initially be covered by the project, and subsequently by private sector input suppliers (already agreed by a range of input suppliers). MOAI seed inspectors will be supported to become service providers for farmers interested to participate in multiplication of seeds for sale to other farmers. The introduction of farmers' field schools will be assessed, particularly to facilitate the link between new crops/new technologies and improved harvest/post-harvest processing. MOAI extension staff capacities will be strengthened through an intensive training programme to improve their skills and participatory methods to deliver services responsive to the priorities of small farmers.

^{10/} with a view to the *Agricultural Extension* in Andhra Pradesh, India, the *Agricultural Extension Services* in Pakistan, the *Agriculture Extension Special Task Force* in China, the *Songhai Centres* in Benin, the *Agribusiness Development Centres* in Sierra Leone, and the *Agribusiness Development Centres* in the Philippines.

The responsibility for organising the provision of services to farm households will be assumed by KC managers, with the support of a contracted NGO. These services will include the creation of farmers' common interest groups; training of representative farmers; demonstrations and trials jointly with DAR; and capacity building support for WUGs. The NGO will support farming households by undertaking agricultural value chain analyses; fostering contractual linkages among commodity chain actors (farmers, input suppliers, traders, buyers, processors); defining post-harvest processing options; and ensuring integration of project-supported farmers into professional organizations.

The same NGO will also be responsible for the provision of services to landless entrepreneurs. It will organize landless entrepreneurs into common activity groups; identify technical needs and create links with vocational training institutes; provide business management training; support the elaboration of business plans, market studies, and loan applications; undertake simple value chain analyses and marketing studies; and foster linkages with MFIs and other stakeholders.

Training of selected extension officers to serve as KC managers will cover partnership building, value chain management, networking, technologies and management. The selected officers will have performance-based contracts for KC management. The project will finance their equipment (mobile phone, motorcycle) and operating costs (field allowances at official MOAI rates). The NGO, selected by the Project Working Group (see below), will have an annual performance-based contract, renewable subject to satisfactory assessment of performance by project management and beneficiaries.

Sustainability. KC sustainability will depend on the ways that public funding can catalyze into viable public-private partnerships for service delivery. Cost recovery on business services and delivery of irrigation water will be considered and introduced gradually (in light of similar experiences across the region). Involvement of and cooperation with the private sector in KC operation will be critical for their sustainability, but this will be carefully phased in during implementation as the private sector emerges, grows, and adopts ethical business practices. TA will be provided to build capacities in managing the knowledge platform as a business/PPP venture in the medium term. IFAD best practices in cost recovery for service delivery will be applied gradually, in consultation with the *Global Forum for Rural Advisory Services* of which IFAD is a governing member.

Sub-component 2.2: Financing Growth. The project will provide financing and will improve the enabling conditions for the growth of sustainable rural micro-businesses and small and medium enterprises. It will further improve the access of smallholders and the landless to rural financial services, and will foster financial intermediaries (such as savings and credit groups) at KC level.

Investment Funds. Two funds will be created under the project: (i) a Rural Business Fund (RBF) in support of rural businesses operated by poor landless entrepreneurs; (ii) an Agribusiness Fund (ABF) in support of selected value chain integrators such as processors/exporters).

The RBF will provide competitive grants to allow landless entrepreneurs (primarily poor women) to finance their micro-businesses and to leverage loans from MFIs, from which they are currently excluded. Competitive grants will cover up to 75% of the total investment cost of maximum USD 5,000, while beneficiaries will cover at least 25% as well as any amount in excess of USD 5,000. The RBF will operate based on periodic (quarterly) public calls for proposals issued by the project. Proposals will be assessed against defined eligibility criteria by a Grant Committee. Typical investments eligible for RBF financing would include fish production in tanks, poultry production, small ruminants raising, and non-farm activities (e.g. furniture production, handicrafts, textiles). Proposals have to demonstrate comparative advantage, market demand and growth potential to be considered.

The ABF will provide competitive grants to encourage entrepreneurs to bring their businesses into the project area and enter into equitable contractual agreements with smallholders. This is fundamental in order to enable smallholders to cultivate high value crops and to access the relevant markets and services. At a later stage when nascent producers' associations evolve into strong organisations effectively serving their members, the project will promote the Public Private Producers Partnerships

(PPPP) model developed by IFAD as a mechanism to replace the Agribusiness Fund and create joint ventures; this transition is expected to be considered in the medium term (after PY3).

These ABF will be aimed at agribusinesses which handle relevant commodities that are, or can be, produced by smallholders (particularly newly introduced high value crops). Competitive grants will cover up to 40% of the total investment cost of maximum USD 400,000, while the entrepreneurs will finance at least 60% as well as any amount in excess of USD 400,000. The ABF will operate based on periodic (semi-annual) calls for proposals issued by the project. Proposals will be assessed against defined criteria by project management and an auditor, reviewed by the Grant Committee, approved by the National Project Steering Committee, and cleared by IFAD. Proposed commodities will have to demonstrate comparative advantage, market demand and growth potential in order for proposals to be considered. Typical investments eligible for ABF financing (for the selected commodities) would include processing, storage, labelling, packaging and marketing. ABF funding will be disbursed in two tranches, the first upon signature of the financing agreement and the second based on compliance (number of smallholders contracted, increases in unit prices paid to farmers, volume of production purchased, number of jobs created). Benefitting agribusinesses will be required to provide technical support to smallholders, particularly in production efficiency and quality control. It is expected that ABF operations will generate substantial quantifiable economic benefits for smallholders, rural employment opportunities, economic multiplier effects, and tax revenues for Government.

The two funds will be managed on the basis of standard operating procedures consistent with IFAD's *Technical Note on Matching Grants* and regional best practices. In particular, an adapted version of the *Competitive Small Grants Manual* developed and operationalised by the Viet Nam ICO will be applied. The manual will be completed at project start up jointly with project personnel (which are essential to ensure relevance and ownership).

Contract farming will be promoted to facilitate smallholders' access to markets, inputs, advice and financing based on existing contracts with Rice Specialized Companies; similar contracts will be set up for other commodities with Specialised Agricultural Development Companies and commercial banks. Several commercial banks have already expressed its interest to finance such a scheme once the Banking Law is amended.

Rural Finance. Two channels will be utilised in order to improve the access of rural women and men to financial services: (i) microfinance institutions to provide working capital loans to smallholders, and investment loans and working capital to landless micro-entrepreneurs; and, (ii) commercial banks to provide investment loans and working capital to medium and large agribusinesses for establishing processing units in the project area. These banks may also finance working capital for farmers linked to participating agribusinesses.

Considering the pivotal role of LIFT in the microfinance sector in Myanmar (refinancing MFIs, building capacities, extending outreach), the project will seek LIFT's support where possible to attract suitable MFI(s) to establish operations in the project area. The selection process will be based on pre-defined criteria. Project incentives to MFI(s) to enter the project area will include: (i) a grant to cover part of the branch establishment costs (50% of capital cost and 33% of first year operating cost for each branch); (ii) a concessional refinancing loan to increase MFIs' financial resources. The refinancing loan would be governed by a subsidiary agreement between MOF and the MFI, while the terms and conditions of onlending would be determined by the MFI. Refinancing would focus on loans to farmers for introducing high value crops under contractual linkages with agribusinesses; (iii) TA to assist MFI(s) to develop appropriate rural financial products and services. Several MFI have informally expressed their interest to play a role in the project. Project support to MFIs will be coordinated with partners who are active in the sector, like LIFT, UNCDF and PACT.

The project will promote the financial empowerment of communities by encouraging inhabitants to form their own savings and credit institutions starting in PY3. An international NGO/MFI will be contracted to support the process, and a twinning arrangement with a relevant partner entity may be considered. Savings and credit institutions will initially focus on savings mobilisation and emergency lending rather than agriculture and businesses activities. Considering the lack of transparency in the

governance and management of savings and credit cooperatives and their federation, it is currently not envisaged that links will be created with the Federation of Cooperatives; however, this will be re-assessed periodically during implementation.

e. Lessons learned and adherence to IFAD policies

FARM represents IFAD's first investment project in Myanmar. Its design incorporates relevant regional and global best practices, as well as lessons and experiences of partner institutions which have been operating in the country (UNOPS, USAID, EU, JICA, UNDP, FAO, UNICEF). Some of the best practices and lessons which have been utilised for FARM are outlined below:

- *Institutional and legal framework.* The institutional and legal framework is the major determinant for growth of the agriculture sector and reduction of rural poverty. The strengthening of relevant national institutions and the influencing of legislation and policy development should constitute key objectives of investment projects. FARM will invest in both these areas.
- *Services.* Investment in productive infrastructure needs to be complemented with the provision of services in order to maximise economic benefits and returns to the rural poor. FARM will complement Irrigation water supply with improved technologies and extension services to increase smallholder productivity and allow the introduction of high value crops.
- *Access to finance.* This is fundamental as it enables farmers to invest in agricultural assets and technologies, and allows agribusinesses to grow, develop backward linkages with smallholders, and create employment opportunities for the landless. IFAD's experiences with savings and credit groups, microfinance, agricultural finance and value chain finance have been considered.
- *Building social capital.* Community organisations, water users' groups, producers' associations, and other self-help groups improve smallholder access to, and benefits from, resources, inputs, financing, markets and decision-making; and they also improve collective negotiation power and advocacy. Relevant forms of community organisations will be promoted by FARM.
- *Participation.* Participatory approaches strengthen communities and gradually enable them to articulate their needs and priorities, to effectively manage their natural resources, to take active roles in design and implementation of development activities, and to influence policy.
- *Capacity building.* The capacity building of individuals and institutions at all levels (communities, public institutions, private sector) is a pre-condition for rural development and poverty reduction. In particular, the gradual strengthening of community organisations and public service delivery is necessary for creating and sustaining growth.

Compliance with IFAD policies. FARM is compliant with all relevant IFAD policies, strategies and guidelines. In particular: (i) its goal and objective are aligned with the *Strategic Framework 2011-2015* in terms of market-driven smallholder development and non-farm rural business growth; (ii) its targeting strategy is consistent with the *Targeting Policy* approach of focusing on economically active poor rural women and men in farming and landless households; (iii) its investments in rural economic growth are compliant with the *Rural Finance Policy* focus on promoting inclusive financial systems to improve the access of the rural poor to a range of financial services; (iv) its participatory approach to land consolidation is consistent with the *Land Tenure Policy*'s focus on the principle of free, prior and informed consent; (v) its environmental impact assessment procedures for infrastructure investments are aligned with the *Climate Change Policy* on proper adaptation and mitigation measures.

The project is also consistent with the Myanmar COSOP 2014-2018, the goal of which is to contribute to reducing rural poverty, specifically of smallholders, the landless, ethnic groups and other marginalised groups. The COSOP defines three Strategic Objectives (SOs) for IFAD's engagement in the country. The SO1 aims to *empower rural women and men to access agricultural resources, technologies, services and markets*. The SO2 aims to *create business and employment opportunities*

for rural women and men. The SO3 aims to promote the social and economic empowerment of marginalised groups, particularly ethnic groups. FARM directly addresses SO1 and SO2.

III. Project implementation

A. Approach

Myanmar has little experience in managing and implementing externally-financed investments in the agricultural sector. Relevant public sector capacities are weak, while the private sector is under-developed and concentrated. Borrowing from experiences in similar contexts elsewhere, the approach adopted for FARM implementation consists of (i) gradual capacity development of MOAI and relevant agencies dealing with agriculture and rural development; (ii) gradually increased MOAI responsibility for implementation in a sequenced manner; (iii) establishment of an autonomous Project Coordination Unit (PCU) which will coordinate project activities and organise implementation through contracted public and private sector entities as appropriate. Special attention will be placed on participatory monitoring and on establishing a *mutual accountability framework* to govern the commitments and accountabilities of the main partners.

f. Organizational framework

Governance. The project's governance framework will consist of: (i) a national project steering committee (NPSC); (ii) a project working committee (PWC) at MOAI level; (iii) township project coordination committees (TPCC); and, (iv) village tract facilitation and monitoring groups.

The NPSC will be chaired by the MOAI Deputy Minister for Irrigation and co-chaired by the Deputy Minister for Agriculture. Other members will include the director-generals of relevant MOAI departments as well as representatives from MONPED, MOF, MOLFRD and Nay Pyi Taw Council. It will be based in Nay Pyi Taw. Its responsibilities will be to provide policy and strategic guidance, review and approve annual work plans and budgets, review and endorse semi-annual and annual reports, review and approve sizeable contracts and financial transactions, endorse staff selection, review audit reports and ensure that corrective actions are taken, and resolve any conflicts.

The PWC will serve as MOAI's internal committee to provide guidance and oversight for proper project coordination. It will be established by the Minister of MOAI, and will consist of deputy director-generals of agriculture, planning, irrigation, research, settlement/land records, and mechanisation; and the project director. It will oversee the appointment of project staff (except the project director and manager) and the recruitment of KCs managers.

In each project township, the TPCC will be chaired by the DOA local officer and co-chaired by the local representative of the Ministry of Home Affairs, with other members representing relevant MOAI departments, implementing agencies and farmers' organizations. It will coordinate the activities of Ministries and departments, participate in drafting AWPBs, review progress reports, provide support to KCs, and guide field staff.

In project village tracts, the facilitation and monitoring groups will be chaired by the village tract leader and include representatives of partner NGOs, the KCs, and community organisations, as well as a staff member of DOA. It will be tasked with ensuring that an effective participatory approach is applied, that poverty targeting and gender mainstreaming are equitable and effective, that AWPBs are responsive, and that monitoring is participatory. This group will meet on monthly basis.

Management. The PCU will be responsible and accountable for the management of the project and the achievement of its results. It will be an autonomous entity reporting to the NPSC, and will be located in Nay Pyi Taw. Its structure will reflect project components and investments, and it will have a certain level of financial autonomy.

The PCU will be managed by the project director (senior officer seconded from MOAI), who will have delegated authority and will be able to commit MOAI as the lead project agency. The director will be

supported by a project manager (agriculture specialist) selected through a competitive recruitment process. The selection of the project director and project manager will be subject to NPSC approval and IFAD clearance. The PCU will consist of three units: (i) the administration office responsible for financial management, accounting, procurement and contracting, headed by a financial manager; (ii) the investment office responsible for investment activities, consisting of a rural finance specialist and an irrigation/water management specialist; (iii) the capacity building office responsible for mobilising communities and strengthening their organisations, consisting of a community/ gender specialist. It will also have an M&E and knowledge management officer reporting to the project manager. PCU staff will be complemented by technical assistance whose role will be to build local capacities in relevant areas. Support staff will be either seconded by MOAI (bookkeeper, clerks, drivers) or recruited by the project (secretary). In addition, provision of IT services for PCU and KCs will be part of the contract with the supplier of computers. IT services will be outsourced to service providers.

A specific committee composed of PCU management (director, manager, heads of offices) will be created to address grievances submitted by project area inhabitants. Project staff will be required to sign a code of conduct at the outset.

Apart from the project director seconded by MOAI, project staff will be recruited from the public or private sectors on competitive basis in compliance with IFAD guidelines. For non-seconded staff, contracts will be for an initial probationary period in line with the Labour Law, with the possibility of extension subject to satisfactory performance. Selection of the project's core staff will be subject to NPSC approval and IFAD prior review.

Implementation. Project activities will be implemented through partnerships with relevant line agencies, NGOs, service providers and the private sector. Partners and service providers will be appointed on performance-based contracts, with performance assessed by the PCU and beneficiary representatives. Specific implementation arrangements are out-lined below.

Component 1: Agricultural Infrastructure. Land development activities will be implemented on contiguous blocks of 500 acres (groups of 125 to 170 households).

- Participatory planning for land development will be implemented by a local NGO experienced in PLUP and FPIC approaches, selected by the PCU (supported by a service provider, possibly UNOPS) on competitive basis and contracted for an aggregate period of up to four years. It will work with MOAI's SLRD and PICs for the issuance of new land titles and user rights once the re-configuration of farm plots has been completed and accepted by the farmers concerned.
- Participation in land development under PLUP and FPIC approaches will be organised by the NGO and PCU to ensure that farming households in each 500-acre block: (i) participate in the design of all civil works; (ii) set up mechanisms for sharing losses of cultivable land arising from civil works; (iii) redefine the boundaries of each household's plot of land for land re-titling purposes; and, (iv) elect a project implementation committee to monitor execution and accept works. Farming households themselves will be responsible for the realignment of earth bunds.
- Civil works for land development will be implemented through direct contract with MOAI's ID. The ID will execute the design, civil works and supervision of tertiary canals, drainage networks and farm roads. A service provider with expertise in infrastructure (possibly UNOPS) will be contracted by the PCU to support engineering design work, assess construction norms, verify unit costs, supervise civil works (complementing ID and beneficiary supervision), and provide technical assistance to ID for capacity building and modernisation purposes.
- The full package of design, implementation and training services for micro hydro turbines will be provided by a specialised international entity or company contracted by the PCU through an international bidding process. This activity will not start before PY2.

Sub-Component 2.1: Investing In Knowledge

- The rehabilitation or construction of KCs will be undertaken by a local firm selected through national competitive bidding. MOAI has already identified possible locations and premises for KCs. Beneficiary representatives will participate in site selection and the design of KC facilities.
- A legal advisor contracted by the PCU will facilitate the selection of beneficiary representatives as well as the electoral process for the formation of the KC Boards.
- KC managers will be responsible for facilitating and brokering arrangements between farming households and commodity stakeholders (input suppliers, agents, buyers, processors) and for organising technical assistance and training to farming households.
- A local NGO will be selected through a competitive bidding process (with the support of a service provider, possibly UNOPS) and contracted by the PCU to provide: (i) capacity building for the 55 selected KC managers; (ii) advisory services for farming households focusing on commodity analyses (crops currently cultivated as well as high value crops to be introduced), contractual arrangements with other value chain actors, and membership within representative farmers' organizations; (iii) value chain analyses to assess proposals received by the ABF for input supply, processing, packaging, storage; (iv) advisory services to landless entrepreneurs focusing on business management training, business plan development, and technical training; and, (v) market studies to assess proposals received by the RBF in key off-farm and non-farm sectors;
- Demonstrations and trials will be organized through agreements among the PCU, DAR, YAU, and private sector as appropriate, based on KC plans. Selected farmers will manage trials on their plots. KC managers and DAR/YAU staff will share emerging lessons through a range of media with the farming community and MOAI. Input suppliers and other stakeholders will be encouraged to gradually participate technically and financially.

Sub-Component 2.2: Financing Growth

- The two funds will be managed by the PCU. The PCU will seek the assistance of LIFT where required and possible. It will issue periodic calls for proposals, analyse proposals received based on pre-defined eligibility criteria (jointly with an auditor for proposals to ABF), define possible amounts of project financing based on resources mobilised by the entrepreneur, submit short-listed proposals to the Grant Committee, and manage financial flows (tranches) to beneficiaries. The scoring matrix will be finalised at project start up.
- International technical assistance will be contracted by the PCU to strengthen the capacity of the PCU's rural finance specialist at project inception.
- The PCU, will broker an agreement with a MFI(s) to establish operations in the project area and provide financial services to smallholders and the landless. Negotiation with the selected MFI(s) will determine the agreed levels of project financial support.
- The formation of savings and credit institutions will be organised by a specialized NGO/MFI contracted by the PCU. Training and TA will be provided in savings and credit management, risk management, portfolio monitoring, product terms and conditions in compliance with microfinance best practices, book-keeping, and governance. Exchanges will be organised with successful savings and credit institutions elsewhere in the region (possibly with Caisse Desjardins in Viet Nam, and with GIZ in Lao PDR).

Partnerships. Project level partnerships will be guided by the country programme partnership strategy outlined in the COSOP and IFAD's corporate partnership strategy. Four kinds of partnerships will be developed, as outlined below.

The Myanmar country programme will seek to develop structured cofinancing partnerships with key partners. The intention is to develop structured cofinancing of the country programme, rather than project-by-project cofinancing, on the basis of common goals and objectives and a shared vision for outreach and results. The potential partners in this respect will include the Asian Development Bank (ADB), the European Union (EU), the Japan International Cooperation Agency (JICA), and the Korea

Export-Import Bank (KEXIM). Potential structured country programme cofinancing will be governed by an umbrella Memorandum of Understanding between IFAD and the partner organisation, followed by project-specific agreements under the MOU. Structured cofinancing will focus on infrastructure development, financial services, machinery/equipment, and technical assistance for capacity building.

The country programme will also seek to develop *private sector partnerships* with private sector entities. These will consist of business partnerships with agribusiness (national or multinational) for vertical value chain integration based on contractual relationships with smallholder organisations, and financial partnerships with relevant private sector firms (national or multinational) under the corporate social responsibility agenda. However, partnerships with the national private sector are expected to evolve gradually, sequenced in line with the development of national private sector capabilities.

The country programme will foster a range of *technical partnerships* with institutions providing technology and knowledge solutions in favour of smallholders and landless entrepreneurs. Relations will be developed with national organisations such as key departments of MOAI, MOLFRD, MOECAP and Yezin Agricultural University. Partnerships will be sought, where possible, with institutions including policy advisors such as UNESCAP and IFPRI; technology providers such as IRRI, ICRAF, World Fish; operational service providers such as UNOPS; and microfinance advisors such as LIFT, UNCDF, CGAP and GRET. Technical partners will be selected based on the results they can create for the target groups.

In the medium term, the country programme will seek to create *advocacy partnerships* with civil society organisations or NGOs that advocate for or on behalf of the rural poor. As liberalisation of civil society discourse in Myanmar is at a nascent stage, it is expected that scope for such partnerships may develop over the next three to five years.

C. Planning, M&E, learning and knowledge management

Planning

Annual work plans and budgets (AWPBs) and activity calendars, based on the design report and informed by operational experiences and supervision missions, will form the basis for project planning. The AWPBs will consolidate plans and budgets elaborated through a participatory approach by partners, stakeholders and beneficiaries. Participatory processes will involve communities (ideally at 500 acre block level) and KCs. The plans and budgets will be finalised by the PCU by early January of each fiscal year for the next fiscal year, and discussed with implementing partners for arbitrage, financial evaluation and finalisation. Each executing agency will also elaborate a procurement plan (PP) for submission to, and consolidation by, the PCU.

AWPBs will be submitted to NPSC for approval by mid-January, and subsequently to IFAD for concurrence by end-January. The timing for preparation of AWPBs and PPs also comply with the national budget calendar, ensuring incorporation of the project budget into the national budget.

The project's logical framework and design report will be discussed at project start up with the relevant partners and stakeholders. The participants will elaborate a six-year roadmap which includes activities, costs, and expected outputs for each activity. This will serve as a basis for annual project planning, and will strengthen national project ownership.

Monitoring and evaluation

The project's M&E system will be designed to offer comprehensive and reliable information to improve planning and decision-making for results-based management. It will also be compliant with the RIMS framework. Considering the extent to which impact depends on access to financial and non-financial services, and on building sustainable linkages with value chain integrators, the system will be participatory and decentralised, actively involving target groups and service providers. The logical framework will constitute the basis for results-based M&E. The M&E system will have a three-tier structure: (i) output monitoring with focus on physical and financial inputs, activities and outputs;

(ii) outcome monitoring for the use of outputs and the measurement of benefits at beneficiary and village tract levels; and (iii) impact assessment evaluating project impact for the target groups in comparison with objectives. All M&E data, analysis, and reporting will be disaggregated by gender.

Responsibility for M&E activities will be vested with the PCU's M&E officer who will establish a data collection, analysis and reporting system to track physical and financial progress, performance and emerging impact. The system will be articulated at project, township, village tract and village levels. It will be discussed with implementing partners to ensure they can provide the necessary data and information. The main sources of data will include farming households, landless entrepreneurs, KCs, implementing partners and NGOs as well as the private sector (particularly agribusinesses engaged in contractual agreements with the target groups).

The logical framework will be reviewed and M&E indicators fine-tuned at the start-up workshop. At the beginning of implementation, a comprehensive baseline survey will be organised by the PCU in selected village tracts to assess the physical and socio-economic status of households and to define the benchmark situation against which project performance will eventually be compared. It will be executed by a contracted service provider. Project progress reports will be produced quarterly, semi-annually and annually for each irrigated area and consolidated for the project area.

Multidimensional poverty assessment. As part of the measurement of the project's impacts on poverty reduction among the target beneficiaries, a multidimensional poverty assessment (MPA) will be adopted as an additional instrument to track progress and provide valuable information. The MPA facilitates results-based management and broadens the income/asset-based definition of poverty to cover additional dimensions such as food and nutrition security, women's empowerment, hygiene status, and vulnerability to shocks. The MPA module will be introduced during the design of the project's M&E system, adopting manuals and best practices developed by MPA pilot initiatives under implementation in IFAD-financed operations in China and India. The MPA survey may be performed together with the RIMS survey, by the same service provider, at baseline, mid-term and completion, and using the same sampling methodology. It should be noted that the MPA instrument can also be used as an advocacy tool to help service providers, Government agencies and development partners to better understand potential synergies and common impacts.

The project will use locally adapted RIMS surveys at baseline, mid-term and completion as the main quantitative survey tools. Ad hoc surveys, qualitative case studies and thematic reviews will be outsourced to independent institutions to verify results and draw lessons on themes such as food security, cropping patterns, climate resilience, micro-businesses sustainability, WUG effectiveness and sustainability, and impact on smallholder and landless households' incomes.

Considering that FARM is the first IFAD co-financed investment in Myanmar, monitoring will be enhanced. The establishment of an IFAD country office in 2015 (approved by the Executive Board) will allow for close monitoring of the project and support implementation on a real time basis. Intensified supervision arrangements are foreseen to closely monitor project performance, with corresponding increase in supervision budget. Two mid-term reviews rather than one, will be undertaken in PY2 and PY4. An external independent third party (such as a national university or NGO) will be engaged to assess project impact on periodic basis, and report to the NPSC and IFAD accordingly.

Learning and knowledge management

The project's operational experiences will create valuable knowledge to be captured by the PCU and utilised to generate lessons and best practices to be shared with national institutions and development partners in Myanmar. The results of project support for developing sustainable activities for smallholders and the landless, developing alternative cropping patterns, strengthening farmers' knowledge, improving natural resources management, and expanding microfinance and rural finance operations in rural areas will be widely publicised. Once documented, the FARM project model of sustainable agricultural development may be scaled up across the central dry zone.

The project will partner with relevant local institutions to share lessons and best practices, such as the Myanmar Business Coalition, a local entity established by traders and businessmen in the dry zone to better connect farmers with traders and provide a market information system, the Myanmar Agri-Business Journal of MOAI, the Farmers' Journal and Agro-cyclopedia, a private newsletter which provides farmers with updated seed technology, cultural practices, GAP systems, integrated pest and disease management practices, and the Farmers' Channel of Myanmar Radio and Telecommunication (MRTV) which disseminates agricultural information to the farming community. The project will also promote the sharing of knowledge in-country by organizing a series of seminars/workshops jointly with partners. It will participate in Myanmar's sectoral working group for agriculture which is coordinated by LIFT and the MOAI, particularly to harmonize methodologies.

The project will share knowledge and experiences with the wider community of development practitioners in Asia and the Pacific through the IFADAsia knowledge management portal.

D. Financial management, procurement and governance

Project fiduciary risk. Project financial management arrangements will ensure that: (i) funds are used for intended purposes in an efficient and cost effective manner; (ii) disbursement of project funds facilitates rapid implementation of activities; (iii) funds are well managed and flow smoothly; (iv) accurate financial reports are issued on timely basis; (v) a robust flow of reliable information on project activities facilitates accountability, transparency and disclosure; and (vi) project resources and assets are safeguarded. Fiduciary risk assessment is drawn from the review of Myanmar's PFM system by the World Bank and published in the Public Financial Management Performance Report, and the Public Expenditure and Financial Accountability Performance Measurement Framework which rates the inherent country fiduciary risk as "High".

In view of high country fiduciary risk, the project will apply a ring-fenced approach in its financial management arrangements, with focus on: (i) procurement and installation of an accounting software, and associated capacity building, through a capacity building grant in favour of MOAI; (ii) hiring of key financial management staff from the market with relevant experience and qualifications; (iii) preparation of a financial management manual through the grant, integrating controls closely linked to the project's operational dimensions; (iv) establishment of the PCU with delegated authority to plan, manage, disburse and control project resources (including counterpart financing); (v) capacity building support and oversight by external financial management specialists; (vi) establishment of a control framework integrating periodic internal audits, independent external audits, and social safeguards to be adopted based on IFAD policies; (vii) adoption of a good governance and *mutual accountability framework* to strengthen accountability and transparency in line with international best practices.

Budgeting and counterpart funds. The PCU will be responsible for preparation of the budget as part of the AWPB exercise, supported by a narrative of proposed activities aligned with the logical framework indicators. Government will ensure that counterpart funds are budgeted in MOAI's national annual budgets, and that these resources are released to the project account on a timely basis as part of the mutual accountability framework.

Financial management responsibilities. The PCU will be accountable to the NPSC as part of the mutual accountability framework, and will maintain a full set of accounts in accordance with the international public sector accounting standards (IPSAS) on cash basis. This delegation of authority requested by the MOAI and approved by MOF will be established as a disbursement condition.

Flow of funds and disbursement arrangements. The project will use the imprest fund method for operating the Designated Accounts (DA), the modalities for which will be detailed in the Letter to the Borrower. Advances to the two DAs, one for the loan and the other for the grant, will be transferred to separate accounts held in USD in the Central Bank of Myanmar (CBM) or another bank acceptable to IFAD. The PCU will be authorised to open operational accounts for IFAD resources and Government funds in USD and MMK in the Myanmar Economic Bank or other commercial bank acceptable to

IFAD. On the basis of the approved AWPB and procurement plan, the PCU will request a three month advance for the implementation of activities from CBM to the respective MMK accounts. On the justification of 75% of the previous advance and 100% of any preceding advances, the next 3-month advance will be provided. The SOE thresholds will be defined in the Letter to the Borrower.

Internal controls. The project's internal controls will be designed to ensure effectiveness and efficiency of operations, reliability of reporting and compliance through dynamic processes. Roles and responsibilities will be aligned to project objectives. This will include elements such as the control environment, risk assessment, communication and monitoring to ensure coherence with good governance and the mutual accountability framework. The project implementation manual and the financial management manual will detail the control framework based on best practises. These manuals should be endorsed by the NPSC prior to the first disbursement.

Accounting system. The project will procure off-the-shelf accounting software through a service provider that will be tasked with installing and operationalizing it. The accounting software and chart of accounts will be set up to ensure separate project accounts to monitor implementation progress, identify works, goods and services, and disclose their use in the project. The PCU's and MOAI's accounting and finance personnel will be trained in using the accounting software by the service provider, which will also commit to providing periodic off-site and on-site support and training as part of the capacity building initiative at least for the first two years.

Financial accounting and reporting. Financial statements will be prepared as per IPSAS cash basis for each fiscal year. The PCU will generate quarterly financial reports to be submitted to MOAI, MOF and IFAD. Consolidated financial reports for each source of financing will include: (i) statement of sources and uses of funds by category and component with information on resources received, cash forecasted, and analysis of actual vs. budgeted expenditures; (ii) vendor reports on contracts, disbursements and progress against milestones; (iii) outstanding advances and unpaid commitments.

Internal Audit. As another mitigation measure in view of the inherent country risk, in addition to the annual external audit, the PCU's procedures will be assessed every six months through internal audit. The project will establish retainer contracts with local audit companies that are accredited and internationally affiliated to assist in the review of project operations, internal controls and compliance measures. The TORs of internal auditors will include the review of accounting and internal controls including proper segregation of duties, financial operations through bank controls, safeguard of cash, and tracking of assets and inventory. Internal audit will be supported by auditors from the Office of the Auditor General as part of efforts to enhance knowledge networking, learning and skill development.

Procurement. Procurement will be executed in compliance with IFAD's procurement guidelines (published on its website). The PIM will detail procurement procedures, processes and management arrangements. The procurement methods, the prior review arrangements, the estimated cost and time frame, and risk mitigation measures will be defined in the Letter to the Borrower and reflected in the approved procurement plan. The PCU will be responsible and accountable for project procurement.

Based on a procurement capacity assessment undertaken in preparation of the project and the inherent country fiduciary risk, the overall procurement risk is considered "high" due to: the lack of a legal framework for public procurement; stipulated procedures and processes; the weak governance environment; limited experience and capacities, and, a redress mechanism.

Audit. An external auditor will be selected by the PCU based on a prequalified list of local audit companies accredited and internationally affiliated with an international auditor (as international audit firms currently do not hold licences to operate in Myanmar). The OAG will participate in the annual audit lead by the external auditor as part of the project's commitment to develop local capacities. As part of audit deliverables, the auditor will examine the documentation related to SOE expenditures. As per IFAD requirements, external auditors will provide separate opinions on the consolidated financial statements, the DA operations, and the SOE facility. External auditors will submit audited financial statements along with the related opinions and management letter no later than six months after the end of each fiscal year. The management letter will include audit observations with opinion on internal

control systems and recommendations for improvement. IFAD will provide its feedback on the quality of the audit report and will ensure follow up on audit observations through supervision missions.

Governance and transparency framework. IFAD's applies a zero-tolerance approach in cases where it is determined through investigation that fraudulent, corrupt, collusive, or coercive actions have occurred in projects financed through its loans and grants; a range of sanctions in line with IFAD rules, regulations and legal instruments will be enforced. Zero tolerance means that IFAD will pursue all allegations, and appropriate sanctions will be applied should they be substantiated.

While the documented methodological justification for considering Transparency International's *corruption perception index* is absent, both internal and external review processes make use of this index. It is hereby reported that Myanmar ranks 172nd out of 176 countries rated in 2012.

Project design includes a number of measures to ensure transparency:

- *management*: the project will be managed by an autonomous PCU based on principles of good governance, accountability, transparency and participation;
- *ethics*: a code of ethics and conduct will be signed by all PCU personnel;
- *internal audit*: in the absence of an internal auditor, the PCU will contract an external audit firm to perform internal audit on procedures ensuring reliability of financial and accounting books;
- *independent audit*: the project will be audited annually by a competitively-selected audit firm, as well as by the Auditor General of the Government.
- *supervision*: IFAD's supervision practices will include modules on fiduciary compliance;
- *impact assessment*: project impact assessment will be out-sourced to independent institutions to ensure analytical objectivity;
- *grievance redress mechanism*: A specific committee composed of PCU management (director, manager, heads of offices) will address grievances aired by project area inhabitants.

Communities will be involved in all phases of decision-making, planning, implementation and evaluation, as documented in this report. The improvement of capacities and relationships among key value chain actors will result in strengthened sectoral governance. Impact assessment will be out-sourced to independent institutions to ensure analytical objectivity.

Mutual accountability framework: Government and IFAD agree to collaborate on the basis of a mutual accountability framework which will be documented in the PIM. Under this framework, Government commits to ensuring a conducive policy environment for smallholder farming, providing its budgeted contribution to the project on timely basis, and fulfilling the assurances outlined in this document. IFAD commits to promoting national ownership of the project, building national capacities to fulfil this role, and providing its budgeted financing to the project on a timely basis. Compliance with this Framework by both partners will be jointly assessed on annual basis.

E. Supervision and Implementation Support

The project will be supervised by IFAD. A supervision and implementation support mission will be conducted at least once a year. The Government, through MOAI, will provide the logistical support and may nominate individuals in MOAI line departments and other ministries to join the mission.

Supervision will be applied as a continuous process requiring ongoing communication and engagement with Government and the PCU. It will encompass three functions: (i) loan administration: ensuring fiduciary compliance with attention to legal conditions, financial management, disbursement, procurement and contracting; (ii) project supervision: focusing on overall implementation performance; progress towards objectives; investments, activities and output; statutory requirements (AWPB, monitoring, reporting); governance, management and steering, executing agencies, targeting and gender mainstreaming; and (iii) implementation support.

Implementation support will be applied at three levels: (i) *project level*: providing guidance for achievement of objectives, supporting adaptation in response to evolving conditions, creating systems for sustainable flow of benefits, resolving operational issues, generating lessons and best practices; (ii) *country level*: introducing a broad programmatic view of development investments, influencing policy based on operational experiences, developing systems and institutions for poverty reduction, facilitating financial and operational partnerships; (iii) *IFAD level*: generating knowledge and lessons, feeding lessons into new project design, creating innovative instruments, and pilot activities.

Project design will invariably be superseded by reality over time due to changing conditions, emerging operational experiences, political and macro-economic changes, exogenous developments and *force majeure*. The supervision and implementation support process will guide the project towards achievement of strategic objectives and broader poverty reduction outcomes, while ensuring fiduciary compliance and responsiveness to the mutual accountability framework.

Considering the lack of project implementation experience in Myanmar, two mid-term reviews will be undertaken (in PY2 and 4) covering physical and financial progress, performance assessment of service providers and implementing partners, progress towards the achievement of objectives, and opportunities for deeper integration into national systems. At closure, a project completion report will be prepared by Government, with IFAD support, to assess overall project performance.

F. Risk identification and mitigation

Project risks have been assessed and mitigated, as articulated below. The residual risk is either moderate or exogenous (particularly political risk related to general elections planned for 2015 that may substantially alter Government and MOAI priorities).

Risks	Possible Consequences	Mitigation Measures
Land tenure risk	Possible land expropriation from farmers if cropping patterns changed, or in the greater interest of country (as per the land law).	(i) assurance that ' <i>project investments in land development are targeted to small farmers, who should not be expropriated from their developed farm plots thereafter</i> ' to be included in Financing Agreement; (ii) assurance that ' <i>project investments in agriculture, services and market information will enable farmer self-determination in choice of cropping patterns; instructions on cropping and land classification should be eliminated in project-supported irrigation areas</i> ' to be included in Financing Agreement; (iii) the two assurances above to be included under Mutual Accountability Framework. Possible land conflicts will be resolved during land consolidation and development.
Forced labour risk	May be used in land development works	(i) will be explicitly forbidden in PIM section on civil works and beneficiary contributions; (ii) will be covered in PCU and MOAI training packages; (iii) will be monitored and reported by beneficiaries through participatory monitoring; (iv) will be investigated by supervision missions.
Governance risk	Poor governance capability may prevent MOAI from effectively and efficiently managing and executing the project	(i) separate MOAI capacity building grant being provided prior to project start up; (ii) substantial TA for MOAI capacity building is included under FARM loan and grant; (iii) service provider such as UNOPS will be contracted to oversee infrastructure; (iv) PCU staff will be recruited from the market and held accountable for managing FARM in compliance with private sector principles.
Fiduciary risk	Possible financial management, procurement, contracting weaknesses	Significant fiduciary risk mitigation measures are included in the project (detailed in the financial management, procurement and governance section above).
Commercial risk	Possible inequitable	(i) knowledge centres will broker equitable contractual

	distribution of value added or lack of market access for smallholders and landless	relationships between smallholders and value chain integrators; (ii) smallholders and landless will be trained to comply with quality/safety standards; (iii) contracted NGO will ensure landless micro-entrepreneurs market access; (iv) private sector is offered incentives to partner equitably with target groups (e.g. agribusiness fund).
Capacity risk	Low capacities may adversely affect provision of services to target groups	(i) capacity building for public institutions and service providers will be undertaken through TA and training; (ii) performance based contracts for service providers will be issued, with target groups participating in evaluation.
Political risk	Possible unjustified political interference in daily project management	(i) NPSC is accountable for eliminating this risk; (ii) this is enforced under the Mutual Accountability Framework; (iii) the PCU will be an autonomous, responsible and accountable organisation.
Environmental risk	Possible adverse impact of project on environment	(i) staff of PCU and implementing agencies trained in environmental aspects; (ii) environmental assessment for all infrastructure activities and relevant service activities.

IV. Project costs, financing, benefits and sustainability

A. Project costs

Total project costs, including duties, taxes and contingencies, are estimated at USD 27.8 million over a six-year project implementation period (Table 6). Costs are estimated on the basis of prices prevailing during final design (December 2013). Average physical contingencies of 4% and price contingencies of 5% have been applied to base costs. Price contingencies are based on estimated inflation rates using projected Manufactures Unit Value Index (for USD), while local inflation rates are based on MONPED forecasts. The exchange rate has been set at MMK 975 to the USD, the average rate prevailing at final design. A constant purchasing power parity (CPPP) exchange rate is assumed.

The agricultural infrastructure component amounts to 46% of base cost, the agricultural and business services component for 44%, and project coordination for 10%.

Table 6: Project Cost Summary

	(MMK Million)			(US \$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
A. Agricultural Infrastructure Improvements	7,731.7	3,745.3	11,477.0	7,929.9	3,841.4	11,771.3	33	46
B. Agricultural & Business Services								
1. Investment in Knowledge	4,433.8	874.6	5,308.4	4,547.5	897.0	5,444.5	16	21
2. Finance for Growth	2,416.4	3,110.3	5,526.7	2,478.4	3,190.0	5,668.4	56	22
Subtotal	6,850.2	3,984.9	10,835.1	7,025.9	4,087.0	11,112.9	37	44
C. Project Coordination	1,916.8	677.0	2,593.8	1,965.9	694.4	2,660.3	26	10
Total BASELINE COSTS	16,498.7	8,407.2	24,905.9	16,921.7	8,622.8	25,544.5	34	100
Physical Contingencies	646.9	263.8	910.7	663.5	270.6	934.1	29	4
Price Contingencies	2,512.2	897.0	3,409.2	991.1	355.1	1,346.2	26	5
Total PROJECT COSTS	19,657.8	9,568.0	29,225.8	18,576.3	9,248.5	27,824.8	33	109

g. Project financing

The project will be financed by an IFAD loan of USD 18.7 million (67% of total cost), an IFAD grant of USD 0.8 million (3%), a Government contribution of USD 5.3 million (19%), private sector resources of USD 2.4 million (9%), and beneficiary contribution of USD 0.6 million (2%). The Government's contribution covers USD 4.5 million for land development and some base staff salaries, and USD 0.8 million for duties and taxes (Table 7). The estimated amount of duties and taxes (under 3% of project costs) is low due to: (i) Government's commitment to waiving duties and taxes on all civil works (to be

executed by MOAI); (ii) substantial TA and services will be procured through a preferred service provider (such as UNOPS) on which no direct taxes are likely to be applicable.

Table 7: Project Financing Plan

	Government		IFAD Loan		IFAD Grant		Private Sector		Rural HH		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
A. Agricultural Infrastructure Improver	3.808,4	28,9	8.736,2	66,3	283,9	2,2	-	-	341,3	2,6	13.169,8	47,3	4.290,8	8.876,2	2,8
B. Agricultural & Business Services															
1. Investment in Knowledge	775,1	12,9	4.583,4	76,2	357,5	5,9	302,4	5,0	-	-	6.018,4	21,6	994,7	4.855,1	168,5
2. Finance for Growth	-	-	3.300,2	58,1	-	-	2.100,0	37,0	280,0	4,9	5.680,2	20,4	3.190,0	2.294,2	196,0
Subtotal	775,1	6,6	7.883,6	67,4	357,5	3,1	2.402,4	20,5	280,0	2,4	11.698,6	42,0	4.184,7	7.149,4	364,5
C. Project Coordination	713,1	24,1	2.106,2	71,2	137,1	4,6	-	-	-	-	2.956,4	10,6	773,0	1.758,4	425,0
Total PROJECT COSTS	5.296,5	19,0	18.726,0	67,3	778,5	2,8	2.402,4	8,6	621,3	2,2	27.824,8	100,0	9.248,5	17.784,0	792,3

h. Summary benefits and economic analysis

Benefits and beneficiaries. The project will directly impact on a farmed area of about 112,000 acres of which 87,000 are within irrigation command areas and 25,000 are rainfed. It will cover 82 village tracts within 5 townships populated by about 59,000 households (286,000 people) of which about 34,000 are farming households and about 25,000 are landless.

The project will directly benefit about 37,600 households (183,400 people). Of these, some 29,250 households (142,720 people) are expected to be within the IFAD target group of rural poor households, classified as 'moderately poor', 'poor' or 'very poor', with an average per capita income of about USD 0.8 per day. Specifically, they include:

- smallholders on 10,000 acres of irrigated land selected for development (3,300 households). They will benefit from land development as well as improved irrigation and roads. They will be supported to improve their agricultural productivity, their knowledge and skills, and their access to finance and markets. Their annual household incomes on the upgraded land are expected to increase by about USD 320/acre at full development due to increased cropping intensity, modernised cultivation and reduced transport costs. About 67% of these households are within the primary target group (2,211 HHs).
- other smallholders in selected command areas and on associated rainfed land (about 102,000 in total). An estimated 85% of these smallholders (26,300 households) are expected to benefit from productivity-improving services but not from land development work. The average benefit per household is expected to be about USD 100/acre net of incremental labour requirement. About 75% of these households are within the primary target group (19,500 HHs).
- poor landless micro-entrepreneurs, particularly in households with unemployed young women and men, who are supported to establish viable rural micro-businesses responding to market demand. This will involve about 4,900 households; the successful ones will earn incremental incomes averaging USD 1,030 per annum including the value of their own labour. A full 100% of these households are within IFAD primary target group (4,900 HHs).
- those benefitting from employment opportunities generated by the project, such as incremental agricultural employment, infrastructure-related employment, micro-businesses employment and value chain employment. About 3,100 households will benefit from these job opportunities. About 85% of these households are within IFAD primary target group (2,635 HHs).

Other employment created by the project will include short-term incremental workers involved in construction of KCs and irrigation works - altogether approximately 600 workers per year for three years. Incremental regular government staff are not foreseen; it is assumed that the project will simply enable the present number of staff to work more efficiently.

The projections of project impact indicate that annual incremental agricultural production in the project area between 2013 and 2020 will be worth about USD 21.5 million at farm gate prices (about USD 17 million excluding processing crops), and additional agricultural inputs of USD 8 million will be used.

Incremental jobs will be created in marketing/supplying these volumes as well as in incremental maintenance requirements of 10,000 acres of tertiary irrigation. These extra activities will create the equivalent of about 900 full time jobs by 2020.

Economic analysis. The project's financial and economic analysis is based on crop models, farm models, and enterprise models. In the case of enterprise models it is assumed that (as with most SMEs and micro businesses) there will be a degree of business failure, which is provided for in the base case (40% for micro businesses and 20% for SMEs). Estimates of financial cost and benefit flows are converted to economic flows using conversion factors; for agricultural components, which have been estimated on a before/after basis, an estimate of without project growth has been made for the project period and offset against the with project growth figures in order to estimate impact.

Financial analysis of the agricultural components shows that at the farm level the benefit cost ratio is around 2.4:1. For the IGA models the financial rates of return to micro-entrepreneurs are high, averaging 99% after offsetting capital investment with a 75% grant while the benefit cost ratios are quite low at 1.12. This is because micro-enterprises modelled are mainly labour intensive, with low net margins on sales after allowing for labour costs. Taking account of business failures the average net financial rate of return, after covering the full cost of labour, is about 26% after grant, and the EIRR of the component (without counting in project overhead) is 33%.

For value chain investments, the benefit cost ratios after grant are on average also low, (at 12% opportunity cost of capital they are 1.11, 1.47 and 1.15 for the three models respectively) because of the fast turnover of the likely businesses compared to the level of capital invested. Base FRRs, net of grant, which is a measure of the return to the investor, are attractive – 33% for the rice mill model, 48% for tomato processing, and 49% for frozen chilli. After allowing for projected business failures, the EIRR of this component is estimated at 23%.

The economic internal rate of return (EIRR) of the project is estimated at 27%. Sensitivity analysis shows that the project is robust in the event of delays in flow of benefits or unforeseen cost overruns (results below).

	Improved Parameters		Base Case	Worse Parameters		Switching Value 2/
Without Project (WOP) Agricultural Growth	1,0%	1,5%	2,0%	2,5%	3,0%	3,7%
Project ERR	34%	30%	27%	23%	19%	
Project Cost and Post Project Maintenance	-20%	-10%	Base	20%	40%	133%
Project ERR	31%	29%	27%	23%	21%	
Net Benefits from Components	30%	15%	Base	-15%	-30%	-35%
Project ERR	35%	31%	27%	21%	15%	
Gross Sales from Components (costs stay same) 1/	15%	10%	Base	-10%	-15%	-18%
Project ERR	39%	34%	27%	19%	14%	
Net Benefits from Components Delayed 1 Year			20%			
Net Benefits from Components Delayed 2 Years			16%			
Evaluated over 15 Years not 20			26%			
Evaluated over 12 Years not 20			23%			

1/ Increase in Agricultural Sales plus total IGA sales plus total sales minus raw material costs for VC models.

2/ Percentage change needed to reduce EIRR to 12%

i. Sustainability

The sustainability of project investments is embedded in the design. It particularly focuses on: (a) access to knowledge: KCs will be governed by communities and managed by trained extension staff; financial mechanisms will be introduced to ensure that operating costs are covered by members to ensure the sustainability of these facilities; (b) access to markets: upgraded commodity chains and improved equitable contractual agreements with processors and traders will ensure access to markets that will be sustained based on underlying business relationships; (c) access to water: participatory water management arrangements (WUGs) developed by the project will ensure equitable water distribution and proper operation and maintenance; (d) access to financial services: the project will promote the sustainable development of MFIs in the project area providing a range of rural products and services in line with best practices; (e) extension services: use of extension officers trained and equipped by the project will ensure continuity in delivery of extension services.

Scaling-up. The project is considered by Government as a pilot to be scaled up in other areas (under the MOAI policy of “*From Nay Pyi Taw to Nation*”). As such, the project is designed to create potential for systematically expanding, replicating, adapting and sustaining successful investments. Through its investment tools, funds and forward-looking policy support, the project will create the pathways, drivers and spaces for scaling up. Investments will be unbundled to facilitate operation at scale of core activities. A full scaling up framework will be provided in the final design report. Key activities may be unbundled and scaled up as: (i) KCs and their managers are integrated within MOAI; (ii) the sustainability of project-supported community-based organisations is ensured through financial contribution mechanisms; (iii) multiple MOAI departments and agencies are relied upon for key activities; (iv) win-win partnerships will be developed with private sector investors; (v) training and capacity building activities will include staff from MOAI and other ministries to develop local capacity to implement and monitor development projects; (vi) the Mutual Accountability Framework and the Government assurances (below) are elements that can be replicated in other irrigated areas.

Exit strategy. The project’s exit strategy is to strengthen Government structures and agencies through their involvement as implementing partners in the project and their involvement in the NPSC. During the second mid-term review, gradual integration of the PCU into Government structures at provincial level will be explored. Other elements of the exit strategy are: (i) KCs will be owned by MOAI and governed by a Board of representatives from communities and an MOAI extension officer trained by the project; (ii) rural finance services will be provided by existing MFIs that are supported by the project to ensure financial sustainability; (iii) microfinance services will be extended by savings and credit institutions supervised by an international NGO/MFI, ensuring proper operational and financial sustainability with the possible creation of an APEX structure; and (iv) ID staff capacity will be enhanced through training, ensuring its capabilities to execute similar irrigation projects elsewhere.

Assurances. During negotiations of the Financing Agreement, several assurances will be sought to mitigate potential risks. In this respect, four key assurances required from Government are outlined below:

- project investments in land development are targeted to smallholders, who should not be expropriated from their developed farm plots thereafter;
- project investments in agriculture, services and market information will enable farmer self-determination in choice of cropping patterns; instructions on cropping and land classification should be gradually eliminated in project-supported irrigation areas;
- project investments in knowledge centers are managed by appointed extension staff, who should not be transferred to positions outside the project area during the implementation period;
- project beneficiaries, farming and landless households, will be supported to possess proper identification documents enabling them to meet the requirements of financial institutions.

Appendix 1: Country and rural context background

1. **Country Economic Background.** Myanmar is the largest country in terms of land area in Southeast Asia with an area of 676 578 sq. km, bordering China to the north and east, Lao PDR and Thailand to the east and India and Bangladesh to the west. The Bay of Bengal lies to the west and the Andaman Sea to the south of the country, with a coastline of around 2 000 km. Myanmar consists of three topographic areas - the western ranges, the central plains and the eastern hill. The western ranges serve as a natural border between India and Myanmar. The Ayeyarwady Delta Region and the Sittaung and Thanlwin basins make up the Central Plain with extensive alluvial lowlands and a lengthy dry season. The Shan Plateau is the eastern mountain range with an average height 1 000 m above sea level.

2. Myanmar's population in 2011 was estimated at 60.4 million, with a population density of 89 per km, an annual growth rate of 1% and an average life expectancy of 66.2 years. Around 70% of the population is rural (down from 73% in 1995 indicating a very slow trend of urbanization). It is an ethnically diverse country, with 8 major ethnic groups, 135 sub-groups and 108 different ethno-linguistic groups. The total population is estimated to be 68% Burmese, 9% Shan, 7% Karen, 4% Rakhine, 3% Chinese, 2% Indian, 2% Mon, and 5% Kachin, Kayah, and Kayin. Myanmar is a Least Developed Country (LDC) and one of the poorest nations in South-East Asia - the 2013 Human Development Report ranks the country 149th among 186 nations with an index of 0.498 (average low HDI countries is 0.466 and South-East Asia average HDI is 0.683).

3. Myanmar is a low income country with a 2011 GDP of USD 55 320 million and a per capita 2011 GDP of USD 916. Its GDP growth rate was 5.5% while the inflation rate was 4.2%. In 2010, the agriculture sector accounted for 36.4% of GDP (down from 60% in 1995); the share for services was 37.6% (up from 30% in 1995), and that for industry/manufacture was 26% (up from 10% in 1995).

4. **Rural Poverty.** There is a strong co-relation between agriculture and poverty in Myanmar, and poverty is largely a rural phenomenon. Though there is no official poverty line in Myanmar, poverty and social deprivation are widespread in Myanmar. The Ministry of National Planning and Economic Development of Myanmar working with UNDP and a number of other UN agencies and INGOs, has carried out two Integrated Household Living Conditions Assessments in 2004-5 and in 2009-10. They provide a number of measures of poverty: (a) the *food poverty line (FPL)* or the amount of money necessary to pay for a consumption basket to meet the caloric requirements of household members; (b) the *poverty line (PL)* or the amount of money necessary to cover consumption expenditure to meet basic food and non-food needs; (c) the *poverty gap index* that measures the intensity of poverty; and (d) the *share of poorest 20%* in consumption. In 2005, an estimated 32% of the population lived below the poverty line - this had fallen to 26% five years later. Between 2005 and 2010, those living below the food poverty line had decreased from 10% to 5%¹¹. Results also showed improvements in other measures of poverty over these five years: the poverty gap ratio showed a reduction of 35% whilst the consumption share of the poorest quintile in national consumption increased from 11.2% to 12%. Health statistics also indicate high levels of deprivation, particularly for women. The Maternal Mortality Rate in 2010 was 200 per 100 000 live births and the estimated infant mortality rate (IMR) in 2010 was 44.8 per 1 000 live births. However, these aggregated national statistics mask significant regional and rural/urban differences. The poorest states, such as Chin (73% living below the poverty line), Shan East (51%) and North (52%), have much higher levels of poverty and social deprivation than areas such as Yangon, Kayin and Mon.

5. The rural poor typically comprise the landless (between 35% and 53% of the rural population in different parts of the country) and those with access to small and marginal landholdings, usually below 2 ha (almost 5 acres). These rural poor suffer from inadequate food, nutrition and essential

¹¹ IHLCA 2008 and 2011.

non-food items¹². In 2010, 54% of poor household members worked in agriculture, compared to 49% for non-poor households. Rural poverty is largely a function of lack of resource endowments. Poor agricultural households on average farm less than 2 ha of land. The average farm size for non-poor households is significantly higher (3 ha). A smaller proportion of poor agricultural households (9%) own farm equipment than non-poor agricultural households (19%). There are also slight differences in access to agricultural credit between poor households (37%) and non-poor households (39%). Most of the poorest either live in the central dry zone (where the soils are sandy, rainfall low and population density high) or in the hill tracts populated ethnic minorities; these are remote, inaccessible, have limited arable lands and are affected by conflicts.

6. However, due to conflicting results and major inconsistencies in data, the report cautions on the “*interpretation of data on poverty levels and trends, in particular on the magnitude of the decline of poverty*”. The diagnosis does not individualize data for the Nay Pi Taw region since it was only established in 2011 but treats them as part of Mandalay Region. Mandalay has a rural poverty incidence of 32% in comparison to a national average of 29%.

7. The main characteristics of rural poverty in Myanmar are presented in Figure 1.

Figure 1: Rural Poverty in Myanmar - Characteristics

<p>Who are the rural poor?</p> <ul style="list-style-type: none"> ➤ smallholders owning < 2 acres of irrigated cultivable land and < 2 acres of rainfed cultivable land; ➤ sharecroppers or tenants; ➤ landless households dependent on livestock activities and/or casual labour; ➤ households with high dependency ratios (e.g. adult unable to work or disabled); ➤ women-headed households; ➤ young women and men living in extended households; ➤ ethnic minorities.
<p>Where are the rural poor?</p> <ul style="list-style-type: none"> ➤ in rural areas with a greater ethnic minority population, and in the central dry zone; ➤ in rural areas of high population density and very small holdings; ➤ concentrated in dispersed settlements with inadequate access to services; ➤ in remote mountainous or hilly areas; ➤ often dependent on seasonal or long-term migration to urban areas.
<p>Why are they poor?</p> <ul style="list-style-type: none"> ➤ high vulnerability to shocks: price volatility, climate change, sudden loss of land, disasters, water shortage; ➤ inadequate access to knowledge and technology; ➤ poor quality and limited/improper application of inputs; ➤ very limited access to financial services; ➤ lack of access to land, markets or employment opportunities; ➤ limited access to local organisations; ➤ social and ethnicity considerations.
<p>What are their coping strategies?</p> <ul style="list-style-type: none"> ➤ out-migration (overseas; in-country); ➤ high dependence on casual wage labour; ➤ borrowing from relatives, local traders, pawnshops; ➤ decapitalization.

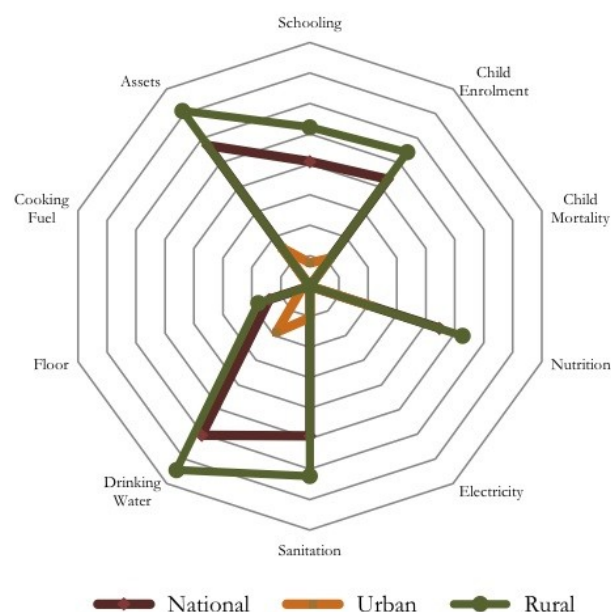
8. The Multidimensional Poverty Index (MPI) developed by the Oxford Poverty and Human Development Initiative for the 20th anniversary of the Human Development Report¹³, goes a step further beyond the traditional focus on income to reflect the multiple deprivations that a poor person faces with respect to education, health and living standard. This composite index uses 10 weighted indicators of the components of these three dimensions (see Figure 2 below) to assess the nature and intensity of poverty at the individual level; the MPI shows the combination of deprivations that affect a household at the same time. The MPI is a product of the incidence of poverty and the average

¹² Ibid.

¹³ Alkire, Sabina & Maria Emma Santos. “Acute Multidimensional Poverty: a new index for developing countries” OPHI Working Paper 38 and UNDP Research Paper Series.

intensity of deprivation; the MPI for Myanmar has been calculated as .154¹⁴. The MPI measure of intensity of deprivation for Myanmar is 48.3, i.e. the average percentage of deprivation experienced by people for the ten indicators of poverty used to calculate the MPI (Figure 2). One of the useful applications of the MPI is that it is possible to illustrate graphically the distribution of poverty within a country, for example, between rural and urban areas of Myanmar to show disparities. Figure 2 (below) illustrates the rural-urban divide: levels of deprivation (and hence poverty) for all of the components of the MPI are much higher in the rural areas than in the urban areas, indicating that the level of rural poverty in Myanmar is much higher across all the determinants of poverty.

Figure 2: Myanmar - Comparison of proportions of population that are poor and deprived



9. Table 1 below shows a comparison of the HDI and MPI for Myanmar with neighbouring countries and other GMS countries. In terms of the HDI, Myanmar shows the lowest level of human development as compared with its neighbours and GMS countries. In terms of the MPI, however, Myanmar fares better than some of its neighbours such as Bangladesh and India, as well as some of the GMS countries such as Cambodia and Lao PDR, but does less well when compared with the other countries (see Table 1 below).

Table 1: Comparison of Poverty Indices (2011) for Myanmar and neighbouring and GMS countries

Country	HDI	MPI
Bangladesh	0.50	0.292
Cambodia	0.52	0.251
China	0.69	0.056
India	0.55	0.283
Laos PDR	0.52	0.267
Myanmar	0.483	0.154
Thailand	0.68	0.006
Viet Nam	0.59	0.084

10. **Food Insecurity.** Food security (undernourishment) is closely co-related to the levels of poverty and is based on four dimensions: food availability, food access, food utilization, and stability of access to food. Nationally, Myanmar produces enough rice to meet its consumption needs. However the net national rice production is not an accurate indicator of food security and adequate nutrition at the household level, as there are severe problems with access to food for the most vulnerable groups in different areas of the country. Moreover, there are discrepancies between and within States and

¹⁴ See <http://www.ophi.org.uk/policy/multidimensional-poverty-index/mpi-country-briefings/>

Regions with regard to food deficits in the country. Shan, Kachin and Chin States are the most food insecure, with a very high food poverty level of 40% in Chin State 21% in northern Shan State and 20% in eastern Shan State. The headcount index of food poverty is generally higher in States than in Regions and in rural than urban areas. Poor infrastructure, restrictions on the movements of food commodities and restrictive market policies prevent the transport of food commodities from surplus to deficit areas. Constraints that affect a farming household's ability to feed itself from its own production include inadequate access to land and lack of rural support services. Households relying on market purchases to obtain food depend on having sufficient income, the existence of markets and the efficiency with which markets function to deliver food at affordable prices. There is widespread chronic and acute lack of access to food resulting from poorly functioning markets, poor transportation infrastructure and lack of non-farm employment opportunities for skilled or unskilled labour.

11. **Agriculture.** Myanmar is an agricultural country richly endowed with land and water resources and favourable climates for agricultural production. The agriculture sector forms the core of the national economy. Nearly 70% of the population lives in the rural areas. Agriculture (including hunting and forestry) employs over 61% of the working population and contributes over 16% of export earnings. Overall Myanmar has a surplus of food production and supply. In a normal year, the country produces enough food to supply its people and exports the surplus. Of the 67.7 million ha in Myanmar, the cultivable land represents 17.6 million ha (26%), of which only about 70% are actually farmed (12.3 million ha)¹⁵. The remaining land area is accounted for by reserved forests (18%), other woodland (25%) and others (31%).

12. Myanmar's share of agriculture in total GDP has remained quite high, indicating a lack of significant structural transformation of the economy over the past 40 years. While the abundance of land and water associated with low labour costs can allow for a rapid development of the sector, agricultural GDP growth has remained relatively low, in particular compared to GDP growth in industry and services that has accelerated in recent years. In 2010-11, total GDP growth was 5.5% and GDP growth in industry and services reached respectively 6.5% and 6.3% against only 4.1% in agriculture. Notwithstanding its large share in GDP and its importance for employment and livelihood, investment in agriculture has been almost non-existent (except by smallholders and foreign investors in ethnic states) and agriculture appears to have been very much neglected in terms of public expenditures. A significant part of MOAI's budget has been allocated every year to irrigation infrastructure to the detriment of extension services or research and development.

13. Over the last two decades, rice cultivated area has nearly doubled (from 4.8 to 8 million ha including 6.8 million ha of monsoon paddy and 1.2 million ha of summer paddy) and its production almost tripled (32.5 million MT in 2010-11 at an average yield of 3.9 MT/ha). As for pulses, their sown area increased over the past two decades from 0.7 to 4.5 million ha with a production now reaching 5.24 million MT at an average yield of 1.28 MT/ha. As for oil crops, since 1995, sesame harvested area increased by 76% and its production tripled, groundnut harvested area increased by 72% and its production more than doubled. As for spices and condiments, chili production grew over the past two decades from 30 000 to 118 000 MT, onion from 171 000 to 1.1 million MT and garlic from 37 000 to 213 000 MT for a total harvested area of 88 000 ha for these three crops. Producers and other stakeholders of commodity chains are organized in thirteen private agricultural crops associations under the Union of Myanmar Federation for Chambers of Commerce and Industry (UMFCCI), including among others: paddy producers; rice and paddy traders; rice millers; pulses, beans and sesame seeds merchants; and onion, garlic and culinary crops producers and exporters.

14. Investment in agriculture is impeded by limited access to agricultural inputs, particularly seeds and fertilizers. Domestic enterprises producing fertilizers are not profitable due to unreliable electricity supply and thus domestic supply remains far below demand, while imported fertilizers are often adulterated. Most farmers use low-quality seeds of mixed varieties saved from previous harvests or bought from other farmers, which produce, when milled, a high proportion of low-value broken rice. While the production of seeds and planting materials is almost the exclusive responsibility of the DoA,

¹⁵ Based on the 2010 Myanmar Census of Agriculture (MCA) carried out by the MOAI.

some Rice Specialized Companies (RSCs) are now initiating certified paddy seed production and distribution through contract farming arrangements in designated areas. RSCs provide seasonal loans and inputs to farmers that the latter pay back in-kind after harvest at prevailing market prices. Farmers benefit from a guaranteed market and better access to credit, resulting in increased crop productivity and improved product quality.

15. Another constraint for any agricultural investment lies with extension services. Agricultural extension services are provided by the Agriculture Extension Department (AED) of the DoA and specialized state economic enterprises. Extension staff is inadequate both in numbers and quality. During the fiscal year 2011-12, the AED included 428 field extension officers and 3 085 village managers. Field extensionists are rotating quite quickly and do not stay more than 3-4 years in the same location. Lack of budget also prevents field visits and hinders efficient and effective knowledge dissemination. In addition, both need a much better orientation towards farmer problems so that they can become more effective in helping farmers by understanding the practical as well as the theoretical background to their work. Of particular concern is also the absence of operational interaction between Department of Agriculture Research (DAR) and extension staff. Most extension messages are centrally designed by managers and mechanically implemented by field staff over a diverse range of agro-ecological and socio-economic conditions, without proper consideration of farmers' needs and limitations, or market requirements, resulting in a low adoption rate of technical recommendations.

16. Finally, agricultural productivity is also hampered by high post-harvest losses. Processing facilities that help reduce waste and raise profit are still lacking for most crops. Smallholder farmers and private entrepreneurs are weak in the awareness of systematic postharvest handling practices in commercial application. Furthermore, in irrigated lands, the quasi-absence of farm roads also generates post-harvest losses.

17. Irrigation infrastructure has been significantly expanded since 1988, targeting mostly paddy-producing areas both in the Delta and in the Dry Central Zone (DCZ). A summer paddy programme, which is at the core of MoAI's activities, was introduced since 1992. The availability of irrigation water during the dry season has been instrumental to the extension of the summer paddy areas and to increased cropping intensities. Supplementary irrigation during the Monsoon period (which is required in the CDZ) and improved drainage (which is particularly critical in the flood prone Delta) gave a key contribution to the 30% increased the rice yields recorded over the last 10 years. The typical highly fragmented pattern of small bunded basins (0.25-0.30 acre) with irregular shape and at slightly different levels characterizing rice production under rain fed conditions is the most widespread in the irrigated rice growing areas. Irrigation water is discharged from the plots nearest to the canal outlets to the lower plots in a plot-to plot water distribution and drainage system. The flow is controlled by the upstream users by temporarily lowering and raising the earth bunds. Practically rice is the only crop that can be cultivated under these flow and drainage conditions. In a recent effort to capitalize on the gravity irrigation schemes financed during the past decade, with a vision of modernizing paddy rice cultivation, the MoAI has developed a number of model farms (covering an area of about 5 000 acres) with improved field roads and tertiary level irrigation and drainage networks, mainly in the Nay Pyi Taw Union Territory i.e. at the southernmost section of the CDZ. In these model farms a comprehensive approach to land development was tested, including land levelling, the realignment of plot boundaries and the reissuance of land titles in line with the provisions of the new Land Law. The model farms are easily accessible to farmers across the Nay Pyi Taw Union Territory and are proving effective in raising the farmers' interest in modernizing their production method through e.g. rental of small combine harvesters.

18. Both the Irrigation Department (ID) and the Water Resources Utilization Department (WRUD) are responsible for irrigation, including collecting water taxes. The ID is responsible for constructing and maintaining irrigation facilities down to the tertiary level, while Water Users' Groups (WUGs) are responsible for building field ditches and for operations and maintenance (O&M) of the latter as well as of tertiary canals. The ID is also responsible for carrying out hydrological, geological and topographical surveys. The WRUD is responsible for supplying irrigation by pumping water from

rivers, streams and groundwater sources. A total of 166 WUGs have been established covering about 40% of the total irrigation network system. They fall under the control of the township agriculture supervision committee.

19. The government disseminates up-to-date information every two weeks on agricultural prices and market flows through radio broadcasting and television channels, as well as weekly or bi-weekly newspapers and journals distributed at township offices. Furthermore, the Myanmar Business Coalition, a local NGO established by traders and businessmen and created in the dry zone to better connect farmers to traders, identified information/communication gaps and established a market information system maintained by local traders and using FM radio stations. Myanmar Agri-Business journal from MoAI, the Farmers journal and Agro-cyclopedia journals (private newsletter) are providing farmers with updated seed technology, cultural practices, GAP systems, integrated pest and diseases management practices. Moreover, the Farmers channel from Myanmar Radio and Telecommunication (MRTV) also disseminates agricultural information for rural households.

20. **Land.** In March 2012, the legislature enacted a new Farmland Law¹⁶ that repealed the previous acts governing land, and set out amended rules for “*the right to work farmland*” whilst retaining ownership of all land in the Government as vested in the 2008 Constitution. The new law officially reintroduces the concept of private ownership, i.e. land tenure rights, which can now be sold, traded, or mortgaged. However, all land remains the property of the state and can be nationalized by the government if necessary. The new law also reduces some protections for farmers; for example, allowing land to be repossessed if they fall into debt. *Farmland Management Bodies* shall be formed at the Union, State/region, District, Township, and Village Tract Ward or Village levels; lower level bodies (from State/Region downwards) shall be “*constituted by the Central Farmland Management Body*” thus allowing the Government to retain overall control of land tenure rights as well as their transfer, mortgage or inheritance. As stated in the law, the Government also retains the right to determine which types of crops to be grown on agricultural land and to repossess the land if farmers do not comply. The Settlement and Land Records Department (SLRD) has completed issuing land tenure rights certificates to farmers in the Naypyidaw region. Restrictions imposed on land use rights increasing tenure insecurity and strict conditions placed on the choice of cropping pattern poses several major challenges and are hindering factors preventing long-term investments in agriculture.

21. Despite the large size of arable land per capita compared to neighbouring countries, most cultivated land is cultivated by small-scale farmers; with an average landholding size of 2.4 ha (almost 6 acres). According to data provided by the Agricultural Census of 1992-93 and of 2003 and by the 2009-10 IHLCS, the number of agricultural landholdings has steadily increased over the last two decades, from 2.7 million in 1992-93 to 4.4 million farms in 2009-10. Consequently, the size of landholdings has declined over this period. In 1992-93, 54% of landholdings were below 2 ha and 82% below 4 ha. In 2003, 77% of households had farms below 2 ha, 15% had farms of 2-4 ha, and only 8% of them operated farms above 4 ha. In 1993, holdings below 0.4 ha covered only 36 699 ha, but up to 62 289 ha in 2003, and their number increased by 174% from 187 493 to 513 221 over this period. Land holding size varies considerably across regions.

Table 2: Landholding size in the Nay Pyi Taw region and in Myanmar

Land distribution	No land	<1 acre (<0.4 ha)	<2 acres (<0.8 ha)	<4 acres (<1.6 ha)	>4 acres (>1.6 ha)
In the dry region	42,6%	2,5%	12,8%	21,6%	20,5%
In Myanmar	49,9%	2,2%	15,8%	16,3%	15,8%

22. **Landless.** A critical issue in the rural economy is landlessness. Landlessness in Myanmar includes landless poor and marginal farmers. It is related to household size and this relationship is

¹⁶ Source: *Farmland Law enacted by the Pyidaungsu Hluttaw under Order No.11/2012 dated 30 March.*

particularly pronounced for the female-headed households. The Agriculture Census (2003)¹⁷ gave the proportion of rural households '*not having access to land*' as between 35% and 53% of the rural population in different parts of the country (ranging from 20%)¹⁸. These 2003 census figures are supported by a recent survey by the LIFT (2012) baseline study of 4 000 households in 3 agro-ecological zones¹⁹ which found that some 50% of households nationally are landless. The 2010 Agriculture Census found that nearly 50% of agricultural households, i.e. over 2.4 million households, had marginal landholdings of less than 2 ha. Even though the situation is gradually improving, ethnic minorities are still particularly vulnerable to forced relocation, destruction of livelihoods and confiscations of land and crops²⁰. In ethnic upland areas, landlessness is often worse, with for example more than 50% of landless households in 12 of the 19 townships in Kachin state, according to Center on Housing Rights and Evictions (COHRE) report. The high landlessness and, at the same time, availability of some 6.7 million ha of land seems paradoxical. Recent Government initiatives such as the new "Vacant, Fallow and Virgin Lands Management Law" combined with the economic, social and political reforms combined with a more "people-centred approach" to rural development aims at addressing the inability of the poor to resettle in some of these areas. These reforms will also address issues such as: (a) lack of finance not just for land development but also for infrastructure, health care and educational services; (b) lack of awareness about these opportunities; (c) Government restrictions on movement of people between different regions, especially for ethnic minorities; and (d) lack of desire to move away from familiar surroundings and traditional support mechanisms that provide considerable assistance to the poor in times of emergency. The landless make up 25.7% of those working in agriculture as wage labourers on land farmed by larger-scale farmers or work as casual labourers in non-agricultural activities. Poverty also forces more people to seek casual work in order to survive; poverty also forces them to migrate to other parts of Myanmar and to neighbouring countries, such as Thailand and Malaysia in search of work. The proportion of the working population in poor households working as casual labourers and as migrants is almost twice the proportion in non-poor households. The landless have also little access to knowledge and information, not to mention access to finance. As a result of that situation, very few landless are able to start any income generating activities and mainly work as casual labourers.

23. **Gender.** Although in theory under both Buddhist customary law and the 2008 Constitution, women and men are entitled to equal rights, the reality tells a different story. Less than 6% of parliamentary seats are currently held by women, but a woman has recently been appointed to the Cabinet as well as four women to key ministerial positions. Although previous Governments have enacted a series of five-year National Plans for economic and social development, none addressed gender equality. There was no evidence that the Government considered the effects of its programmes on women, especially rural women who were disproportionately affected by poverty and militarisation. At local levels (districts, townships, villages), there were few women representatives, especially in the key decision-making bodies. Current reforms, which include decentralisation and election of local government bodies, may see women playing a greater role in decision-making at the local level as well as in productive sectors, such as agriculture or business, rather than being confined to their former roles in service delivery in the traditional areas of health, education and welfare. It will also help address inequities such as the fact that although women make up 38% of the labour force, women's participation in decision-making bodies in the economic sector is low, under 20% amongst management, production and information and technology decision-makers. However, traditionally the role of women in the decision-making process in rural areas and in farming activities is quite dominant, with equal rights in land tenure and ownership of other family assets. Another exception is the teaching and academic professions, where women account for 62% of senior staff. In contrast, amongst the poor, a higher proportion of female household heads (37.6%) are illiterate than male household heads (16.1%).

¹⁷ As quoted in the 2007 WFP/FAO/EC report on "Identification and assessment of the poor, food insecure and vulnerable in the Union of Myanmar".

¹⁸ The 2010 MCA does not give a figure for landlessness in Myanmar.

¹⁹ LIFT Baseline Survey Results, July 2012.

²⁰ Source: *Situation on Human Rights in Myanmar*, United Nations High Commissioner for Human Rights, 2004.

24. **Financial institutions.** The financial sector is small and highly underdeveloped. Access to financial services is severely limited. While the agricultural sector represents 35-40% of GDP and employs 61% of the population, only 2.5% of all outstanding loans are made to this sector. Four state-owned banks and 19 private banks dominate the sector. In addition, the financial sector also comprises of 1 625 credit cooperative societies established under the Ministry of Cooperatives; state-owned and private pawnshops; 318 licensed microfinance institutions established by international donors and local associations; 31 specialized agriculture development companies, and informal lenders, including traders and input suppliers. There is only one state-owned insurance company in Myanmar. It is small in scale and outreach and offers no insurance for any form of agricultural sector activities, such as flood, crop, or livestock. There are no credit bureau, no formal microfinance APEX body, no microfinance association (although there is a microfinance working group composed of Partner Agencies Collaborating Together (PACT), World Vision, GRET, Save the Children, and AMDA). There is no specific microfinance training centre/institute (although CARD together with the German Savings Bank SBFIC will provide capacity building to 2 emerging MFIs, and PACT will launch a training programme funded by LIFT for up to 9 local NGOs to build their capacity in microfinance provision). Payment systems are underdeveloped, ATMs were only introduced in 2013 while credit cards (VISA and MasterCard) were introduced in Nov. 2012. International audit firms are re-entering the market (KPMG, PwC).

25. Expanding financial inclusion and microfinance especially in rural areas is closely related with the stage of development of the formal financial sector. Currently several factors inhibit financial sector growth and outreach to the unbanked populations: (i) capped interest rates set by the Central Bank: 8% on deposit and 13% maximum loan rate. This effectively curtails their ability to lend profitably to low-income segments due to higher operating costs; (ii) deposits limited to 25 times paid-up capital limiting the ability of banks to mobilize more savings. As a result, most banks do not serve rural areas, which represent at least two-thirds of the population; (iii) liquidity ratio of 20% resulting in a shift to more profitable segments, such as larger trade and construction companies, and further limits credit access to smaller enterprises and micro-clients; (iv) collateral requirements preventing most of the population to access loan (although land use rights can now be mortgaged and could be sued to borrow against despite restrictions); (v) limited provision of insurance services; (vi) absence of diversification of banking products. The sector is largely confined to fixed deposits and one-year fixed-rate loans, and (vi) limited prospects to use innovative technology to increase access. The potential for branchless banking is limited because of the monopolistic and underdeveloped status of the communication sector resulting in a low mobile penetration estimated at less than 5 percent of the total population.

26. The Myanmar Agricultural Development Bank (MADB) is owned and supervised by MoAI. It is virtually the only major source of institutional credit for small farmers. However, the MADB caters only to about a third of the farming population. MADB reportedly claims to have 1.4 million active borrowers for an outstanding loan portfolio of USD 84 million (average loan outstaying of USD 59) and to mobilize savings and deposits from 1.7 million people for a total amount of USD 86.9 million (average deposit USD 50.5) in addition to subsidized resources extended by the Myanmar Economic Bank. Its NPL is reportedly to be on the high side (25%) and incurs annual financial losses due to subsidized interest rate. Although the law gives MADB a mandate to provide diversified financial services to a broad spectrum of borrowers, in practice, it provides loans only to farmers for agricultural production. As rice farmers have been given top priority, they received about 81.4% of total loans in 2009-10, while the remaining loans are divided among farmers growing oilseeds (10.4%), pulses (6.9%), maize (0.7%) and cotton (0.6%) (Table 15). With a loan portfolio concentrated uniquely in agriculture, primarily in rice cultivation, MADB has high covariant risk. Seasonal loans (monsoon, pre-monsoon and winter loans) make up the bulk of MADB's lending, are uncollateralized with only joint-liability from 5-10 group members. In principle, loan size is to be determined according to the borrower's demand and capacity to repay. In practice, because of MADB's limited funds, the amount can be as small as USD 25-50 per ha, compared to an estimated production cost of USD 250-475 per

ha, leaving farmers filling the gap by borrowing from informal money lenders who often charge 10–20 per cent interest per month.

27. Private commercial banks have shown little interest in microfinance and rural finance because they often lack capacity and expertise for the undertaking and because of certain regulatory constraints (capped spread). These banks are reported to be generating profits primarily from domestic remittances and lending to trade and construction companies. As such, they serve only a small portion of the micro segment in terms of remittances, and they focus their activity on urban areas because of the inadequate infrastructure of the financial sector. Although the new Bank Law will be more favourable for commercial banks, it is unlikely that commercial banks will enter into rural finance considering restrictions imposed on land tenure and cropping pattern choice.

28. Supervised by the Ministry of Cooperatives, the entire cooperative sector comprises of one apex, 20 unions, 461 federations, and 10 751 primary societies (as of December 2012). The Central Cooperative Society (CCS) is the apex in the sector. Under a newly received microfinance license, CCS also operates 46 MFIs of its own that function as village banks, covering seven states and regions. CCS provides seed money to the MFIs. In return, they provide loans ranging from USD 45 to USD 120 with a compulsory saving equivalent of 2.5% of the loan size. The interest rate for loans is 2.5% per month flat (roughly 60% APR) and 1.25% for savings. According to CCS, MFIs have 98 to 99% repayment rates because the loans typically have a 60-day duration and repayments are collected every day which make them highly impractical for agriculture financing. As of May 2012, CCS reported total capital of USD 0.15 million, 32 851 total members, total savings of USD 0.34 million, and total loan outstanding of USD 1.1 million. Financial cooperatives are organized under the Union of Savings and Credit Federation (tertiary level society), which, as of March 2012, had 41 savings and credit federations (secondary level societies) and 1 625 primary level societies. The Union does not have a microfinance license. It lends to the primary societies at a flat 2 percent interest rate per month. It also launched its own lending to individuals in June 2012. As a whole, the Union reported savings of USD 24.2 million and outstanding loans of USD 16.5 million (average loan outstanding of USD 34), with a total membership of 476 632. Among thousands of primary-level societies, the Microfinance Cooperatives (142), and the Agriculture Savings and Credit Cooperatives (896) are among the largest groups. The Microfinance Cooperatives have 44 329 members, with USD 1.3 million in savings and USD 2.3 million in loans. The Agriculture Savings and Credit Cooperatives have 121 312 members, with USD 2.3 million in savings and USD 2.0 million in loans. The Cooperative Bank (CB Bank), a private bank with 25 branches, is closely associated with the cooperative system. It is owned by 4 500 shareholders, including 1 500 individuals and 3 000 cooperative societies. CB Bank lends to CCS, the union, and the primary societies. CB Bank has an ambitious expansion strategy and has received Central Bank approval to expand its branch network from the current 25 branches to 55 branches by the end of 2015. The cooperative movement has a mixed reputation due to poor governance, previous crisis and long history of government interference. In addition, loans extended by cooperatives are barely suitable for agriculture financing.

29. Before the passage of the Microfinance Law in November 2011, only PACT UNDP was allowed to operate in Myanmar legally. All others operated without legal status, which essentially prevented them from developing or scaling up their microfinance programs. Since then, most international NGOs and NGOs have received or will soon receive their MFI license. The leading institutions (GRET, PACT, Save the Children, and World Vision) have reached over 467 000 active borrowers with an aggregate loan portfolio of over USD 63.3 million (average loan outstanding of USD 135.5); with approximately 80 percent of total outreach and portfolio is accounted for by PACT UNDP (only 2 NGOs/MFIs are deposit-taking). NGOs/MFIs are supervised by the Microfinance Supervisory Committee while MADB is part of the MoAI, cooperatives by the Ministry of Cooperatives and commercial banks by the Central Bank of Myanmar which was not long ago a department of the Ministry of Finance and Revenue. New entrants in the rural finance/microfinance field include: IFC supporting ACLEDA of Cambodia to open a microfinance bank and several green-field microfinance institutions sponsored by LIFT.

30. Sixty Specialized Agricultural Development Companies (SADC) provide value chain finance for rice production (a bundled package including technical assistance/capacity-building services, seeds, fertilizers, rice milling, sales contract in addition to cash and in-kind lending at 2 percent per month). They extend around USD 50 million in loans during each season, supporting about 200 000 farmers. SADCs, usually one in each township, are typically owned by a few Yangon companies with export experience and local farmers, traders, and millers in the respective township. An average borrower holds five to seven acres and receives a loan of USD 70 to USD 100 per acre, compared to the USD 50 per acre they can get from MADB. An uncollateralized group lending methodology is used. They report a 95 percent repayment rate in the past three consecutive years.

31. The Livelihoods And Food Security Trust Fund (LIFT), a multi-donor trust fund, provides funding to several MFIs (UNDP/PACT, Save the Children, GRET). It works with the World Bank on the Financial Inclusion for National Development (FIND) project which will primarily support the Microfinance Supervisory Enterprise. Assistance will focus on three main areas: (i) institution building for microfinance supervision; (ii) capacity building for MSE staff to perform its supervisory functions and for microfinance lenders; and (iii) financial literacy and awareness. It will also work with UNCDF on the MicroLead project, and on the Making Access Possible diagnostic of Myanmar.

32. Farmer's indebtedness constitutes a serious problem in Myanmar, and the number of landless farm households is increasing. Working capital for farmers is exceedingly expensive for the small amounts provided by MADB, farmers having no other solution than borrowing the necessary balance from money lenders at a rate of interest incompatible with agricultural activities (ranging from 5 to 10% per month with an average around 7%). Bad harvests can mean that farmers need to sell their land to satisfy loan repayment and become casual labourers.

33. **Policy, strategy and institutional context.** Emerging from 50 years of isolation, Myanmar has embarked on a comprehensive programme of political and economic reforms that aims to introduce elements of popular representation in the political sphere, foster economic growth and inclusive social development, improve the business environment, attract foreign investment and reduce poverty. The EU lifted its economic sanctions in April 2013 and the USA has suspended its bilateral sanctions. ASEAN is now fully re-engaged, and South-east Asian investment in the country is increasing rapidly. The major multilateral and bilateral institutions are starting to establish operations in the country.

34. Government's reform agenda is articulated around the adoption of an open market economy; improvement of socio-economic conditions and reduction of rural-urban gaps; protection of social and economic rights; development of infrastructure and delivery of basic services, including for ethnic groups; improvement of health and education standards; protection of human rights and freedoms; respect for the rule of law and an independent and transparent judiciary; respect for the role of media; good governance and public scrutiny of executive and legislative bodies; institutional capacity-building and human resource development; government's accountability, responsiveness and inclusiveness; and decentralization. Many of these policy priorities are likely to impact on the rural sector, particularly in terms of safeguarding fundamental rights, including those of farmers.

35. Serious lack of capacity in the public sector to implement policy decisions is a major constraint to the success of these social, economic and political reforms. Thus there is an urgent need to build capacity at all levels of governance, ranging from central government agencies to institutions at state, regional and township levels. There is also a need to translate policy decisions, such as the poverty alleviation and rural development action plan, into sectoral plans and strategies to be implemented by Government institutions. Development partners have helped Government to set up various Working Groups to assist with drafting and implementation of these policies, strategies, sectoral approaches, and development plans (IFAD is a core member of the Agriculture and Rural Development Sector Working Group). Other major constraints faced by the public sector include the lack of robust and up-to-date operating systems and procedures, and excessively centralised decision making processes.

36. The agriculture sector comprises four sub-sectors: crops, livestock, fisheries and forestry. There are seven principal agencies responsible for agricultural and rural development, of which three have a direct bearing on the agricultural sector²¹: (i) Ministry of Agriculture and Irrigation (MOAI) responsible for crops, irrigation, agricultural credit and mechanization; (ii) Ministry of Livestock, Fisheries and Rural Development (MOLFRD); (iii) Ministry of Environmental Conservation and Forestry (MOECAF). Following Myanmar's five decades of isolation, MOAI (like other Ministries) is widely assessed as being weak in terms of human capabilities, technical capacities, fiduciary processes, farmer outreach and budgetary allocations. Its experiences with participatory approaches involving poor communities, small farmers and landless tenants are limited. It has little exposure to effective project management and execution in compliance with international standards and the requirements of external partners; and its administrative processes are outdated. Its coordination capacities are minimal, and its eleven departments²² work in silos. Decision making lacks transparency and internal procedures are unclear. Monitoring is poor and data reporting is unreliable, resulting in inconsistent institutional actions.

37. The Nay Pyi Taw Accord for Effective Development Cooperation agreed between Government and Development Partners (in early 2013), promotes transparency, collaboration and local ownership and management of development efforts. The Accord establishes a coordination structure between Government and partners to ensure development assistance brings maximum benefits to Myanmar, by supporting the implementation of strategies defined by Myanmar. Government is a signatory to the Global Summit on the Millennium Declaration and has recently reiterated its commitment to reducing poverty to 16% by 2015, half the 2005 level. Rural development and poverty reduction are key priorities in Government's agenda. The new Poverty Alleviation and Rural Development Action Plan (PARDAP) provide a coherent approach to rural development in coordinating Government efforts as well as of development partners, civil society and private sector. It focuses on eight priority tasks: (i) agricultural production; (ii) livestock and fisheries; (iii) rural productivity and cottage industries; (iv) micro saving and credit enterprises; (v) rural cooperatives; (vi) rural socio-economy; (vii) rural energy; and (viii) environmental conservation. The PARDAP targets investments in rural poverty reduction to meet the needs of the rural poor and landless, and aims to strengthen services, such as extension and research, that in the past showed limited responsiveness to farmers' needs.

38. **National Rural Poverty Reduction Strategy.** Although Myanmar does not have a poverty reduction strategy *per se*, the series of national development plans have served that purpose in support of Goal 1 (poverty reduction) of the Millennium Development Goals. Moreover, the Government has started to put in place a more coherent and coordinated approach to development; this includes the long term National Comprehensive Development Plan (NCDP) and the Framework for Economic and Social Reform (FESR). The FESR sets a direction for the continuing reform process in the country and articulates the broad goals of the reform process as well as its medium term objectives. It provides a bridge between reforms and Government's twenty-year NCDP, and focuses on a policy agenda for the next three years that will provide potential "quick wins" to be implemented to deliver tangible and sustainable benefits to the population. The NCDP, the FESR and the PARDAP thus provide the umbrella for the entire agricultural sector through the National Medium Term Priority Framework 2011-2014 (NMTPF) and the Country Programme Framework 2012-2016 (CPF) agreed by Government and FAO. The first priority is to increase agricultural production to ensure food security, which includes measures for poverty reduction, while the sixth is to improve rural livelihoods by helping communities to harness their physical, natural and human capital. The areas for action for the first priority outcome include ensuring food security in deficit regions through a number of measures including "*empowerment of farmers to control over resources, access to opportunities and improved governance*", promoting access to irrigation water and supporting sustainable livelihoods by expanding options for income and employment generation. Regrettably, the NMTPF and resulting

²¹ The other four ministries that operate in rural areas are the Ministries of Cooperatives, Home Affairs, Industries, and Border Areas.

²² Departments of Agricultural Planning, Agriculture; Irrigation, Agriculture Mechanization, Settlement and Land Records, Water Resources Utilization, Agricultural Research, Surveys; and the Myanmar Agricultural Development Bank, the Yezin Agricultural University, and Myanmar Industrial Crop Development Enterprise.

CPF do not mention any targeting of assistance to disadvantaged groups such as the poor, women, the landless and ethnic groups.

39. The Government is a signatory to the Global Summit on the Millennium Declaration and has reiterated its commitment to reducing poverty to 16% by 2015, half the 2005 level. In this context, the PARDAP focuses on eight priority tasks: (i) agricultural production; (ii) livestock and fisheries; (iii) rural productivity and cottage industries; (iv) micro saving and credit enterprises; (v) rural cooperatives; (vi) rural socio-economy; (vii) rural energy; and (viii) environmental conservation. It targets investments in rural poverty reduction to meet the needs of the rural poor and landless, and aims to strengthen services, such as extension and research, that in the past showed limited responsiveness to farmers' needs. The PARDAP further guides the formulation of sectoral plans which will define explicit actions for tackling rural poverty and targeting disadvantaged groups. The strategic documents link national development plans and the reform agenda, and underpin the formulation of the *Fifth National Economic and Social Development Plan 2011/12-2015/16*; together these provide a vision for the country to become a peaceful, modern and developed nation. The immediate objectives set in this plan include: (i) infrastructure development; (ii) development of border areas; (iii) development of rural areas; (iv) poverty alleviation; (v) achieving MDGs 1 and 7; and, (vi) maintaining good economic foundations and financial conditions. This Plan, coordinated by the National Planning Department of MONPED, will also guide the formulation of the rural development strategy and action plan by the Department of Rural Development of MOLFRD in coordination with other relevant agencies.

Appendix 2: Poverty, targeting and gender

I. THE NATIONAL POVERTY CONTEXT

1. The Human Development Index (HDI) for the Republic of the Union of Myanmar is 0.498, placing Myanmar 149th out of 186 countries globally in terms of poverty in the 2013 Human Development Report (HDR). Myanmar adopted its Country Millennium Development Goals (CMDGs) in 2001 with a target of halving poverty by 2015. However as the previous Government was sensitive about openly acknowledging that poverty was an issue, poverty alleviation did not receive the attention it deserved and was carried out without rigorous monitoring in the framework of general social and economic development plans.²³ Since 2011 there has been a renewed focus on poverty and the launch of Myanmar's first Poverty Alleviation and Rural Development Action Plan. Since 2004 there has also been more systematic monitoring of poverty with an Integrated Household Living Condition Assessment (IHLCA) carried out by UNDP in consultation with the Government in 2004-05 and 2009-2010.

Table 1: Poverty Profile

State, Region and Union	Urban	Rural	Total
Kachin	23.4	30.6	28.6
Kaya	2.3	16.3	11.4
Kayin	16.8	17.5	17.4
Chin	52.1	80	73.3
Sagaing	16	14.9	15.1
Tanintharyi	16.7	37.5	32.6
Bago	19	18.2	18.3
- Bago (E)	20.9	20.1	20.2
- Bago (W)	15.6	15.9	15.9
Magwe	15.8	28.2	27
Mandalay	14.1	31.6	26.6
Mon	17.8	16	16.3
Rakhine	22.1	49.1	43.5
Yangon	11.9	28.7	16.1
Shan	14.1	39.2	33.1
- Shan (S)	8.3	31.2	25.2
- Shan (N)	16.3	43.1	37.4
- Shan (E)	28.6	52.3	46.4
Ayeyardwady	23.1	33.9	32.2
Union	15.7	29.2	25.6

(IHLCA, 2010)

Table 2: Food Poverty Profile

State, Region and Union	Urban	Rural	Total
Kachin	2.5	5	4.3
Kaya	0	1.9	1.2
Kayin	0	2.1	1.7
Chin	6.4	30.8	25
Sagaing	2.5	1.1	1.3
Tanintharyi	4.5	11.1	9.6
Bago	3.4	1.4	1.7
- Bago (E)	4.9	2.4	2.8
- Bago (W)	0.7	0.3	0.3
Magwe	2.1	3.8	3.6
Mandalay	2.3	6.5	5.3
Mon	2.4	3.8	3.6
Rakhine	4.4	11.5	10
Yangon	1.6	4.8	2.4
Shan	3.5	10.8	9
- Shan (S)	3.6	9.8	8.2
- Shan (N)	3.4	11.6	9.9
- Shan (E)	3.5	10.9	9.1
Ayeyardwady	3.8	6.5	6.7
Union	2.5	5.6	4.8

(IHLCA, 2010)

2. The IHLCA series provide a number of measures of poverty: (i) the food poverty line; (ii) the poverty line; (iii) the poverty gap index, which measures the intensity of poverty and (iv) the share of poorest 20% in consumption.²⁴ The results indicate a general improvement in poverty levels between

²³ *Reducing Poverty in Myanmar: the way forward* Paper presented at workshop on poverty alleviation in Myanmar, Nay Pyi Taw, June 2011 by Dr U Myint, Chief, Economic Advisory Unit, Office of the President, NPT

²⁴ (i) The *food poverty line* is the amount of money necessary to pay for a consumption basket to meet the caloric requirements of household members; (ii) the *poverty line* is the amount of money necessary to cover consumption

2005 and 2010 in those living below the poverty line (32% to 26%) and the food poverty line (10% to 5%). The poverty gap ratio showed a reduction of 35% whilst the consumption share of the poorest quintile in national consumption increased from 11.2% to 12% between 2005 and 2010. The data is disaggregated at the State/Regional level; table 1 and 2 provide an overview of rural and urban poverty and food poverty by region²⁵.

3. The rural-urban divide is prominent in Myanmar with nearly 70% of the total population and 85% of the poor located in rural areas. The rural poor typically comprise the landless (between 35% and 53% of the rural population in different parts of the country) and those with access to small and marginal landholdings, usually below 2 ha (almost 5 acres). These rural poor suffer from inadequate food, nutrition and essential non-food items. Most of the poorest either live in the CDZ (where the soils are sandy, rainfall low and population density high) or in the hill tracts populated ethnic minorities; these are remote, inaccessible, have limited arable lands and are affected by conflicts.

4. Rural poverty is largely a function of a lack of resource endowments. Small farm size is a correlate of poverty, which has remained quite stable since 2005 among consumption deciles. Landlessness is a significant phenomenon at 24% of those whose primary economic activity is agriculture and is much higher amongst poor households (34%). The LIFT (2012) Baseline study of 4,000 households in 3 agro-ecological zones²⁶ found that some 50% of HHs nationally is landless - the proportion of landless varies from 26% in hilly areas to 72% in the delta/coastal areas. The 2010 Agriculture Census found that of those households with access to land, 5% of the landholdings owned less than 0.4ha, a decline of 47.6% in farm size since the 2003 Census. This suggests that they are functionally landless although they may not be registered as landless in the 2010 Agricultural Census.

5. At least half of rural HHs depends on wage labour for all or part of their livelihoods. Landless farmers and farm workers, and families not engaged in agriculture fall into this category, but so do many land-poor families. Farmers reported that opportunities for wage labour, either in agriculture or in nearby towns, were scarce. The ability to migrate has put a floor under real wages and it appears that wage-earning opportunities may have declined as lower crop prices and “expensive” wages cause farmers to cut back on labour-intensive transplanting and weeding, even though this reduces yield. Farmers with larger landholdings reported to hire less labour as they reduced acreage or the intensity of cultivation. Significantly, virtually all farmers – even ones with larger holdings – said they would engage in wage employment if it were locally available at prevailing wage rates²⁷.

6. In terms of **demographic correlates**, there was a significant association between poverty and HH size: poor HHs is larger (6.0) than non-poor HHs (4.7). The average HH size, i.e., the number of individuals in a HH, nationally is 5.2 with little difference in HH size between rural areas and urban. In poor communities, both fertility and mortality are high; this is due to high levels of illiteracy, and lack of knowledge about health services, health care, and nutrition. The economic dependency ratio, i.e. the number of economic dependents compared to the number of economically active persons in the HH, is 0.47 in rural areas at the national level. The IHLCA surveys found no significant difference in the economic dependency ratio of poor and non-poor HHs, suggesting that low returns or low remuneration are much more important determinants of poverty than unemployment or low participation rates in the labour force. Education of the HH head, especially literacy, is an important

expenditure to meet basic food and non-food needs; (iii) the *poverty gap index* measures the intensity of poverty; and (iv) the *share of poorest 20%* in national consumption.

²⁵ Availability of data on a number of social and economic issues, including information on levels and distribution of income and non-income poverty levels is a major constraint in Myanmar. Much of the data quoted in this working paper is derived from surveys by UN agencies or other international donor agencies or INGOs. The Government does gather data routinely on social, economic and environmental issues, available from the Central Statistical Office (CSO), and published annually in the Statistical Yearbook. However, much of this data is out-dated and not necessarily accurate and reliable. Official data is aggregated and only available at the second administrative level, thus making it difficult to identify and target particular populations at a geographically appropriate level. Sex disaggregated data and reliable data on poverty and income levels of the various ethnic groups was particularly hard to come by. Some unofficial information was available from various NGO groups, but this tended to be anecdotal rather than factual.

²⁶ LIFT Baseline Survey Results, July 2012.

²⁷ 2009 - "Assessment of the Myanmar Agricultural Economy" IDE, for the Harvard Kennedy School

determinant of poverty; illiteracy rates for poor HH heads were close to double those of non-poor HH heads. More than twice as many female HHs heads were illiterate than male household heads. Poor HHs also has lower access to education, with a net enrolment rate for children of 80.1%.

7. Nationally, 18.9% of households are female-headed HHs; this proportion is much higher in urban (25.1%) than rural areas (16.7%). In Myanmar, female-headship does not appear to be related to poverty. The proportion of poor HHs headed by women is slightly lower than the proportion of non-poor HHs headed by women (18.3% compared to 19.1%). Accordingly, poverty incidence for female-headed HHs (29%) is comparable to poverty incidence of male-headed HHs (30%).²⁸ Myanmar ranks 90 out of 186 countries in the 2012 Gender Inequality Index²⁹ with an index of 0.492, the first year for which it was possible to calculate such an index due to inadequate data. This slight reduction from the HDI value would reflect women's lower adult literacy rate of 86.4% compared to that for men of 93.9%, and lower estimated earned incomes than for men - women can expect to earn two-thirds of the income of men. The average gender gap in adult literacy for Myanmar is 6.2%, however the gap is largest in Mandalay (9.7%) followed by Magwe (9.2%).

8. Recent reviews of the agricultural sector and extensive anecdotal evidence question the extent of poverty reduction recorded in the latest IHLCA survey. The IHLCA itself notes *"in light of conflicting results, caution is urged in the interpretation of the data on poverty levels and trends in particular on the magnitude of the decline in poverty"*. In particular, the share of income spent on food has increased, the per capita rice production has dropped and the price of paddy and many pulses has fallen in real terms, diminishing the income of many farmers. In addition, many farmers are deeply in debt with a current debt burden that is often larger than their expected annual incomes. If they have high cost debts, many farmers use funds borrowed at lower interest rates to pay off the high-cost debt. Therefore the new loan is not fully used for inputs and the cash flow from the subsequent crop is reduced. The landless did not borrow for production but they do typically borrow for consumption. In short high levels of indebtedness characterise both Myanmar farmers and the rural sector; a recent analysis suggests that in fact Myanmar is facing "a crisis of insolvency and illiquidity."³⁰

9. In sum, the factors causing rural poverty are complex with a nuanced picture of some temporary gains for the landless through rising wages and migration but an overall decline in resource endowments, employment opportunities, production and high indebtedness preventing sustainable poverty reduction. The challenge is to establish means to balance the competing interests of small farmers and the landless and find a locally tailored mix of interventions to restructure farm debt combined with investments in rural and agricultural infrastructure and institutions. The decision on how to respond to these challenges represents not only an economic issue but also a policy issue on how to tackle competing interests and develop models that work. These issues have contributed to the targeting rationale of the project developed in this paper.

10. The main characteristics of poverty in Myanmar are presented in figure 1:

Figure 1: Rural Poverty in Myanmar - Characteristics	
Who are the rural poor?	
➤	smallholders owning < 2 acres of irrigated cultivable land and less than 2 acres of rainfed cultivable land;
➤	sharecroppers or tenants and their households;
➤	landless households dependent on livestock activities and/or casual labour;
➤	households with high dependency ratios (e.g. adult unable to work or disabled);
➤	women-headed households;
➤	young women and men living in extended households;
➤	ethnic minorities.

²⁸ Poverty Profile 2007 IHLCA-I & 2011 IHLCA, Ministry of National Planning & Economic Development, and UNDP.

²⁹ Human Development Report, 2011. UNDP.

³⁰ Myanmar Agriculture in 2011: Old Problems and New Challenges, Ash Centre, Harvard Kennedy School.

<p>Where are the rural poor?</p> <ul style="list-style-type: none"> ➤ rural poor are to be found throughout rural areas with a greater ethnic minority population and in the Dry Zone; ➤ located in areas of high population density and very small holdings; ➤ concentrated in dispersed settlements with inadequate access to services; ➤ found in remote inhospitable mountainous areas; ➤ often dependent on seasonal or long-term migration to urban areas.
<p>Why are they poor?</p> <ul style="list-style-type: none"> ➤ high vulnerability to shocks: price volatility, climate change, sudden loss of access to land, disaster, seasonal water shortage, underemployment; ➤ inadequate access to knowledge and technology; ➤ poor/inconsistent quality and limited/unscientific application of inputs; ➤ extremely limited access to financial services; ➤ lack of access to land; ➤ difficult access to markets; ➤ limited access to local organisations; ➤ other social and non-economic aspects (low level of education, belonging to an ethnic minority).
<p>What are their coping strategies?</p> <ul style="list-style-type: none"> ➤ out-migration (overseas; in-country); ➤ high to very high dependence on casual wage labour; ➤ borrowing from relatives, local traders, pawnshops; ➤ decapitalization.

II. THE INSTITUTIONAL CONTEXT

11. Myanmar is a country in transition. The new Government that took up office in March 2011 following the elections has, for the first time in recent history, set out a public policy agenda and a frank assessment of many of the problems facing the country³¹. This is in recognition that a key explanation for poverty in Myanmar – a resource rich country – is the policies and institutions that influence the livelihood strategies and options of the poor. One of the major constraints to the success of these reforms is a lack of institutional and technical capacity in Myanmar, particularly at the middle management and working levels and capacity to translate policy decisions into sectoral action plans and strategies. Evidence-based policies are required to support action plans to address the major constraints in the rural sector. This section sets out the main institutional issues specifically related to targeting the poor that have not been fully outlined in the main report.³²

12. **Land policies.** In March 2012, the legislature enacted a new Farmland Law³³ that set out amended rules for “the right to work farmland” through obtaining a Land Use Certificate (LUC) whilst retaining ownership of all land in the Government. The new law officially reintroduces the concept of private ownership, i.e. land tenure rights, which can now be sold, traded, or mortgaged. This is a positive step as land was previously traded illegally but openly on a black market with little transparency. However, the new law also removes some protections for farmers, such as allowing land to be repossessed if they fall into debt. Farmland management bodies – represented at all administrative levels – are given the power to scrutinise land use and the government retains the power to “revoke the right to use farmland” and ordain what crops shall be grown if these are deemed “*beneficial to the State*”. The Settlement and Land Records Department (SLRD) have completed the issue of tenure rights certificates to farmers in the Nay Pyi Daw region. Restrictions imposed on land use rights and strict conditions placed on the choice of crops poses several major challenges for farmer capacity to respond to market incentives and maximise income. The challenge for poverty reduction is how to support farmers to realise the full potential of their land without undue exposure to risk and indebtedness that could compromise their land rights; landlessness and indebtedness are two of the main symptoms and causes of poverty, as the next section will outline further.

³¹ *Situation on Human Rights in Myanmar*. Report of the Secretary General, UN General Assembly, A/66/150, August 2011.

³² This working paper was written on a post-design mission; a comprehensive analysis of the institutional context has already been provided. This section therefore only draws out the implications of specific institutional issues for poverty and targeting and does not review the wider policy and governance framework.

³³ Source: *Farmland Law enacted by the Pyidaungsu Hluttaw under Order No. 11/2012 dated 30 March*.

13. **Planned farming practices.** The policy to maintain national food self-sufficiency and the right of the government to ordain what crops can be grown has resulted in government restrictions on farmer self-determination in choice of cropping pattern. Farmers who have land in irrigated areas, as well as in lowland areas that have sufficient water, are required to grow paddy in the monsoon season. This reduces farmer capacity to respond to the market and to seek alternative and less water intensive crops. With poor market prices for paddy in the last few years many farmers with irrigated land that the team met during the mission had chosen to produce monsoon paddy with minimum inputs and invest in the winter crop with the residual moisture available. Restrictions on crop choice prevents farmers from growing alternate less water intensive crops that are better for the environment and contribute to greater efficiency, what is often called 'more crop per drop'. Restrictions on farmer self-determination of crops in irrigated areas reduces farmer capacity to generate maximum income from irrigated land and results in a complex distribution of benefits that has implications for targeting, namely; while irrigated land is generally associated with reduced poverty, in the project area some upland farmers having access to tube-wells are better-off as they are able to respond to the market.

14. **Land consolidation in irrigated areas.** The productivity of land in irrigated areas is sub-optimal because of the highly fragmented pattern of small bunded basins with irregular shape at slightly different levels. It is also inequitable as upstream users have a clear comparative advantage in terms of securing the required amounts of water and fine-tuning the cropping calendar with the availability of water in the canals. Practically rice is the only crop that can be cultivated by the downstream users under these flow and drainage conditions, preventing possibilities to respond to market demands and making the farmers' incomes subject to externalities such as the fluctuations in the rice price. Moreover, the high and continuous water requirement of summer rice makes rice growers highly vulnerable to any reduction of flow from dams. The plot-to-plot system also results in sub-optimal use of agricultural inputs (pesticides and fertilizers) regardless of the level of inputs used.

15. Recognising these constraints the Government has supported agricultural infrastructure investment and land consolidation initiatives in which the land is levelled, the irrigation structure is upgraded and the land is consolidated into regular bunded plots. This procedure requires some farmers to contribute parts of their land to the infrastructure works. Whilst the collective benefits of this procedure are considerable the process is contentious because it requires a redefinition of title and plots. In discussions with farmers during the fieldwork, farmers expressed their interest in agricultural infrastructure investment and land consolidation as well as the following concerns:

- Concern that there might be sale or expropriation of land to be developed;
- Reluctance to exchange the location of their plots after levelling;
- Concern about having to allocate land to the infrastructure works;
- Requested evidence that the productivity would increase;
- Concern that the top soil of the upper farm land would be used to fill up the lower land;
- Concern that mechanisation would decrease labour opportunities;
- Concern that fuel costs would prevent mechanisation.

16. There is currently no method or institutional framework for agricultural investment combined with land consolidation that is participatory and inclusive. A farmer-driven approach that is based on participatory and service-oriented principles would make land consolidation and modernization a real option for the existing irrigation schemes.

17. **Irrigation systems and Water User Groups.** Both the Irrigation Department (ID) and the Water Resources Utilization Department (WRUD) are responsible for irrigation, including collecting water taxes. The water tax is currently MMK 900 per acre for monsoon paddy and MMK 1,950 per acre for summer paddy, an increase from MMK 11 in 2006. The ID is responsible for constructing and maintaining irrigation facilities down to the tertiary level, while Water Users' Groups (WUGs) are responsible for building field ditches and for operations and maintenance (O&M) of the latter as well as of tertiary canals. The WRUD is responsible for supplying irrigation by pumping water from rivers, streams and groundwater sources.

18. There is no policy, strategic or institutional framework that sets out the rights and obligations of irrigation stakeholders. The WUG are currently informal groups that are largely self-formed to manage water along tertiary canals. In the case of complaints members usually approach the field staff of the ID as individuals, there is no system of formal sanctions and rules that govern the groups. The amount of water tax collected has declined every year from – anecdotally - 30-40% in 2009 to less than 10% so far in 2013. The process of collecting the water taxes is difficult because of fragmented ownership and a lack of clarity over titles. The ID had passed responsibility for collecting the water tax to the SLRD as they have the land records but both have stopped serious attempts to collect water tax until the land titling process is complete. In addition, sanctions are hard to apply, partly because there is no legal framework and partly because the Government will not turn off irrigation due to the policy to achieve food security through irrigated rice production.

19. There is an obvious need to synergize farmer-agency relationships in irrigation, based on their complementary roles in system management and mutual accountability³⁴. An important component of this is capacity building and training of WUGs and farmers. Current constraints are the lack of an enabling environment, which normally requires: (i) a stakeholder dialogue and consensus building process; (ii) an enabling legal framework in which the legal status, membership, rights and responsibilities of members are clearly stipulated; and (iii) a capacity building and support programme.

20. **Gender policies and institutions.** Buddhist customary law and the 2008 Constitution provide equal rights to women and men. However women are not well represented in the political and higher level administrative sphere outside of the traditional areas of social services, health and education. At the local levels (districts, townships, villages), there were few women representatives, especially in the key decision-making bodies. The prevailing cultural disposition is towards a stereotypical gender division of roles with women closely associated with domestic activities, despite the fact that they are quite dominant in decision-making and often have ownership of assets. The five-year National Plans for economic and social development have not adequately addressed the issue of gender inequality and there has been limited attention to the disproportionate burden of poverty and militarisation that falls on women. In addition, systems for collecting sex-disaggregated data and monitoring women's welfare and gender are poorly developed and narrowly focused on reproductive functions.

21. There has been considerable progress in recent years to mainstream gender. The Department of Social Welfare is the focal point for gender and in 2011 prepared a "National Plan of Action for the Advancement of Women 2011-2015". A key objective is to see women play a greater part in current decentralisation reforms in order to play a greater role in decision-making at the local level as well as in productive sectors, such as agriculture or business. The Myanmar National Committee for Women's Affairs (MNCWA) is a national mechanism for the promotion of women's rights, a UN Gender Theme Group (GTG) was formed in 2009 to mainstream gender in the humanitarian and development interventions and a Gender Equality Network (GEN) is now a leading network of civil society, national and international non-government organizations (I/NGOs), UN agencies and technical resource persons on gender issues. Further, the Women Organizations Network of Myanmar (WON) was formed in 2008 to coordinate local and national women groups and organizations and now has a network of over 29 local women groups and organizations.

22. The experience of gender integration in rural and livelihood projects in Myanmar has been generally positive. In particular, women are the main recipients in many micro-finance schemes aimed at supporting income generation, such as those managed by PACT. Findings from design mission discussions are that women's groups are highly effective and established gender roles can be challenged to enable women to have greater access to and control over resources. Positively, more than 50% of extension agents are women, albeit because the position is so poorly paid. However having a large female extension force is unusual and the project should be careful not to lose them if the position gains more prestige and supplementary income through project investments.

³⁴ Review of access to, and management of, water resources in the CDZ, commissioned by the Livelihoods and Food Security Trust Fund (LIFT) to the International Water Resources Institute (January – June, 2013)

23. **Constraints and opportunities in community-led development.** The cultural homogeneity, community spirit and tradition of mutual help that are widely encountered in Myanmar communities are major strengths for community development. The existence of a number of social and welfare groups operating at community level also provides a background from which to build in the future.

24. However there is little experience of collective action around production and economic development. The attitude of the Government to community-based development has been mixed. While acknowledging the benefits of mobilizing community efforts for rural development, development projects have found it difficult to link communities to government services, particularly extension. With a history of production targets inherited from the socialist period, Government services place excessive focus on commodity production issues rather than rural livelihoods and take a 'top down' approach to determining priorities and activities.

III. RESOURCES AND LIVELIHOOD STRATEGIES OF THE POOR IN THE PROJECT AREA

25. This section looks in more detail at the resources and livelihood strategies of the poor in the project area; namely the command area of six irrigation schemes in five townships in the Nay Pyi Daw union territory.

Nay Pyi Daw in the regional context³⁵

26. Nay Pyi Daw is at the southern tip of the Central Dry Zone (CDZ), an area characterised by a large population of the poor vulnerable to climate change, with sandy soils, low rainfall and low and high population density. This is a priority area of the PARDAP and the Fifth National Economic and Social Development Plan. The CDZ is also a priority area for other donors such as the WB community development programme and the new UNDP country programme. Nay Pyi Daw was part of the Mandalay region, which has a rural poverty rate of 31.6% and a rural food poverty rate of 6.5% compared to the national average of, respectively, 29.2% and 5.6%. Mandalay region makes the second highest contribution to national poverty and food poverty (after the Ayerwaddy region) because of its population, respectively 15% and 16% (see table 3).

27. Poverty analysis in the Nay Pyi Daw Union Territory (hereafter Nay Pyi Daw) is hard to individualise as Nay Pyi Daw, composed of three townships in Mandalay region until 2011, is now composed of 7 townships in a separate Union territory. The IHLCA series and the 2010 Agricultural Census do not have disaggregated data for these 7 townships and, as already noted, there is no social and economic data collected by the townships themselves³⁶. The total population in the 5 townships amounts to about 167,000 households (i.e. 800,000 people). The total population living in the 82 village tracts located within the project area amounts to 59,000 households (i.e. 286,000 people) with approximately 42% of all rural households landless. A Social and Economic Baseline (SEBS) study of the project area was commissioned as part of the design process³⁷. Table 5 provides key data on the Nay Pyi Daw project area compared to the larger Mandalay region of which it was formerly part; the wealth categories were derived through wealth ranking.

³⁵ As noted, data in Myanmar is seriously flawed. This section draws on what is available to present a contextual analysis of Nay Pyi Daw.

³⁶ The township administration collects data mainly on items that can be counted not correlated. The Central Statistical Office conducted an expenditure survey in three townships in Nay Pyi Daw (Zabuthiri, Pyanamina and Lewe) in 2012 but the data is still being processed.

³⁷ The SEBS provides quantitative and qualitative information on the socio-economic conditions, needs and priorities of target beneficiaries. It was conducted in 10 villages, had a total of 786 respondents, 194 Focus Group Discussions and 380 household interviews.

Table 5. Selected socio-economic indicators in project area and Mandalay division

	Project Area				
	Better Off	Moderate	Poor	Very Poor	Average
HH distribution (%)	18	21	24	37	-
Average Land size (ac.)	10.9	5.3	2.86	0.19	4.81
Debt (% of HHs)	71.4	83.8	85.6	67.1	77.0
HH head completed primary education (% of HHs)	61	54	40	29	46
Access to Electricity (% of HHs)	76	73	64	37	62.5
Landless HHs (%)	7	6	24	91	42

Sources: SEBS 2013, IHLCA 2010

28. In wealth ranking exercises in the SEBS 61% of the population was considered poor and household income surveys found that the income of the poor and very poor was significantly below the 2010 national poverty line of MMK 274990 per capita per annum (see table 7 below). Whilst income in the better-off and moderate category placed households above the poverty line, the moderate category is vulnerable to becoming poor through natural, health and economic shocks. This was related during the wealth ranking exercises but is also clear from data tracking movements in and out of poverty in the IHLCA 2010, in which 27.8% of the population had either descended into poverty or escaped poverty since 2005.

29. NPT on the whole presents better livelihood opportunities for the rural poor. NPT has higher rainfall and more irrigated lowland than is typical for the CDZ, whilst major construction in the new capital has provided wage-earning opportunities, markets and infrastructure improvements. Despite these advantages, NPT remains below the national poverty line with rising wage rates and falling prices cutting into small farmer profits and declining opportunities for labour both on farms and in NPT reducing livelihood options for the landless. The severity of poverty amongst the bottom 20% is similar to other areas. The level of indebtedness in NPT is higher than the national average, further reducing the livelihood options the rural poor have for sustainably increasing income.

Assets and Ownership in the Project Area

30. Rural poverty in Nay Pyi Daw, as in most of Myanmar, is largely a function of a lack of resource endowments. Land remains the most important resource endowment for the rural poor. On the irrigated and lowland areas, paddy is the dominant crop in the monsoon period, this is followed in winter by pulses, mainly black gram and/or oilseeds, sesame or groundnut. Where water is available in summer, summer paddy is grown as well as oilseeds or grains. The SEBS study finds that weighed average landholdings in the project area is 3.83 acres distributed as follows amongst the wealth categories: better off (10.90); moderate (5.30); poor (2.86) and very poor (0.19). The distribution of irrigated land between wealth categories is as follows: better off (9.25), moderate (5.30), poor (1.99) and very poor (0.19). The distribution of land is inequitable, with 25% of poor households and almost 90% of very poor households landless.

31. This triangulated picture of land distribution suggests that the pattern of growing inequity in land distribution recorded in the 2010 Agricultural Census holds true for NPT.³⁸ The traditional IFAD target group – the 61% of the population found to be very poor and poor – has rapidly declining access to land and an increasing reliance on livelihood strategies based on labour, trade and non-agricultural income. Other main differences in resource endowment characterizing poorer HHs are:

- Education levels differed significantly between households. Amongst the better-off HHs 60% and 31% of HHs had completed, respectively, primary and secondary school, this percentage declines with increasing poverty, amongst the very poor it is 29% and 6%. The lack of

³⁸ The inequity in distribution and fragmentation of land is likely to be even more extreme than provided in the 2010 Agricultural Census as data on land ownership has not been updated since before 2010. In Nay Pyi Daw this will only be done once the certification process is complete, providing the first ever accurate picture of land distribution in Myanmar. Annex 3 provides more detail on the distribution of land in the five different project townships, but again this has not been updated. The SEBS 2013 data linking landholdings to wealth categories is likely to be the most accurate.

education is both a symptom and a cause of poverty that has a big influence on limiting the livelihood options of the poor, in particular for the uptake of new technologies in agriculture, providing agricultural services and accessing higher paid labour.

- The demographic and economic dependency ratio of HHs in different wealth categories is similar suggesting that this is not in itself an explanation for poverty. The percentage of female-headed households was highest in the very poor group.
- Whilst there are no large concentrations of livestock, ownership declines with increasing poverty; the very poor do not own any draught cattle at all and have at the most a pig and a few chickens.
- The ownership of productive assets and physical capital declines with increasing poverty. The better-off and moderate categories own basic agricultural equipment as well as transport, the poor and very poor have a bicycle and carts at the most.
- The poor categories have less income and less access to credit; this will be explored further.

32. Table 6 presents an overview of the distribution of assets and ownership amongst the different wealth categories.

Table 6: Characteristics of Poverty Groups in the Project Area

Particular	Better off	Moderate	Poor	Very Poor
Household Distribution by Social Classes (# and %)	70 (18%)	80 (21%)	90 (24%)	140 (37%)
Average female headed households	6 (2%)	12 (3%)	13 (3%)	37 (10%)
Demographic Dependency Ratio (# and Ratio)	129/252 (0.5)	115/275 (0.4)	146/293 (0.5)	248/408 (0.6)
Economic Dependency Ratio	154/227 (0.68)	148/242 (0.61)	183/256 (0.71)	269/387 (0.7)
Average land holding size and irrigated land holding	Owned 11 acre per family of which 9.25 acre is irrigated land	Owned 5.3 acre per family of which 4.1 acre is irrigated land	Owned 2.86 acre per family of which 2 acre is irrigated land	Owned almost no land (landless)
Income, Expenditure, Debt (USD)	HH income/year: 4,000 HH expenditure/year: 4,300 HH debt/year: 1,000 Income/capita/day: 2.18	HH income/year: 2,300 HH expenditure/year: 3,200 HH debt/year: 800 Income/capita/day: 1.29	HH income/year: 1,500 HH expenditure/year: 2,000 HH debt/year: 400 Income/capita/day: 0.82	HH income/year: 750 HH expenditure/year: 1,000 HH debt/year: 200 Income/capita/day: 0.41
Cropping pattern	Paddy in rainy, black gram or green gram in winter and paddy again in summer when irrigated water is accessible.	Paddy in rainy, black gram or green gram in winter.	Paddy in rainy season and black/green grams grow in winter under irrigated land. Sesame, groundnut or corn grows in rainy under rain-fed land and vegetable during the winter season.	Sesame, groundnut or corn grows on rain-fed land, vegetable during the winter season.
Housing, water and sanitation.	All HHs are with corrugated iron sheets roofing and all HHs access to sanitary toilet.	90% of HHs is with corrugated iron sheets roofing and all HHs access to sanitary toilet.	80% of HHs are with corrugated iron sheets roofing and 94% of HHs access to sanitary toilet.	One third of HHs are with corrugated iron sheets roofing 81% of HHs access to sanitary toilet.
Average livestock holding	Typically own 1-3 draught cattle, one pig and three chickens	Typically own 1 draught cattle, 50% of the household own one pig and most households own three chickens	Typically own 1 draught cattle, 50% of the household own one pig and most households own three chickens	Typically do not own cattle, one third of the households own one pig and most households has one chicken
Household assets	Mostly own motor cycle, hand tractor, water pump, thresher/crusher and cart	Some farmers own motor cycle, hand tractor, water pump, and cart	Some farmers own cycle and cart	Few households own bicycle
Education	60% and 30% of HH heads completed primary and secondary school respectively	54% and 18% of HH heads completed primary and secondary school respectively	40% and 11% of HH heads completed primary and secondary school respectively	Only 29% and 6% of HH head completed primary and secondary school respectively

Livelihood Strategies and Options

33. The SEBS conducted as part of the project design process indicated that some that some 61% of families could be classified as, poor or very poor. The average household income for this group as a whole was MMK 1,044,000 or the equivalent of USD 0.60 per person day for a family of average size 4.88 persons. However, the moderate category remains extremely vulnerable to shocks leading to high poverty. Taking together the income from agriculture and agricultural labour, the total income from agriculture for the wealth groups are 47% for the very poor, 67% for the poor and 74% for the moderate group. Agriculture remains crucial as a livelihood strategy but poor households in particular are increasingly dependent on migration and trade. Clearly the very poor are mainly those with little access to land and derive little income from agricultural production (about 7%), compared with the poor (53%) or the moderately poor (73%).

Table 7: Rural Household Incomes in the Project Area (MMK '000 per annum)

Sources of Income	Better Off	Moderate	Poor	Very Poor	Weighted Average All	Weighted Average Target Group	
Income from Agriculture	3,157	1,706	788	51	1,127	339	32%
Agricultural Labour	-	28	206	305	55	266	25%
Other Labour and Employment	142	134	238	263	111	253	24%
Trade	338	175	38	22	108	28	3%
Other Income	342	305	223	114	180	157	15%
Total Income	3,979	2,348	1,493	756	1,581	1,044	100%
USD per person per day*	2.29	1.35	0.86	0.44	0.91	0.60	
(Poverty Line: 1.08 USD/day)							

* Based on avg. HH size of 4.88 and MMK 1,000 = USD 1.026

Source: SEBS, 2013

34. The irrigated lowlands provide the main source of agricultural income for all poverty groups, whether from crop sales or agricultural labour. As noted, the average parcel size in irrigated areas is 3 acres. The irrigation systems are extremely inefficient, estimated at 35-55% of potential, because of a near exclusive focus on providing irrigation for rice. In addition, irrigation is operated on a plot-to-plot water and drainage distribution system that is controlled by upstream users by temporarily lowering and raising the bunds. Under this system upstream users have a clear comparative advantage in terms of securing the required amounts of water, fine-tuning the cropping calendar to water availability and thereby achieving maximum productivity. The current irrigation system, the policy requirement to grow paddy in the monsoon, the increasing policy support for high-input hybrid varieties and mechanisation, reduces the potential returns from irrigated lowlands, which are still the main source of income for the poor in NPT. Specifically, rice growers are vulnerable to any reduction of flow from dams, are not able to benefit from less water intensive crops that could provide opportunities for the expansion of the irrigated area in summer and are not provided with support to explore lower input technologies more adapted to the economic constraints of small producers.

35. The rainfed uplands provide an important source of income for all wealth groups and constitute almost a third of the landholdings of the poor. At the township level, 28% of rural households have both lowlands and uplands and 35% have only uplands. The distribution of land categories across wealth categories is provided in table 8.

Table 8: Landholdings by Type, Size and Wealth Category

Household Type	Better-off	Moderate	Poor	Very Poor	Total	% of Total
Irrigated farming HHs	33%	37%	28%	2%	100%	51%
Rainfed Farming HHs	4%	15%	52%	30%	100%	7%
Landless HHs	3%	3%	14%	80%	100%	42%
Weighted average	18%	21%	24%	37%	100%	100%

Source: SEBS 2013

36. Although the proportion of landholdings under rain-fed agriculture is lower than that for irrigated land in all wealth categories, it nevertheless constitutes almost a third of the landholdings of poor HHs. Mission fieldwork found that HHs farming rain-fed land have received no support for the uptake of new technologies suitable for rain-fed areas; extension services are focused on productivity improvements in irrigated lowlands. Further the focus on productivity increases has been at the expense of commodity development, value chain upgrading, market access and linkages among stakeholders. In short, the focus has been on productivity increases for wealthier HHs more able to link directly to markets at the expense of poorer households requiring technologies adapted to their resource endowments and support with market integration. This focus has prevented poor HHs from fully benefiting from one of their main resource endowments.

37. Landless HHs, as detailed in table 8, make up a large percentage of the poorest HHs in the project area. Their main income sources are on-farm labour opportunities in combination with off-farm labour in the construction and services sectors as well as seasonal migration during the dry season. The development of NPT and increasing opportunities for migration had provided considerable income for landless NPT HHs. The traditional interdependence between the landed and the landless that provided a solid subsistence for the landless is under pressure for several reasons; (i) decreasing land sizes and the growing number of landless; (ii) opportunities in NPT, rising agricultural wages and slow mechanisation has resulted in many farmers either choosing less labour intensive production or, for wealthier HHs, mechanisation. The reduced demand for agricultural labour, as well as labour in NPT - with the completion of the City - and limited access to higher paid service jobs, has limited the livelihood opportunities available for the landless. Seasonal migration remains one of the main options, but one that remains a challenge for HHs with limitations in human capital (female-headed, limited education, high dependency ratio and health concerns).

38. Livestock provide an important source of cash income for HHs in all wealth categories: better-off (17%); moderate (9%); poor (14%) and very poor (16%). Although it only constitutes a small part of HH income, for the poor and very poor groups income for livestock is an important insurance against one-off costs, especially related to health and education that can otherwise result in more serious de-capitalisation. Livestock production has been given limited support through extension services. With declining common property resources and a reduction in the demand for draught-power, the potential of livestock production as a source of income for poor HHs requires strategic support and intervention to be fully explored and realised.

39. A key constraint on increasing incomes for all HHs is high levels of indebtedness with over 75% of HHs indebted. The HH average debt burden by wealth categories is described in table 9.

Table 9: Household Debt Burden

Household Numbers	Better Off	Moderate	Poor	Very Poor	Total
Household with no debt burden	20	13	13	46	92
Household with debt burden	50	67	77	94	288
Total	70	80	90	140	380
% of debt HHs	71	84	86	67	77
Average Debt Amount (USD)	1 000	800	400	200	600

Source: SEBS (2013)

40. The reason and source of the debt varied considerably between households in different wealth categories. Amongst the better-off group only 14% took a debt for subsistence, whilst 90% took a loan for investment in production and a further 10% for purchasing assets. Loans for health and education constituted respectively 2 and 6% of all reasons for taking loans. For the very poor, at the other spectrum, 64% of loans were for subsistence, 26% for health and 7% for education related purposes, whilst only 11% was for investment in production. Notably 37% of households in the moderate category had taken a loan for subsistence purposes, indicating the continued vulnerability of households above the poverty line. The source of credit also varies considerably between households with different resource endowments as shown in table 10.

Table 10: Source of Credit and Credit Terms

Credit Sources	Monthly Interest Rate	Collateral	Requirement	Amount of Credit
Myanmar Agriculture Development Bank	0.87%	No	Farmer with Paddy Land	100,000 Kyat / Acre (up to 10 Acre)
Agriculture Cooperatives	2.50%	No	Farmer with Paddy Land	50,000 Kyat / Farmer
Licensed Pawn Shop	2%	Yes	Anyone	50% value of collateral
Informal Money Lenders	6-10%	No	Farmers and Landless	Based on Trust worthiness
Gold Shop	2-4%	Yes	Loan by using Gold as collateral	50% value of collateral

Source: SEBS (2013)

41. The table shows that poor households – particularly those with no land - have limited sources of credit and pay high interest rates. The monthly interest rate is based on trust and usually has to be settled every month. The other main source of credit is advance sales of crops and labour, both of which seriously reduce farmer incomes. In many cases farmers who had high-cost debt were borrowing additional funds from sources such as the Myanmar Agricultural Development Bank to cover this debt. When they do this the 'new loan' is not fully used for inputs and therefore does not contribute to productivity gains for the farming household. The field visits verified high level of indebtedness; with the new land laws and freedom to mortgage land this could contribute to accelerated landlessness. The fact that expenditure on food constitutes 64% of the income of the poor and over 90% of the income of the very poor underscores the vulnerability of the poor. Only 8% of households in the study area had enough food for more than 3 months and 60% had food for less than 1 month.

42. These figures show the extreme vulnerability of the poor and the complexity of balancing rural livelihood strategies and conflicting needs. The better-off and moderate farmers require access to higher yielding varieties, accessible and affordable mechanisation to enable competitive commercialisation. Poor households require affordable seasonal labour and technologies adapted to smallholder constraints on land and financial capital. Indeed there is an on-farm season labour shortage and off-farm season labour surplus. Landless households require well-paid labour and options to generate sustainable incomes that are based not only on labour but also sustainable investments. Access to financial capital that enables poor households to invest in production, rather than cyclical debt servicing and consumption, is therefore key to poverty reduction.

43. Both the government and private sector are currently not providing affordable services adapted to smallholder and poor household production constraints. The public sector departments are present at the township level but, apart from being understaffed and under-resourced, they do not have the capacity to provide extension advice tailored to smallholder capacities, nor do they have the skills to respond to smallholder priorities. The private sector operators – providing inputs and related advisory services – limit their services to better-off and moderate farmers who are more effective consumers. International and

national NGO's are common in the CDZ but totally absent from the Nay Pyi Daw region³⁹. In short, there is currently no institutional capacity to negotiate the interests and priorities of different household needs, constraints and livelihood strategies whilst supporting poverty reduction amongst the rural poor.

44. This institutional support and planned development is increasingly important. Level of trust and community bonds have been strong with considerable collective action on social services and social infrastructure, as well as interdependence between landed and landed households based on mutual support with land and labour. However the factors described – alternative labour sources, rising land prices, mechanisation, modernisation, land fragmentation etc. – will break down these traditional community bonds, as was noted several times during the fieldwork. Moreover, these ties are based more around social services than collective action around productive assets. The changing context and pressures described require alternative institutional arrangements to enable poverty reduction.

45. Women are particularly affected by the changing social and economic realities of the rural sector in the last few years. The gender analysis outlined above applies to women in the project area, although gender roles and division of tasks is even more divided in the CDZ. There is no township level data available on the economic status of women in the project area or of total number of households that are headed by women. The IHLCA 2010 study found that, at a national level, women-headed households were not found to be more poor than those headed by men. However the SEBS study found a clear link between poverty and female-headed households with only 2% of better-off households headed by women and 10% of very poor households headed by women. Women and men play complementary and often interchangeable roles in agricultural labour, although weeding and transplanting tends to be women's work whilst men are more involved in land preparation and irrigation. Women have a lower wage rate than men and are less involved in seasonal migration, performing domestic, agricultural and labour tasks whilst men migrate. In general, men own assets and hold decision-making roles in the public domain whilst women are influential in household decision-making as well as in trade and market related decisions.

IV. TARGETING AND SOCIAL AND GENDER INCLUSION

TARGETING RATIONALE

Geographic targeting

46. The poverty analysis completed for the design concluded that whilst the CDZ and Mandalay region are below the national poverty line, NPT on the whole presents better livelihood opportunities for the rural poor. NPT has higher rainfall and more irrigated lowland than is typical for the CDZ, whilst major construction in the new capital has provided wage-earning opportunities, markets and infrastructure improvements. Despite these advantages, NPT remains below the national poverty line with rising wage rates and falling prices cutting into small farmer profits and declining opportunities for labour both on farms and in NPT reducing livelihood options for the landless. The level of indebtedness in NPT is higher than the national average, further reducing the livelihood options the rural poor have for sustainably increasing income. However NPT was not selected as the location for the first IFAD investment in Myanmar because it has comparatively high poverty levels but because working in NPT, for reasons outlined below, provides an opportunity for the project to generate evidence-based strategies to support the development of a better enabling environment for rural poverty reduction.

47. Within NPT the location of the Knowledge Centres (KCs) and the selection of the upland areas to be included in the project will use poverty criteria such as a high proportion of HHs below 5 acres, high proportion of landless, limited alternative livelihood options and high rates of indebtedness. The selection criteria will be finalised in the targeting and gender study and strategy during project inception.

³⁹ The role and capacity of private and public sector service providers has been explored in some depth in the technical working papers.

Enabling Policy and Institutional Environment

48. A recent review of the agricultural sector has noted that questions related to how to recapitalise farmers and support growth in the rural sector “are more social and political than economic in nature ... they must be answered before any policy response to indebtedness and the other problems confronting Myanmar’s farm sector is implemented”. The report goes on to note that “until the Government decides on the activities that it will support and the means of funding those activities, donor agencies can assist by funding pilot programs and working with selected government agencies to test approaches to rural incomes, food output and food security in various localities”.

49. This represents the consensus view and is key to the targeting approach of the project. IFAD will work with key government agencies and other stakeholders to introduce and test innovative approaches and models for sustainable rural development through the following main activities:

- Support the capacity of officials of the MOAI to carry out land consolidation through decentralized participatory planning methods that involve communities in the design and supervision process;
- Promote social mobilization and capacity building of communities to carry out planning and management of irrigation water supplies, group marketing, saving and credit operations and income generation activities;
- Increase the integration of Government support services with the activities of rural communities, such that extension messages (and research) cease to be commodity based and adopt instead a more integrated approach based on local constraints and options;
- Support the adoption of diversified cropping systems able to respond to water availability as well as market demands therefore reducing farmer vulnerability to climate and market driven shocks.
- Generate Government buy-in on approaches to increase rural incomes and food security successfully piloted in the project for replication in other regions.

50. Nay Pyi Daw is an appropriate choice for these interventions for the following reasons:

- (i) Senior staff of the MOAI as well as other key decision-makers is located in NPT, so lessons from the project can be effectively communicated and translated into evidence-based strategies and policies. Analysis has noted the importance of demonstrating to decision-makers that the goals of broad-based economic development of smallholders can be achieved through participatory and consultative processes.
- (ii) Participatory land consolidation and water management require land certification as a foundation. NPT is the first region in Myanmar to complete the certification process and is therefore an ideal place to generate lessons on best practice.
- (iii) NPT is the main location of model farms show-casing a comprehensive approach to land consolidation with infrastructure works, hybrid rice production and mechanisation through top-down management. Project investments have the opportunity to demonstrate how participatory processes and experimentation with alternative crops in a rice-based cropping pattern can provide solutions that are more adapted to local capacities. In addition, how these models are more appropriate for the new economic and political realities of agriculture in Myanmar, i.e. landowners with titles and a growing appreciation of the fact that in theory at least they have the right to make their own investment choices.
- (iv) There is potential for significant benefits for the poor from relatively little incremental investment due to the current ineffective use of irrigation capacity in the six irrigation schemes in NPT with irrigation intensity on most existing schemes ranging between 45% and 82%.
- (v) Above average debt levels amongst all agricultural HHs, the near completion of the land certification process in NPT that enables HHs to sell and mortgage land, rising land prices, GoM pressure to consolidate land through the extension of model farms and economic manipulation through misinformation increase the exposure of vulnerable HHs to ill-informed distress sales of land.

Self-targeting

51. Goods and services provided by FARM project respond to priorities, financial and labour capacities and livelihood strategies of targeted groups:

- Agricultural investment and land consolidation will support equitable water distribution, improved productivity of existing crops and ability to respond to market and climatic conditions in cropping patterns.
- Information and extension support to improve crop productivity and access related knowledge, skills and implement new technologies.
- Empowerment and capacity building in accessing markets and negotiating market position.
- Access to credit and finance to overcome constraints in improving agricultural productivity and escape the cycle of indebtedness that has prevented sustainable poverty reduction.
- Access to agricultural employment through incremental labour on farms as a result of project investments.
- Support to establish viable rural micro-businesses responding to market demand (e.g. agricultural contract services, poultry, fish production in tanks, small livestock production, and non-farm activities).
- The development of agri-business based on smallholder production able to provide markets, employment and key value chain services such as packaging, labelling, branding etc.

52. The target group expressed interest and willingness to uptake the activities that are offered by the project during mission field visits. The only reservations expressed were about the land consolidation process in component 1. These concerns have been considered in the design and appropriate measures have been taken to address these.

53. Component 1 is not entirely self-targeting in that services provided benefits all households within the area in which agricultural infrastructure improvement will take place. The rest of the activities are largely self-targeting because technologies and services provided through KCs will be tailored to the particular characteristics of smallholder production. Those services of more general interest and which might be subject to elite capture have direct targeting and eligibility criteria attached.

Direct Targeting

54. Grants provided under the Rural Business Fund (RBFs) will directly target poor landless entrepreneurs. Fifty percent of RBF recipients will be women. The eligibility criteria are residence in the village and living in a household that has no access to land⁴⁰. The targeting will be done through wealth ranking in the village in advance of fund allocation.

55. The Agri-Business Fund (ABF) will provide grants of up to 40% of total investment costs to agribusinesses with eligibility criteria to target investments that include the number of project-supported smallholders contracted; % of increase in purchase price of smallholders' production, volume of production purchased; # of jobs created; number of project-supported beneficiaries linked to the investment and the incremental profit that is generated for them. The numeric eligibility criteria will be reviewed during project start-up as part of the targeting study and strategy.

V. SOCIAL AND GENDER INCLUSION MECHANISMS

56. The project targeting strategy has a range of self-targeting features that have been outlined in section A. The self-targeting aspects of the project need to be supplemented by operational measures so that project services respond to the priorities and capacities of poorer groups and of women. The overall project approach to ensure that inclusion and gender equity are mainstreamed in all aspects of project implementation will be operationalized through the instruments and mechanisms outlined in this section.

⁴⁰ During fieldwork there were cases where landless families were part of a larger HH economic unit that had land; typically a parent.

Inclusion and gender study

57. An inclusion and gender study will be carried out at project onset to, *inter alia*: (i) detail the priorities and needs of poor households different asset profiles and the interventions and activities that the KC's will provide; (ii) identify opportunities and measures required to promote the inclusion of poor and vulnerable households by setting appropriate targets, quotas and time-frames for empowerment and capacity building; (iii) recommend inclusive representation systems for the project governance structure at township (TPCC) and village (VTMFG) level, and (iv) contribute to selection criteria for the additional upland sites.

58. Part of this study will specifically focus on gender and propose measures to facilitate women's access to project services and mainstream gender issues into project activities. A team of consultants (one international and one national) will be recruited by the PCU to conduct the study in collaboration with the NGO's selected to support component 1 and 2. The Community Development and Gender Specialist in the Capacity Building Office of the PCU will manage the study.

Inclusion and gender mainstreaming strategy and implementation plan

59. The output of this study will be an inclusion and gender mainstreaming strategy and implementation plan. Stakeholder workshops at national, township and village levels will be organised to discuss the results of the targeting and gender study and contribute to the establishment of a targeting and gender mainstreaming strategy and action plan for each of the components. These workshops, which will be held at national, township and village levels, will also be part of the capacity building process of the project and will demonstrate to relevant public staff the principles of establishing participatory planning processes.

60. The purpose of the gender mainstreaming strategy will be to promote gender equality so that targeted women and men have equitable access to, and control over, resources (e.g., livelihood supports) provided by and benefits (e.g., food security) gained from FARM. Gender will be a cross-cutting strategy that includes the following activities:

- *Gender equality concepts* are adequately introduced to project staff as well as women and men from project communities as much as possible during the project work;
- *Facilitation of women's/men's equal and meaningful participation* in the project activities and their voices heard in decision-making to be ensured by the project implementing partners;
- *Gender sensitive language is used in all documents* – resource and information, education, and communication materials, reports, etc.;
- *Mechanisms and tools* are in place to ensure equitable access to and control over resources;
- *Gender impact assessment* of the project are to be conducted along with periodic review and learning of the project;
- *Sex disaggregated data* is to be collected, analysed and used for ongoing project development and reporting - with both quantitative and qualitative information;
- *Gender sensitive organizational policies, practices and staff recruitment* for all levels (from management positions to field level positions). This includes ensuring that FARM does not lose female extension workers when the position is upgraded under the project.

Annex 1: FAD Targeting Check-list

Questions	Design
1) Does the main target group - those expected to benefit most- correspond to IFAD's target group as defined by the Targeting Policy (the extremely poor and food insecure)?	The target group is divided between the poor and the food insecure but also includes an estimated 18% of the non-poor
2) Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with due attention to gender differences?	The target sub-groups have been extensively described. A detailed breakdown has been provided of the assets, resources, demographic characteristics, strategies, needs, priorities and preferences of the target sub-groups with due attention to gender differences.
3) Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups (self-targeting)?	The proposed activities address the priorities of the target sub-group and there is a clear interest in and very likely an uptake of activities. Some reservations were expressed about component 1; these have been described and the concerns have been addressed with appropriate design mechanisms.
4) Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy? <i>The targeting strategy will involve either all or some of the following measures and methods</i>	The design document does provide a feasible and operational targeting strategy based on an assessment of institutional realities, organisational capacities and socio-economic relations, particularly of power; these are outlined below.
4.1) Geographic targeting – based on poverty data or proxy indicators to identify, for area-based projects or programmes, geographic areas (and within these, communities) with high concentrations of poor people	The project area is not comparatively one of the areas with the highest concentration of poor people although the severity of poverty amongst the extremely poor is high.
4.2) Enabling measures – These include measures to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment, including policy dialogue, awareness-raising, capacity-building, and appropriate project/programme management arrangements (references in ToR, PCU composition); language in describing staff positions (s/he; masculine/feminine).	The targeting rationale of the project and of the project design as a whole is to focus on the policy and institutional factors that enable poverty. A key focus is policy dialogue, capacity building and awareness-raising on mechanisms and institutional arrangements able to support poverty reduction in the rural sector. This focus is supported by management and implementation arrangements able to support these objectives.
4.3) Empowerment and capacity-building measures including information and communication, focused capacity- and confidence-building measures, organisational support, in order to empower and encourage the more active participation and inclusion in planning and decision making of people who traditionally have less voice and power.	A key objective of the project is to empower poor and landless rural people to improve their livelihoods through improving their access to resources, information, options and the power to negotiate and protect their rights. This includes involving them in
4.4) Direct targeting when services or resources are to be channeled to specific individuals or households. Such measures may include eligibility criteria, to be developed and applied with community participation; quotas (e.g. for women), earmarked funds	The investment funds in component 2.2 are directly targeted to the landless poor through eligibility criteria to be developed and applied with community participation.
4.5) Attention to procedural measures that could militate against participation by the intended target groups (such as, excessive beneficiary contributions; cumbersome legal requirements, etc.)	The procedural issues that could militate against participation by the intended target groups have been considered both in the targeting paper and in the technical papers. They include issues related to land rights, access to beneficiary contributions, information on procedure; these have all been considered as risks and mitigating actions have been included in the design.
5) Monitoring targeting performance. Does the design specify that targeting performance will be monitored using participatory M&E, assessed at MTR?	Yes this is specified.

Annex 2: Gender Check-List

Questions	Design
1. <i>The project design document contains – and project implementation is based on - gender-disaggregated poverty data and analysis of gender differences in the activities or sectors concerned.</i>	The design provides an analysis of gender differences in the sectors concerned but there is very little gender-disaggregated data available in Myanmar. What exists tends to be on reproductive health and is not particularly useful. This information gap has been noted in the analysis.
2. The project design report articulates – or the project implement – actions with aim to: •Expand women's economic empowerment through access to and control over fundamental assets ; <ul style="list-style-type: none"> Strengthen women's decision- making role in community affairs and representation in local institutions; and Improve women's knowledge and well-being and ease their workloads by facilitating their access to basic rural services and infrastructure. 	The design includes an analysis of the gendered division of labour in rural communities and the social, economic and cultural roles factors that influence women's options. The design makes provisions for women's economic empowerment and supporting them to become decision-makers in community affairs. The activities to disseminate knowledge and improve local capacity to make informed livelihood choices will be made available and relevant to women through gender sensitive design and delivery. No specific provisions have been made to ease women's workload or facilitate their access to infrastructure, although component 1 reduces cartage significantly.
3. <i>The design document describes - and the project/programme implements - operational measures to ensure gender- equitable participation in, and benefit from, project activities. These will generally include:</i>	Yes
3.1 Allocating adequate resources to implement the gender strategy;	Yes
3.2 Ensuring and supporting women's active participation in project- related decision-making bodies and committees;	Yes provision has been made for including women in leadership positions and committees.
3.3 Ensuring that project/programme management (composition management coordination unit, project terms of reference, etc.) reflect attention to gender equality and women's empowerment concerns; and	The gender objectives of the project are reflected in the composition of the management team and the selection process of project partners will pay due attention to capacities to work with women.
3.4 Ensuring direct project/programme outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited.	The project design has considered outreach to women and women's mobility in the public sphere. In principle there is no barrier against this and over half of agricultural field staff are women. The project will support women staff to upgrade their qualifications and expand their sphere of influence.
4. The project's logical framework and monitoring and evaluation (M&E) system specify in design – and project	Yes

Appendix 3: Country performance and lessons learned

1. FARM represents IFAD's first investment project in Myanmar. Its design incorporates relevant regional and global best practices, as well as lessons and experiences of partner institutions which have been operating in the country (UNOPS, USAID, EU, JICA, UNDP, FAO, UNICEF). Some of the best practices and lessons which have been utilised for FARM are outlined below:
 - *Institutional and legal framework.* The institutional and legal framework is the major determinant for growth of the agriculture sector and reduction of rural poverty. The strengthening of relevant national institutions and the influencing of legislation and policy development should constitute key objectives of investment projects. FARM will invest in both these areas.
 - *Services.* Investment in productive infrastructure needs to be complemented with the provision of services in order to maximise economic benefits and returns to the rural poor. FARM will complement Irrigation water supply with improved technologies and extension services to increase smallholder productivity and allow the introduction of high value crops.
 - *Access to finance.* This is fundamental as it enables farmers to invest in agricultural assets and technologies, and allows agribusinesses to grow, develop backward linkages with smallholders, and create employment opportunities for the landless. IFAD's experiences with savings and credit groups, microfinance, agricultural finance and value chain finance have been considered.
 - *Building social capital.* Community organisations, water users' groups, producers' associations, and other self-help groups improve smallholder access to, and benefits from, resources, inputs, financing, markets and decision-making; and they also improve collective negotiation power and advocacy. Relevant forms of community organisations will be promoted by FARM.
 - *Participation.* Participatory approaches strengthen communities and gradually enable them to articulate their needs and priorities, to effectively manage their natural resources, to take active roles in design and implementation of development activities, and to influence policy.
 - *Capacity building.* The capacity building of individuals and institutions at all levels (communities, public institutions, private sector) is a pre-condition for rural development and poverty reduction. In particular, the gradual strengthening of community organisations and public service delivery is necessary for creating and sustaining growth.

Compliance with IFAD policies. FARM is compliant with all relevant IFAD policies, strategies and guidelines. In particular: (i) its goal and objective are aligned with the *Strategic Framework 2011-2015* in terms of market-driven smallholder development and non-farm rural business growth; (ii) its targeting strategy is consistent with the *Targeting Policy* approach of focusing on economically active poor rural women and men farming and landless households; (iii) its investments in rural economic growth are compliant with the *Rural Finance Policy* focus on promoting inclusive financial systems to improve the access of the rural poor to a range of financial services; (iv) its participatory approach to land consolidation is consistent with the *Land Tenure Policy's* focus on the principle of free, prior and informed consent; (v) its environmental impact assessment procedures for infrastructure investments are aligned with the *Climate Change Policy* on proper adaptation and mitigation measures.

The project is also consistent with the Myanmar COSOP 2014-2018, the goal of which is to contribute to reducing rural poverty, specifically of smallholders, the landless, ethnic groups and other marginalised groups. The COSOP defines three Strategic Objectives (SOs) for IFAD's engagement in the country. The SO1 aims to *empower rural women and men to access agricultural resources, technologies, services and markets*. The SO2 aims to *create business and employment opportunities for rural women and men*. The SO3 aims to *promote the social and economic empowerment of marginalised groups, particularly ethnic groups*. FARM directly addresses SO1 and SO2.

Appendix 4: Detailed project description

Project area and target group

1. **Project Area.** In line with GoM's request, the project area will consist of the command area of six irrigation schemes (Paunglaung, Chaungmange, Madan in Tekhina district and Yezin, Ngalit, Sinthay in Ottra district) in Nay Pyi Taw Union Territory covering five townships (Otrathiri, Zeyathiri, Tatkon, Lewe, Pyinmana). The aggregate command area will amount to some 87 183 acres. In addition, the project will cover up to an additional 25 000 acres of rainfed lowlands and uplands located in these five townships. The project will therefore cover an aggregate area of 112 183 acres (45 400 hectares) which constitutes 45% of the cultivated land in the five townships. Table 1 illustrates the breakdown by type of land per district/township.

Table 1: Breakdown by type of land in the project districts

District	Township	Total Land Area (in acre)	Cultivated Land				Other Types of Land*	Project area		
			Lowland Areas	Upland Areas	Others (Orchard, Highland)	Total Cultivated Land		Command areas	Additional upland/ low land area**	Total Project Area
Ottra	Otrathiri	204.961	4.858	4.215		9.073	195.888	19.748		
	Zeyathiri	147.225	12.384	10.532	61	22.977	124.248	11.748		
	Tatkon	445.368	46.220	54.029	11	100.260	345.108	16.032		
	Subtotal	797.554	63.462	68.776	72	132.310	665.244	47.528		
Tekhina	Pyinmana	272.502	15.628	9.931	1.765	27.324	245.178	25.175		
	Lewe	558.239	57.302	30.840	53	88.195	470.044	14.480		
	Subtotal	830.741	72.930	40.771	1.818	115.519	715.222	39.655		
Total		1.628.295	136.392	109.547	1.890	247.829	1.380.466	87.183	25.000	112.183

Source: Nay Pyi Taw Council, SLRD and the mission

* Including: uncultivated land, forest, moorland and wild land.

** Distribution of additional upland/lowland per township to be made at project onset based on poverty criteria, on- and off-farm business potential, and # of target beneficiaries.

2. The total population in the 5 townships amounts to 166,555 HHs (i.e. 799,167 people). The population living in the 82 village tracts located within the project area amounts to 59,074 HHs (i.e. 286,303 people). Based on the results of the Socio Economic Baseline Survey (SEBS) carried out in July/August 2013 on a limited sample of 380 HHs in the project area, it is estimated that about 31,000 HHs are farming in irrigated land (with some of them also holding rainfed upland), about 3,000 HHs are exclusively farming in rainfed areas, and about 25,000 HHs are landless (representing 42% of the total population). Ethnic minorities in the 5 selected townships account for less than 2% of total HHs. Table 2 illustrate the breakdown of sampled HHs by level of poverty.

Table 2: Breakdown of sampled HHs by level of poverty and activity

Activities	Better-Off	Moderately Poor	Poor	Very Poor	Total	%
HHs farming in irrigated land and some elsewhere	64	71	54	4	193	50,8
%	33,2	36,8	28,0	2,1		
HHs farming in non-irrigated land (i.e. rainfed)	1	4	14	8	27	7,1
%	3,7	14,8	51,9	29,6		
Landless	5	5	22	128	160	42,1
%	3,1	3,1	13,8	80,0		
Total HHs	70	80	90	140	380	

3. Based on the results of the SEBS, the main characteristics of rural households in the Nay Pyi Taw Union Territory (and more precisely in the project area) and distinctive features of their poverty level are detailed in table 3.

Table 3: Main characteristics of rural households in Nay Pyi Taw Union Territory

Main Features	Better-Off	Moderate	Poor	Very Poor
HH distribution	18%	21%	24%	37%
Dependency ratio	Low	Reasonable	High	Extremely high
Ag. landholding (total/ irrigated in acres)	10.90/ 9.25	5.32/ 4.08	2.86/ 2.04	0.19/ 0.00
Cropping pattern	3 crops	3 crops	2 crops	2 crops
Average livestock holding	3 draught cattle, 1 pig, chickens	1 draught cattle, 1 pig (50% of HHs), chickens	1 draught cattle, 1 pig (50% of HHs), chickens	1 pig (33% of HHs), chicken
Household assets	Motorcycle, hand tractor, water pump, thresher/crusher, cart	Motorcycle, hand tractor, water pump, cart (50% of HHs)	Motorcycle and cart (<50% of HHs)	Bicycle (<50% of HHs)
Access to electricity	76%	73%	64%	37%
Education (completed primary/secondary for head of HHs)	60%/ 31%	54%/ 18%	40%/ 11%	29%/ 6%
Income/ year				
- Agriculture (production)	3,157	1,706	788	51
- Agriculture labor	-	28	206	305
- Other labor and employment	142	134	238	263
- Trade	338	175	38	22
- Other income	342	305	223	114
Total Income	3,979	2,348	1,493	756
- Income/ capita/ day	2.29	1.35	0.86	0.44

Source: Socio-Economic Baseline Study carried out by a local NGO in July-August 2013

4. **Target Group.** The project target group consists of (i) farming HHs in the command area of the 6 irrigated schemes included in the project area; (ii) farming HHs with landholdings only in rainfed areas, and (iii) poor landless HHs living in village tracts within the project area interested in investing in rural micro-business (off-farm and non-farm activities). Special attention will be given to women-headed HHs and ethnic minorities in all project-supported activities.

5. Combining data from Tables 2 and 3, Table 4 categorizes the project interventions for each target group and evaluates the proportion of each sub target group (moderately poor, poor and very poor HHs forming the primary target group while better-off HHs form the secondary target group).

Table 4: Project interventions per target groups

Target Groups	Target area (acre)	Primary Target Group (HH)	Secondary Target Group (HH)	Project's Activities
a/ HHs farming in irrigated land				
- Within land developed area	10.000	2.211	1.089	Land development; WUGs; increased/alternative crop production; skills enhancement; access to finance, knowledge and markets
- Outside land developed area	77.183	15.670	7.718	Increased/alternative crop production; WUGs; skills enhancement; access to finance, knowledge and markets
b/ HHs farming in rainfed area				
- On additional 25 000 acres	25.000	7.272	303	Increased/alternative crop production; skills enhancement; access to finance, knowledge and markets
c/ Landless people		24.066	744	Capacity building; access to finance and markets for off-farm and non-farm activities
%	112.183	83,3%	16,7%	

6. Activities related to land development, access to knowledge and markets, as well as skills enhancement will encompass all households farming in the project area irrespective of their level of poverty. Financial support especially for landless people will mainly target the most vulnerable

(defined as the primary target group). The project will ensure the effective participation of the primary target group in all activities supported by the project, thus avoiding elite capture. Table 4 indicates that within the total number of households estimated as the direct target group, more than 83% are either moderately poor, poor or very poor HHs and less than 17% are better-off HHs.

Development objective, outcomes and impact indicators

7. The project's goal is to improve the economic status of poor rural women and men in the project area. Its objective is to increase the incomes of smallholder and landless households.

8. The impact indicators to be applied for measuring project performance relative to its goal and objective will measure the incomes, nutrition and food security of targeted smallholder and landless households. At outcome level, this will include access to land and water resources, agricultural productivity and production, sale of agricultural output, access to technical and financial services, development of skills and knowledge, establishment of viable micro-businesses, and employment opportunities generated for rural women and men. These are detailed in the logical framework. The specific monitoring indicators will be prepared by the project in consultation with key stakeholders.

9. The project's outcomes are as follows

- Component 1: Agricultural Infrastructure: land and water resources sustainably managed;
- Component 2: Agricultural and Business Services: (i) skills of farming and landless households enhanced, employment improved, relevant value chains upgraded; (ii) financial environment for creation and expansion of sustainable and profitable rural businesses improved.

Project Description

Component 1: Agricultural Infrastructure

10. The Agricultural Infrastructure Component will sustain the ongoing expansion of the irrigated areas under the command of MoAI's primary and secondary canals with complementary investments in Land Development identified through a participatory design process. The main objectives of the investments will be: (i) to improve equitability of irrigation water distribution; (ii) to create opportunities for crop diversification; and (iii) to improve access to the field (for machinery and transport).

11. Within a projected timeframe of 4 years, the component will invest in land development on 10,000 acres in the project area focusing on the upstream sections of three irrigation schemes (Paunglaung, Chaungmange, Madan), prioritized on the basis of sufficient availability of water during the dry season. Land development will include land consolidation and land titling, land levelling, tertiary canals (up to field edge), drainage networks, farm roads and appurtenant structures. The physical works will be carried out from PY2, indicatively at a pace of 4,000 acres/year during PY2 and PY3 and 2,000 acres during PY4. The estimated direct beneficiary population will consist of around 3,300 farming households with an average irrigated land of approximately 3 acres, across 24 village tracts. Based on the schemes' assessed potential it is expected that some 60% of the area developed under the project will be under the Paunglaung scheme.

12. Levelling will be carried out throughout the targeted 10,000 acres. Some 230km of roads, 340km of irrigation canals and 180km of field drains will be developed in connection with the land development works. About 3,400 associated small hydraulic structures, including culverts, gated outlets, checks and end structures will be also constructed. Where required by site conditions, the project will also support the extension of approximately 10km of roads and minor canals and related structures as well as re-sectioning of main drains and construction of 10 gated-head regulators.

13. Plans for land development will be site specific. A participatory land use planning (PULP) approach will be applied and implemented by a local NGO with proven experience in community mobilization and free, prior, informed consent (FPIC) approaches. The contracted NGO will operate in close coordination with design, construction and maintenance teams from Irrigation Department (ID), staff of the Settlements and Land Records Department (SLRD), the PIC (see below), township/village

tract authorities, and affected farmers. The ID will first identify and survey the contiguous areas suitable for land development (referred to as “blocks”, averaging about 500 acres each - yet carrying from 50 to 800 acres). In each village tract with irrigable land under one block, the project will support the farming HHs making informed decisions and setting up mechanisms for sharing the losses of cultivable land arising from the construction of roads and tertiary canals. Alongside with the consultation on preferred routes for roads and canals, the project will help farming HHs develop a map indicating boundaries and ownership of the reconfigured plots to serve as a basis for the re-issuance of land user rights after the completion of construction works. Concurrence of all farming HHs concerned with the reallocation and reconfiguration of the plots will be a pre-requisite to proceed with the implementation of the physical works.

14. Project investment in land consolidation will comply with IFAD’s *Policy on Improving Access to Land and Tenure Security*, in particular: (i) alignment with national priorities and strategies; (ii) adherence to the ‘do-no-harm principle’; (iii) appreciation of existing agrarian structures and tenure systems; (iv) empowerment of the rural poor and their organizations; (v) forging of complementary partnerships; (vi) attention to the gender dimensions of land rights; (vii) adherence to the principle of free, prior and informed consent as appropriate; and (viii) support to production services and market linkages. The selection of the implementing NGO will specifically take into account its commitment to these elements. Operating procedures and criteria will be prepared at early implementation, and emerging experiences and results may feed into national policy-making on land tenure.

15. Prior to and during the implementation of construction works the project with the assistance of the contracted NGO will: (i) raise awareness of communities about works foreseen in the detailed design and to be executed by ID; (ii) seek opportunities for the mobilization of locally hired labour in quantities and at rates specified in the design; (iii) monitor the execution of the construction of the earth bunds and piped turnouts by the community; (iv) strengthen existing traditional village water management committees (VWMCs) and transform them into formal water users’ groups (WUGs) for improved water management at tertiary level. A Project Implementation Committee (PIC) established at each block with elected farming HHs’ representatives will monitor and carry out the acceptance of the works.

16. Design works will be undertaken by ID as part of their normal functions, supported by project-financed technical assistance (possibly UNOPS civil work department), and presented to the related construction, agricultural mechanization and maintenance units of ID as well as WUGs for validation. Civil works will be executed through direct contracts with ID on block-by-block basis. This contractual modality which is currently required due to the absence of qualified contractors with specific experience on land development will be reviewed annually by IFAD supervision missions. The actual costs of land development for each block will be defined by applying the official unit rates (verified by international TA) issued at district level to the adopted norms on machinery output. Where appropriate, targeted procurement of maintenance of public civil works under FARM may consider outsourcing to Labour Contracting Societies (LCS), an IFAD award-winning modality successfully tested in Bangladesh to transfer financial benefits and empower marginalized people, particularly women and landless.

17. All land development investments will be cost-shared by IFAD and Government; IFAD will finance all direct costs (comprising of fuel, lubricants, materials and labour - net of tax) while the Government of Myanmar will finance all indirect costs (machinery work) in kind. An average direct investments cost of USD 740/acre is considered for Land Development works carried out through ID, based on a schematic design for land development of a 500-acre block and on the applicable unit rates for the use of equipment, labour and materials. Depending on site conditions and on outcomes of the participatory design process, these figures may vary and shall be considered as indicative.

18. Physical works will consist of levelling, construction of drainage and irrigation canals, construction of roads and small hydraulic structures of low complexity.

19. Land levelling will be carried out by means of tractor mounted box levellers, mandatorily using laser supported hydraulic controls to achieve high accuracy. The target levelling elevation in each

sub-area will be determined by the designers, based on a detailed topographic survey and on the analysis of soils samples. In most locations the operation of the box leveller will require prior deep ploughing and harrowing. The project will also support ploughing and harrowing for the first field preparation after levelling is completed.

20. The tertiary canals will be earthen embankments in compacted fill, not exceeding 1.0km in length. The area served by a tertiary canal will be less than 50 acres, fractioned into smaller units (at least 3 sub units of 15-20 acres each) by means of check structures along the tertiary canal. In no instance the level of the irrigation canal bottom shall be lower than the field level nor the design of the canals shall foresee an alternated use as drain or irrigation canal. Generally a command head of 150mm will be desirable for the tertiary canals. The layout applied in some of the pilot “intensive” farms, with canals on the sides of the field roads feeding 1 acre (37m x 110m) basins perpendicular to the road axis, may adapted to specific site conditions. In this configuration an irrigation canal to drain length ratio of 2:1 is applied, with the tertiary drains conveying water from the basins on two sides.

21. Roads along a tertiary canal (field roads giving access to less than 100 acres) and those connecting several tertiary canals (branch roads) will use different standards. Indicative top width of the embankment will be 4.3m (branch road) and 2.8m (farm road). A compacted sand/gravel mix layer of at least 200mm will be required with a shoulder width of 0,3-0,15 m.

22. Hydraulic structures (checks, end structures, flumes, head regulators and culverts) will be mainly constructed with plastered brick masonry for which ID has developed standard type drawings. The use of precast concrete pipes for the culverts will be reassessed during implementation depending on the availability of more durable and easy to install corrugated Polyethylene pipes.

23. Upon completion of the roads, canals and drains by ID, the farming HHs will be responsible for raising the earth bunds delineating the new plot boundaries according to the plan agreed at the early stages of design. Farming HHs will also install the PVC piped turnouts across the bunds from the tertiary irrigation canals.

24. **Water management.** The project will promote participatory farmer managed tertiary irrigation systems in line with IFAD’s best practices in the region, and will ensure coordination with the water management activities of other projects (such as LIFT and JICA-financed projects) for methodological consistency. Currently, farmers are responsible for dealing with irrigation water distribution at tertiary level; however, they are organized in village water management committees (VWMCs) with limited capabilities and responsibilities, and without access to or control over financial resources for O&M. The project will strengthen participatory water management by: (i) registering these VWMCs into formal WUGs (of 20 members each along a tertiary canal) in accordance with the evolving legal framework; (ii) strengthening WUGS through capacity building in governance and technical aspects; (iii) supporting WUGs to establish a cost recovery mechanism to be utilized for operation and maintenance purposes as well as emergency repairs; and, (iv) empowering WUGs to channel their concerns on the timing and quantity of water delivery from ID, and to air any grievances. In the medium term, the project may support WUGs to federate into water users’ associations (WUAs) at secondary level, in line with best practice, or to be placed within a broader cooperative structure, as appropriate. This form of project support for participatory water management, once successfully practiced in LC&D model units, may be extended across the entire irrigated project area (87,000 acres) through the delivery of services. KCs will instrumentalize this potential scaling up.

25. **Access to electricity.** In addition to investments in Land Development, the project will support piloting of small scale investments in micro hydro turbines (under 25Kw) on main canals where feasible to supply electricity both to the project-supported KCs, to the nearby villages households and income generating activities implemented by farmers and landless households.

26. **ID Capacity building.** The project will strengthen ID’s capacity in modern irrigation technologies (canal lining, pressurized systems) which have a potential for future development and upgrading of gravity schemes. This will be achieved through training courses for technical staff at the ID Irrigation Technology Centre (ITC), and relevant study tours for ID managers. Similarly, small

farmer groups, constituted around precision irrigation systems such as tube well solar panel driven drip irrigation for HV market crops, will also receive training in construction and handling of their investments. FARM will assist in obtaining the necessary licenses and registration in WRUD to secure reliable water supply.

Component 2: Agriculture and Business Services

27. **Sub-component 2-1: Investing in Knowledge.** Under this component, the project will seek to develop a conducive environment for rural households to access services and technologies enabling them to improve or develop their activities. In that respect, the project will: (i) support the creation of a pluralistic bottom-up participatory extension services platform providing support to farming HHs, and (ii) provide specific support to landless people to start their rural businesses.

28. Although of a certain quality, extensions services have a limited outreach in rural areas mainly due to budgetary constraints. Consequently, knowledge transfers and adoption rate of new technologies, techniques and inputs are quite low, thus drastically limiting the increase of farming households' income. Furthermore, extension services have mainly been focusing on increasing the yields with little consideration given to value chain/commodity development, linkages among stakeholders, market access and generalization of demonstrations. In addition, rice production has captured more than its share of extension services leaving other crops with little if none attention.

29. To enhance access to services for rural HHs, the project will build on the existing network of MoAI extension officers and establish 55 Knowledge Centres (KCs) in the project area. The catchment area of each KC will be approximately of 2 000 acres corresponding to around 500 to 650 farming HHs and an equivalent number of landless HHs. These 55 KCs will serve as focal point for the provision of services to both farming HHs and landless entrepreneurs:

- **For farming HHs** services to be developed within each KC include: (a) technology transfer, skills improvement and knowledge development; access to improved inputs, supplies for existing and/or alternative crops; (b) access to markets, market information and development of contractual linkages with other stakeholders of value chains/commodities (notably promotion of forward contracts/contract farming/outgrower schemes between project-supported farming HHs and processors/buyers), and (c) access to financial resources through partner MFIs/rural finance institutions. KCs will also be used as an input supply distribution outlet and an output collection center, thus facilitating linkages with other value chain/commodity stakeholders.
- **For landless entrepreneurs** services to be developed will aim at creating and developing small businesses and the support will include: (i) technical skills development; (ii) business management training; (iii) market approach (inclusive of food security and standards when required); (iv) linkages with other actors (suppliers, traders, processors), and (v) assistance to elaborate their business plans, loan applications and financial projections.

30. **KCs Governance.** KCs will be low-cost facilities implemented under Public-Private Partnership (PPP) agreements. They will be owned by the MoAI but steered by an elected Board of representatives from the rural population (representatives - one man and one woman - from each different socio-economic profile such as: better-off, moderately poor, poor, very poor HHs, women-headed HHs, landless HHs) to which a representative of the MoAI will be joining.

31. **KCs Management.** Each KC will be managed on a daily basis by the MoAI extension officer who will be trained by the project (management training, training planning, refresher technical skills training and knowledge enhancement). KCs managers will also act as secretary of the Board. Project will also promote the elaboration of a financial mechanism for members/users to contribute to KC's O&M costs.

32. **Support to KCs. Capacity building of KCs managers.** The project will select a NGO to assist KCs managers and to provide technical assistance to KCs members. The PCU will launch an invitation to tender to NGOs that are already operating in Myanmar. Selection criteria will include: (i) demonstrated experience in providing assistance to farmers and landless HHs; (ii) willingness to

establish an activity in the project area; (iii) adherence to the project's objective, goal and modus operandi; (iv) number of available skilled staff; (v) capacity to promote integration of smallholders in value chains/commodity chains; (vi) capacity to promote market linkages with input suppliers, buyers, processors, off-takers, and other service providers; (vii) capacity to link smallholders with a microfinance institution, and (viii) capacity to provide non-financial and financial services to rural HHs (marketing, business management, accounting and bookkeeping, identification of training needs, business planning and forecasting). The selected NGO will provide 7 to 8 staff; each one of them responsible for the supervision/support of 7 to 8 KCs for the duration of the project.

33. A legal advisor contracted by the PCU (or eventually the project-contracted NGO) will assist communities and KCs managers to create, register and develop their KCs. Notably, the legal advisor will assist communities with regards to Board members' election, drafting KCs internal procedures, and formal registration with the relevant authorities at both local and national levels.

34. The project-contracted NGO will also strengthen the capacity of KCs managers. In particular, it will focus on the following areas: (i) KCs management; (ii) bookkeeping and simple accounting; (iii) elaboration of annual work plan and budget; (iv) monitoring and evaluation; (v) provision of participatory farmers-led services; (vi) marketing (with a specific focus on ASEAN and GlobalGAP standards); (vii) formation and monitoring of Common Interest Groups; (viii) value chain/commodity chain development and structuring, as well as relationship and agreements among their stakeholders; (ix) environmental issues; (x) financing agriculture and linkage with the formal financial sector, and (xi) conflict resolution. Finally, KCs managers will also receive training related to Information Communication Technology (ICT) leading to the implementation of a Marketing Information System.

35. Additional training will be provided to KCs managers by the MoAI Agriculture Research Department on; critical irrigation techniques; plant nutrition use; varieties; conventional and IPM pest control; postharvest practices. The MoAI Agriculture Research Department, the PCU Water Management/WUGs specialist and, eventually an external TA, will also build up the capacity of KCs managers with regards to water use management, water users' associations and their sustainability, as well as on cost recovery mechanism.

36. The selection and appointment of KCs managers (formerly from the MoAI Extension Department) will be overseen by the Project Working group (PWC) with the assistance of an IFAD-contracted consultant. Selected KCs managers will be offered a performance-based contract. Selection will be executed during the first half of 2014. Apart from training, the PCU will also finance KCs managers' operating expenses (KCs managers' salaries will continue to be paid by the MoAI while travel allowances will be paid by the project - currently these travel allowances are not paid due to budgetary constraints, thus preventing extension officers to efficiently and effectively do their work) and equipment (motorcycle and mobile phone, for which a buy-back mechanism will be introduced).

37. The project-contracted NGO will have a performance-based contract of one year renewable upon satisfactory assessment carried out by the PCU and beneficiaries.

38. **KCs AWP&B.** Identified KCs activities will form the annual work plan and budget (AWP&B) document to be drafted by their managers with the assistance of the NGO in accordance to needs of its members. In particular, activities will follow the agricultural calendar of respective crops and related value chains. Relevant value chain stakeholders such as research institutes, input suppliers, traders, processors, specialized agricultural development companies, public sector institutions will be encouraged to contribute to the plan and budget. AWP&Bs will be submitted to KCs Board of Directors for approval and then submitted to the PCU for inclusion in the global PCU AWP&B.

39. **Support to KCs members.** Both the KCs managers and the NGO will provide support to KCs members, as follows:

- **Farming HHs.** The responsibility for the provision of services to farming HHs will be assumed by KC managers supported by the project-contracted NGO.

- With the NGO support, KC managers will organize: (i) the creation of farmers' common interest groups; (ii) training of representative farmers; (iii) demonstrations and trials together with the DAR, and (iv) capacity building support for WUGs with the PCU irrigation/water management specialist.
- The project-contracted NGO will focus its support to farming households on: (i) undertaking agricultural value chain analysis; (ii) developing contractual linkages among commodity chain stakeholders (farmers, input suppliers, traders, buyers, processors); (iii) defining post-harvest processing options, and (iv) ensuring integration of project-supported farmers into professional organizations.

To facilitate the dissemination of services and maximize their impact, farming HHs in the same KC will be organized in groups of common interest of 20 members revolving around water management (WUGs). Two/three members of each group will be supported by the KC Manager and service providers and will in return train and disseminate information to other group members. The PCU, NGO and the KC manager will promote a revolving mechanism for the annual selection of the two/three members to be supported directly by the KC Manager. Training will be organized at KC's level by half-block of 500 acres regrouping 12 WUGs (or around 35-40 trainees).

- **Landless entrepreneurs.** The same NGO as above will also be responsible for the provision of services to landless entrepreneurs. It will: (i) organize landless entrepreneurs into groups based on common activities; (ii) identify technical needs and link them with vocational training institutes; (iii) provide business management training, training on environmental issues, and standard food and security training; (iv) support the elaboration of business plans, market studies, and loan applications; (v) undertake simple value chain analysis/marketing studies, and (vi) foster linkages with MFIs and other value chain stakeholders. For training and capacity building purposes and to ensure cost-efficiency, landless entrepreneurs will be also organized in groups of common interest of around 20/25 people based on their activities.

40. **Value Chains Analyses.** The project-contracted NGO with the assistance of KCs managers, will undertake value chain analyses that will serve two different purposes and targets: (i) farming HHs and the related Agri-Business Fund (ABF - see below), and (ii) landless entrepreneurs and the related Rural Business Fund (RBF - see below).

- *For farming HHs and related ABF*, value chain analyses will be undertaken on the main irrigated and rainfed crops, whether currently farmed or to be gradually introduced under the project within the current rice cropping pattern as alternative crops to increase farming HHs' income. Analyses will identify constraints in terms of access to improved inputs and sustainable markets, opportunities for smallholders to access these inputs and outputs markets and/or to link with processors, current relationship among stakeholders (inclusive of marketing channels, production/inputs flows, pricing and breakdown of value added among them), and training needs for farming HHs. The analyses will also determine the procedures to be implemented so as to ensure that smallholders are effectively part of the value chains and that they will benefit from (i) increased prices; (ii) increased production; (iii) improved market access, and (iv) access to technical support and training. The analyses will also determine the financial needs of each stakeholder as well as their access to the formal financial sector. Finally the analyses will examine the possibility for farmers, processors and financial institutions to enter in a tripartite contractual arrangement under the model developed for tobacco, sugar cane, cotton, tea and coffee. Each value chain analysis will be followed by a workshop during which the options and recommendations will be validated by all stakeholders of the value chain under review (inclusive of financial service providers). As a result of the workshop, leaflets and investment prospectus will be elaborated for distribution to potential investors, private and public sectors relevant institutions/companies, KCs managers and NGO.

- *For landless entrepreneurs and related RBF*, value chain analyses will be conducted on main activities implemented by landless entrepreneurs. Points examined in these analyses are similar to the ones related to farming HHs. However, a stronger focus will be placed on access to markets, commercialization channels and marketing. Value chain analyses/market studies recommendations and options will be summarized in a specific leaflet and investment prospectus to be distributed to KCs managers, project-contracted NGO and relevant private and public sectors institutions/companies.

41. It is envisaged that about 6 agricultural value chain analyses will be undertaken, mostly based on alternative crops to be introduced within the current cropping pattern and that another 6 value chains/market studies will be undertaken for major activities implemented by landless entrepreneurs (among others: fish production in tanks, poultry and quail raising, small ruminants fattening, handicraft, textile). Value chain analyses and market studies shall be completed by PY4.

42. **Marketing Information.** During harvest seasons, KCs managers will obtain daily market information by phone and/or internet for all crops produced within KC communities. Information will initially be posted at KC level, but when mobile phones become more common among KC community members, this information will be sms to members. If internet connectivity increases during the implementation of FARM, the PCU will take the initiative to jointly develop a trade portal for farmers and other stakeholders. The portal shall also include the possibility for farmers to receive free advisory services on request from stakeholders.

43. **Demonstrations and trials.** Each KC will organize trials at the level of selected farming HHs (willingness, land availability, technical skills), in close collaboration with the MoAI Department of Agriculture Research (DAR), Yezin Agricultural University (YAU), and private sector companies. Four demonstrations/trials will be organized per KC per year with their costs borne by the project during the first years and gradually borne by private sector inputs suppliers. The project will also support MoAI seed inspectors (skills training, innovation awareness) that are also service providers to farming HHs.

44. **Water Use Management.** KCs managers and PCU Water Management/WUGs specialist will assist existing traditional village water management committees (VWMCs) with limited capabilities and responsibilities, and without access to or control over financial resources for O&M to be transformed into formal Water Users' Groups (WUGs) of 20 members each along a tertiary canal in accordance with the evolving legal framework. They will strengthen participatory water management by: (i) strengthening WUGS through capacity building in governance and technical aspects; (ii) supporting WUGs to establish a cost recovery mechanism to be utilized for operation and maintenance purposes as well as emergency repairs; and, (iii) empowering WUGs to channel their concerns on the timing and quantity of water delivery from ID, and to air any grievances.

45. In the medium term, the project may support WUGs to federate into water users' associations (WUAs) at secondary level, in line with best practice, or to be placed within a broader cooperative structure, as appropriate.

46. **Sustainability.** KCs managers will be paid by the MoAI Extension Department even after completion of the project. Facilitating partnerships between stakeholders in different value chains, and between private sector and farmers will enable the provision of direct services, support and technical assistance to farmers. In the future, the role of KCs will evolve into that of a multi-purpose platform providing a wide array of services (micro-finance point of services, collection of outputs, delivery point of inputs, one-stop-shop for business services). The PCU together with the contracted NGO will assist KCs managers and Board of representatives in drafting a cost-recovery mechanism for the petty operating expenses incurred by KCs.

47. **Sub-component 2-2: Investing in Growth.** Under this sub-component, the project will seek to create economically sustainable, productive and profitable opportunities for rural businesses, and rural small and medium enterprises. In that respect, the project will: (i) establish two funds targeting landless entrepreneurs and selected value chain stakeholders respectively, and (ii) will seek to

coordinate its support with LIFT, where possible, for the implementation of microfinance institutions in the project area as well as the promotion of local savings and credit institutions.

48. **Funds.** Two Funds will be created under the project: (a) the Rural Business Fund (RBF) targeting poor landless entrepreneurs, and (b) the Agri-Business Fund (ABF) targeting selected value chains stakeholders. RBF grants will enable landless entrepreneurs to finance their small businesses and leverage loans from MFIs, from which they are currently excluded. ABF grants will incentivize entrepreneurs to expand their businesses in the project area and to enter into more equitable contractual agreements with project-supported farming HHs, thus providing the latter with access to markets and other services.

- **RBF.** The RBF will provide competitive grants for landless entrepreneurs of up to 75% of total investment cost of maximum USD 5,000 with the balance to be provided by the beneficiary; any amount above the USD 5,000 threshold will be integrally financed by the entrepreneur. The RBF will operate on the basis of quarterly public calls for proposals issued by the PCU Rural Finance Specialist. The project-supported NGO for landless entrepreneurs (see above) will build up their capacity with regards to management, accounting, bookkeeping, marketing, and will assist them to draft their business plan and financial projections. As previously indicated, the NGO will also carry simple market studies main activities proposed by landless entrepreneurs to ensure the existence of a sustainable market that can be accessed under affordable conditions.

Proposals will be assessed against pre-determined selection criteria⁴¹ by a specific Grant Committee for Rural Businesses composed of 4 persons. Landless entrepreneurs will submit the following documents to the PCU Rural Finance Specialist: (i) detailed business plan; (ii) financial projections including the financing plan for the investment considered (evidence of mobilization of the necessary contribution), and (iii) a short marketing plan indicating market, growth perspective, competition, positioning of the production against competitors, marketing channels, and pricing. The Grant Committee for Rural Businesses will determine on a case-by-case basis the amount of the financial support to be provided by the project based on the business plan, the compliance with selection criteria, mobilized resources by the landless entrepreneur, as well as on conclusions and recommendations from the market studies.

The Grant Committee for Rural Businesses decision will be submitted to the NPSC for final approval. Once approved, a Grant Financing Contract will be signed between the landless entrepreneur and the PCU manager (by delegation from the NPSC), provided that the materiality of the balance of funds required for the investment has been proven (for example by a deposit on a specific bank account opened under the name of the entrepreneur).

Typical investments eligible to grant financing under the RBF will include (non-exhaustive list): fish production in tanks, poultry, small ruminants raising/fattening, drip-irrigated crop/vegetables production, as well as non-farm activities such as wood furniture producing, handicraft, textile production, basket weaving, subject to effective demand from the market and comparative advantages.

Grants provided by the RBF will cover investment cost (building construction and/or renovation, purchase of machinery/equipment) but also working capital related to investments. The grant amount will be disbursed by the PCU on the basis on the business plan, invoices or bills of quantities duly checked by the PCU Rural Finance Specialist. The disbursement will be done in one single or several instalments depending on the nature of the asset financed. Grant will be disbursed to the supplier or service provider directly and not to the entrepreneur.

The ownership of any asset purchased with the project's grants will remain with the project. In case the rural business is terminated, the asset will be repossessed by the PCU, which will

⁴¹ Selection criteria would include: Landless entrepreneur's level of poverty, project profitability, cost per jobs created, RoI, number of jobs created (skilled/unskilled, and for women), market prospects. Projects initiated by women and youth will be positively considered.

have the possibility to provide it to another entrepreneur. However, the landless entrepreneur is responsible for the asset's proper maintenance and insurance.

A specific Operation Manual will be elaborated during project inception by an IFAD-contracted consultant, the PCU Rural Finance specialist and the project-contracted NGO. The Operation Manual will draw on successful IFAD experiences and will adapt their procedures to the local characteristics.

Resources allocated to the RBF under the project amount to USD 0.84 million.

- **ABF.** Consequently to the promotion of alternative crops within the existing cropping pattern made possible by, among others, land development and water use management promoted under the project, the objective of the ABF is to attract private investors to establish processing facilities in the project area for alternative crops produced by project-supported farmers, thus securing an exit route for their production.

During the first years of the project, grant financing has been preferred to private-public-producers partnership agreements because producers' associations are extremely weak, when they exist. The project will strengthen the capacity of these producers' associations or will assist producers to organize their own association. Once strengthened, the project will promote private-public-producers partnerships agreements (PPPPs) for the development of processing facilities in the project area as well as other facilities (packaging, storing, transporting).

The ABF will provide competitive grants of up to 40% of the total investment cost of maximum USD 400,000 for creation/expansion of agribusinesses within project-supported commodities, with the balance to be provided by the entrepreneur. Any amount above the threshold of USD 400,000 will be integrally financed by the entrepreneur. The ABF will operate on the basis of semi-annual calls for proposals issued by the PCU Rural Finance Specialist.

Typical investments eligible for grant financing under the ABF within selected commodities include: processing, storing, labelling/branding, packaging, and marketing. However, existing entities should demonstrate a two-year existence with sound financial results to be eligible to the ABF.

Entrepreneurs/companies interested to establish a processing activity in the project area will submit a business proposal inclusive of: (i) a business plan; (ii) a financing plan detailing the entrepreneur's contribution amount; (iii) a marketing study and plan, and (iv) a financial projection. A separate document will detail backward linkages with project-supported farming HHs (number broken down by gender and level of poverty; volume processed or purchased from these HHs; incremental benefit for these HHs when entering into an agreement with the entrepreneur; additional non-financial services provided by the entrepreneur to HHs; type of contractual agreement signed between the entrepreneur and the HHs).

A local audit company contracted by the project will review and assess the soundness of the financial projections, financing plan and business plan, and ensure the effectiveness of the entrepreneur's contribution (funds deposited in a specific bank account for the proposed project). The PCU Rural Finance Specialist will review each proposal against pre-determined selection criteria⁴² and will also ensure that the proposal is compliant with recommendations of the value chain analysis undertaken for each commodity promoted under the project (see above). Both conclusions and recommendations from the audit firm (on feasibility and profitability of the investment) and the PCU Rural Finance Specialist will be submitted to a specific Grant Committee for Agri-Businesses composed of representatives from the PCU, from the MoAI or from the relevant ministry, and three private sector representatives (one

⁴²

Selection criteria would include: number of project-supported beneficiaries linked to the investment; cost of investment per project-supported beneficiaries; RoI and profitability of the investment; Value Chain Multiplier Index; incremental profit for project-supported beneficiaries, and willingness to engage in tripartite agreements with producers and financial institutions.

businesswoman, one farmers' organization representative, and one member of the Bankers' Association).

In priority, the ABF will finance existing companies/enterprises expanding their business in or around the project area and purchasing from project-supported farming HHs (contract farming agreement). The expansion of the activity could be according to the following two modalities: (i) creation of a separate new legal entity owning the processing unit. This option will be favoured if a producers' association could hold equity in that company (PPPP agreement), or (ii) implementation of a new processing activity without a separate legal entity (grant financing). Building on existing companies/enterprises will guarantee that entrepreneurs are experienced, already have a market for their production, and can provide advisory services to farming HHs to increase their production and its quality.

ABF grants will finance only productive private goods such as building (construction or rehabilitation), machinery and equipment and will not finance any public goods which are not part of a productive investment. ABF grants will only finance investment and not working capital. Support to farmers engaged in a contract farming agreement with the processing unit will be made available through KCs and therefore will not be financed through the ABF grant. Grant will in priority offset construction cost of the building (including the cost of the land) up to an amount of 50%, and the balance of the grant will then offset the remaining investment cost.

The percentage of ABF grant will be determined on a case-by-case basis by the Grant Committee for Agri-Businesses based on recommendations from both the audit company and the PCU Rural Finance Specialist. It will notably take into account: (i) the level of contribution the entrepreneur can provide for the investment, and (ii) the incremental price the entrepreneur is willing to pay for the production of project-supported farming HHs (contract farming agreement).

The decision of the Grant Committee for Agri-Businesses will be submitted to the NPSC for approval (with possibility to modify the grant amount). Once approved, a Grant Financing Contract will be signed between the entrepreneur and the PCU manager (by delegation from the NPSC), provided that the contribution from the entrepreneur has been materialized and verified by the PCU Rural Finance specialist.

ABF grants will be performance-based. They will be disbursed in two equal instalments: the first one representing 50% of the total amount of the grant will be disbursed at the signature of the Grant Financing Contract, provided that entrepreneur's contribution has effectively been released. The second instalment will be disbursed when the enterprise meets pre-determined performance benchmarks⁴³ included in the Grant Financing Contract, within a maximum period of 3 years (the PCU Rural Finance specialist will also verify the correct use of the first instalment of the grant). Failure to comply within this period will lead to the cancellation of the second financial support tranche.

Resources allocated to the RBF under the project amount to USD 1.4 million. It is expected that the project will finance about 9 agri-business investments (6/7 investments related to alternative crops and 2/3 investments related to rice).

49. **Contract Farming - Tripartite Agreements.** Alongside grants the project will also promote contract farming to facilitate farming HHs' access to markets, inputs and finance. In most cases, entrepreneurs/companies willing to establish a processing unit in the project area have already an on-going relationship with a commercial bank. Such an agreement is already implemented in Myanmar for rice by Rice Specialized Companies as well as by commercial banks for other commodities (sugar cane for example). The KBZ Bank has already expressed its interest to finance such a scheme as soon as the Banking Law will be amended. Such a scheme will ensure access for farmers to improved

⁴³ Performance indicators/benchmarks could include: # of project-supported smallholders contracted; % of increase in purchase price of smallholders' production (at least 15% increase), volume of production purchased; # of jobs created.

inputs and their timely delivery, will ensure quality and quantity production for the processing unit and will minimize the lending risk for the commercial bank as farmers have an exit route for their production and as the processing unit has markets for its finished goods. Contract farming will also be promoted through Rice Specialized Companies and Specialized Agricultural Development Companies that will be selected by the PCU based on the selection criteria: (i) number of smallholders contracted and/or financed; (ii) volume of activities; (iii) volume of the loan portfolio and PAR; (iv) terms and conditions applied to loans to farmers; (v) financial resources available for expanding loans to additional farmers; (vi) willingness to implement a branch/office in the project area; (vii) willingness to enter into contract farming with project-supported farmers, and (viii) number of commodities considered. Selected companies will have to be approved by the NPSC.

50. **Support for the Development of Rural Finance.** The financing of project target beneficiaries will be achieved through two different channels:

- Micro-finance Institutions (MFIs) that will provide: (i) working capital loans to farming HHs, and (ii) working capital and investment loans to landless and farming entrepreneurs to finance their micro and small-businesses;
- Commercial Banks (CBs) providing investment and working capital loan to entrepreneurs to establish processing units. In addition, based on contract farming agreements, CBs could also extend working capital loans to farmers included in these agreements.

51. Considering the pivotal role of UNOPS-LIFT in the microfinance/rural finance sector in Myanmar (refinancing MFIs, building their capacity, extending outreach), and with a view to attracting a licensed MFI in the project area, the project will seek the support of UNOPS-LIFT, where possible, to identify the most suitable microfinance institution (MFI) to provide its services in the project area. The MFI shall be assessed against the following criteria: MFI experience, number of clients, repayment rate and PAR, resources already mobilized, portfolio with landless HHs and with small IGAs, number of staff in lending activities and in non-financial activities such as training and capacity building of landless HHs. The PCU Manager and Rural Finance Specialist and a representative from the GoM (MoAI or MoF) will make the final selection which will be subject to the approval of the NPSC and IFAD no-objection.

52. In the specific context of Myanmar where the few NGOs currently operating are also engaged in microfinance activities, the project will positively consider the possibility of contracting one NGO/MFI that will: (i) provide non-financial services to landless entrepreneurs, and (ii) extend financial services to both landless entrepreneurs and farmers in the project area. Strict recording of financial support received from the project will be requested as well as specific financial statements detailing each type of support received.

53. In order to attract an MFI to deliver its services in its area, the project, after negotiation with the MFI, will provide the MFI with a distinctive financial support. This support will include the following elements (either one or the other or a mix of the two):

- an implementation grant to partially cover the implementation cost of the MFI in the project area i.e. 50% of investment costs (construction of brick-and-mortar branches or development of a branchless network) for branches serving the project area and 33% of the first year operating costs of these new branches (inclusive of staff salary and training costs, and other office costs);
- a refinancing loan to increase the financial resources of the MFI. The refinancing loan will be provided under a Subsidiary Loan Agreement (SLA) signed between the MoF and the selected MFI at very favourable terms and conditions including a 10-year duration and a very concessional interest rate (around 1.5 - 2% per year). For loans extended from SLA loan proceeds by the MFI to project target beneficiaries, market terms and conditions will be applied. SLA loan proceeds should be used in priority for financing farmers willing to introduce alternative crops in their cropping pattern and participating in a contract farming agreement with a processing company.

54. In addition, the project will also finance international technical assistance to assist the selected MFI with the development of rural finance products and services fine-tuned with project-supported beneficiaries' needs and in-line with best practices. Project support to the selected MFI will be provided, in possible coordination with UNOPS-LIFT and UNCDF, the long-term policy of which is to financially and technically assist in the development of local MFIs, thus expanding microfinance/rural finance outreach across Myanmar. The selected MFI will also participate in the capacitating of Knowledge Centers' managers with regards to financial matters.

55. The selected MFI shall provide the PCU with monthly financial statements detailing the portfolio financed under the SLA and/or the loan portfolio developed with project-supported beneficiaries (portfolio ageing balance, repayment rate at 0 day and at 90 days, portfolio at risk ratio, total amount of loans written-off during the period under review, loan loss ratio, as well as actions (legal and extra-legal) taken to recover arrears).

56. As far as commercial banks are concerned, the project will assist commercial banks to further adapt their financial instruments to the needs of the rural population (especially the project-supported beneficiaries). In addition, the project will also assist commercial banks to implement contract farming and to develop the adequate monitoring of the related loan portfolio. Coordination with UNOPS-LIFT and UNCDF could be sought in the provision of this support to commercial banks.

57. Finally, with a view to empowering communities, the project will also encourage project-supported beneficiaries within their related Knowledge Center to form their own savings and credit institutions. These local savings and credit institutions (LSCIs) will primarily focus on savings mobilization and emergency loans. These LSCIs will not constitute in the short-term a proper instrument to finance rural businesses and agricultural activities. It is envisaged that such institutions will gradually be implemented starting from PY3 for Knowledge Centers established during PY1. The project will identify and contract an international MFI/NGO to develop LSCIs. In that respect, the project could enter in a contractual agreement with Caisse Desjardins which has implemented similar institutions in Viet-Nam or with GIZ which has also implemented such institutions in Lao PDR. Considering the lack of transparency in the management and governance of Savings and Credit Cooperatives and of their Federation as well as the risk of MoAI's interference in the SCCs activities, it is currently not envisaged that the LSCIs created under the programme will join the Federation of Cooperatives. During mid-term reviews, the mission will analyze the changes occurred in the global situation of the Federation of Cooperatives and its affiliates as well as the relation with the MoAI and allow for the possibility of affiliation of the LSCIs to the Federation.

Appendix 5: Institutional aspects and implementation arrangements

Organizational Framework

1. **Governance.** FARM's governance will be fourfold: (i) national level with the National Project Steering Committee (NPSC); (ii) MoAI level with the Project Working group (PWG); (iii) township level with the Township Project Coordination Committee (TPCC), and village tract level with the Village Tract Facilitation and Monitoring Group (VTFMG).
2. The project will be steered by a National Project Steering Committee (NPSC) chaired by the MoAI Deputy Minister for Irrigation and co-chaired by the MoAI Deputy Minister for Agriculture. Other 7 members will include director generals of relevant MoAI departments such as Agricultural Mechanization Department (AMD), Settlement and Land Resources Department (SLRD), and Department of Agricultural Planning (DAP) as well as representatives from MoNPED, MoF, the Department of Rural Development from MoLFRD and Nay Pyi Taw Council. In addition, the PCU Director will be an *ex-officio* member of the NPSC. The NPSC will be based in Nay Pyi Taw. The PCU will be the PSC's secretariat. The NPSC will be set-up before project start-up through a special order from MoAI with concurrence from MoF, MoNPED, MoLFRD, and NPT Council.
3. NPSC role and responsibilities will include: (i) provision of strategic guidance to the PCU; (ii) review and approval of AWP&B; (iii) review and endorsement of semi-annual and annual reports; (iv) review and approval of financial support over and above USD 50 000; (v) endorsement of staff selection; (vi) review and approval of audit reports, and (vi) conflicts resolution. The PSC will meet at least bi-annually, although more frequent meetings might be required during the initial period of project implementation.
4. The PWC will serve as MOAI's internal committee to provide guidance and oversight for daily project management. It will be established by the Minister of MOAI, and will consist of Deputy Director-Generals of agriculture, planning, irrigation, research, settlement/land records, and mechanisation; and the project director. It will notably oversee the appointment of the project staff (except the project director and manager) and the recruitment of KCs managers.
5. In each township of the project area, a Township Project Coordination Committee (TPCC) will be chaired by the DoA local officer and co-chaired by the local representative of the Ministry of Home Affair with other members representing relevant MoAI departments (ID, AMD, DAP, DAR) implementing agencies (NGOs and other partners) and farmers' organizations. The township DoA representative will act as secretariat for the TPCC.
6. The TPCC will ensure coordination of project activities and between ministries' departments and agencies, participate in the elaboration of the AWP&B, review progress reports for KCs and provide guidance to field staff. The TPCC will meet quarterly.
7. In each village, a Village Tract Facilitation and Monitoring Group (VTFMG) will be established and chaired by the village leader with representatives from local partner NGOs, KC manager, farmers' groups, women's groups and landless groups, as well as a staff officer from the DoA. The VTFMG will be key to ensure: (i) effective participatory approach for selection of target beneficiaries based on project selection criteria, (ii) effective targeting focusing on poor rural HHs, women, youth and landless HHs; (iii) effectiveness of users' groups work (farmers' groups for training, WUGs for water management), and (iv) reporting of reliable project progress implementation report at village level. This consultative structure will meet at least once per month and will also participate in the elaboration of the AWP&B and in impact and performance assessments.
8. **Management.** A Project Coordination Unit (PCU) will be responsible and accountable for the day-to-day management and implementation of the project. It will benefit from financial autonomy.

Project execution will be guided by a Project Implementation Manual (PIM) approved by the NPSC and IFAD (see *infra*). The PCU will report to the NPSC.

9. Apart from the project director seconded by MOAI, project staff will be recruited from the public or the private sector on competitive basis in compliance with IFAD guidelines. Staff contracts will be for an initial probationary period in line with the Burmese Labour Law, with the possibility of extension subject to satisfactory performance.

10. The recruitment of the PCU staff will comply with the following 6-step procedure: (i) publication of vacancy announcements in local newspapers and internet; (ii) long-list of qualified candidates according to pre-defined criteria; (iii) short-list of qualified candidates based on an objective scoring matrix; (iv) interview of short-listed candidates and final scoring; (v) preparation of selection panel report with recommendation for selection of candidate; (vi) IFAD prior review and no objection. The NPSC will oversee the recruitment process for the project director and project manager, while the PWC will oversee the process for all other staff. The selection panel will be formed by representatives from different MoAI departments, from MoNPED and from MoLFRD.

11. The PCU will be located in Nay Pyi Taw. Its structure will reflect project components and requirements. It will be managed by a Project Director, senior officer seconded from the MoAI, who will have delegated authority and will be able to commit the MoAI as lead project implementing agency. The Project Director will be assisted by a Project Manager, agriculture specialist, whose nomination approved by the NPSC will be based on a competitive recruitment process. The nomination - recruitment of both the Project Director and the Project Manager will be subject to NPSC approval and IFAD clearance. The project staff will consist of three units: (i) the administration office responsible for financial management, procurement and contracting. It will be headed by a financial manager; (ii) the investment office comprising of a rural finance specialist monitoring the two funds and an irrigation/water management specialist liaising with ID and WUGs, and (iii) the capacity building office headed by the community development/gender specialist who will mobilize and organize communities. The project will also have an M&E and knowledge management officer reporting to the Project Manager.

12. Support staff will be either seconded by the MoAI (bookkeeper, clerks, drivers, caretakers) or recruited by the project (secretary). In addition, provision of IT services for PCU and KCs will be part of the contract with the supplier of computers.

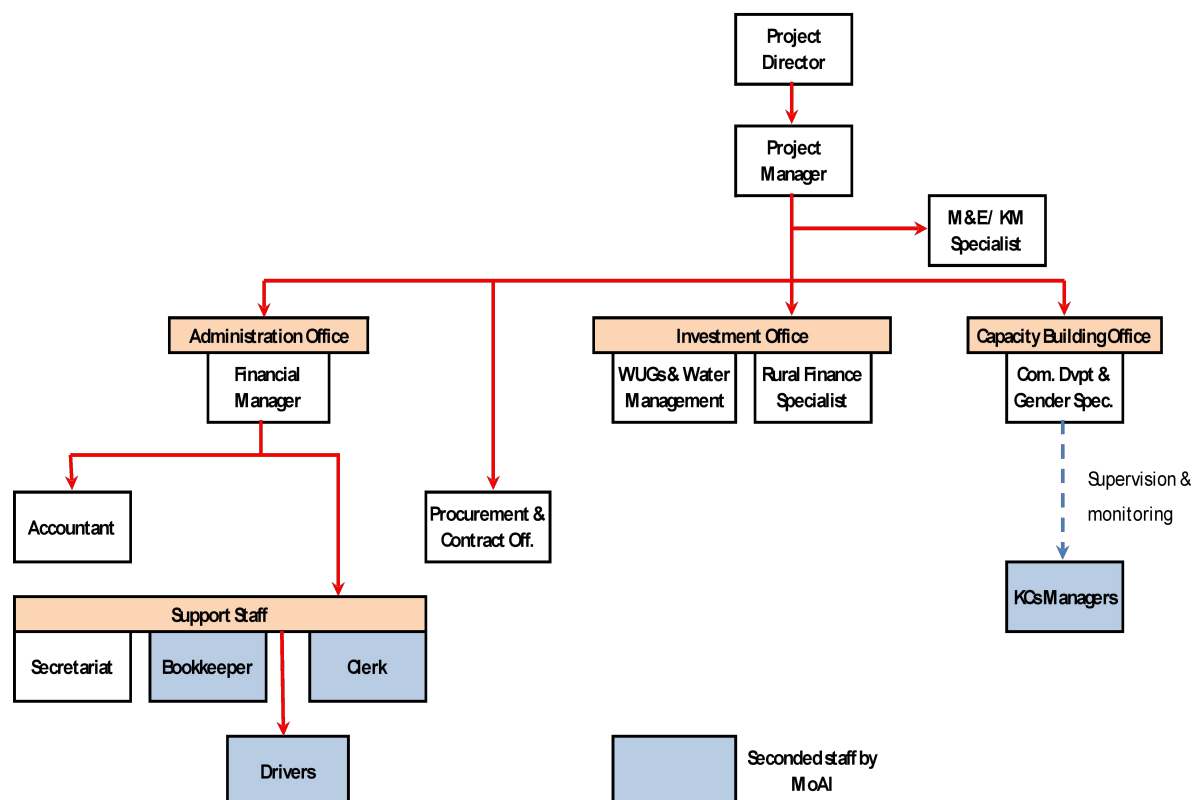
13. Apart from the project director seconded by MOAI, project staff will be recruited from the public or the private sectors on competitive basis in compliance with IFAD guidelines. For non-seconded staff, contracts will be for an initial probationary period in line with the Burmese Labour Law, with the possibility of extension subject to satisfactory performance. Selection of the project's core staff will be subject to NPSC and IFAD approval.

14. A specific committee composed of PCU Management (Director, Manager, and heads of offices) will be created to address grievances submitted by project-supported households and entrepreneurs. Staff will also sign the Project Ethic Code.

15. KCs implemented under the project will be staffed by extension officers seconded from the MoAI extension department for the duration of the project to become KCs managers. The recruitment will be restricted to existing extension staff of MOAI and will be compliant with the 6-step procedure: (i) publication of the vacancy announcement within the MOAI; (ii) long-list of qualified candidates according to pre-defined criteria; (iii) short-list of qualified candidates based on an objective scoring matrix; (iv) interview of short-listed candidates and final scoring; (v) preparation of selection panel report with recommendation for selection of candidate; (vi) prior review and no objection by IFAD. The PWC will oversee the recruitment for all knowledge centre managers. Selection panel will be formed by representatives of MoAI relevant departments (extension, agriculture, planning, irrigation). KCs managers will continue to be paid by the MoAI, the project will only pay the travel allowances that are currently not being paid by the MoAI. A logbook signed by farmers will be the triggering element to pay the per diem on a monthly basis. This logbook will be controlled by NGO staff seconded to the project

to support KCs managers. KC Managers will also receive a motorcycle and a mobile phone which they will pay-back on a monthly basis during 3 years. At the end of the period, both the motorcycle and the mobile phone will be theirs.

Figure 1: PCU's Organizational Chart



16. All staff members will be recruited on competitive basis in compliance with IFAD guidelines. All staff contracts will be for an initial probationary period in line with the Burmese Labour Law, with the possibility of extension subject to satisfactory performance. Recruitment of project's core staff will be subject to PSC and IFAD approval.

17. Considering the lack of expertise of the Burmese public and private sectors in handling a development project, and consequently the lack of expertise of recruited/seconded staff and local agencies and departments, the project will support the PCU's staff as well as the staff of relevant departments/agencies with technical assistance, mainly international. This support will spread over the first four years of the project and will touch upon different subjects based on needs identified by the staff or by IFAD supervision missions.

18. PCU staff will be complemented by TA whose role will be to build local capacities in relevant areas. A specific committee composed of PCU Management (Director, Manager, and heads of offices) will be created to address grievances submitted by project-supported households and entrepreneurs.

Implementation Arrangements

19. **Component 1: Agricultural Infrastructure.** The PCU will be responsible for administration of funds, procurement and payment for services and works as well as for monitoring the activities carried out under the agricultural infrastructure Component. The ID will be the key implementing partner, operating under a MoU with the PCU. Under this MoU ID will retain the key responsibility for identification of potential sites, surveying, designing and assessing the costs for the land development works. The ID will be also responsible for coordinating with other departments of the MoAI involved in specific aspects of implementation (e.g. the SLRD for the provision of cadastral maps and land titling).

20. The PCU will ensure timely mobilization, assistance for field operations and monitoring of performance of the Technical Assistance and Implementation Support Services required by the ID for the implementation of investments in Land Development. The key services to be procured by the project include: (i) TA from one consulting firm with relevant experience on land development to support the ID designers (possibly UNOPS civil works department), and (ii) a local NGO with proven experience in community mobilization, participatory land use planning (PLUP) and free, prior, informed consent (FPIC) approaches to lead the participatory process for irrigation development at each village tract identified for land development.

21. For easier and speedier implementation and to meet the highest standards in procurement, the services of the local NGO will be procured by the PCU with support from UNOPS applying a Quality Based Selection method. Besides being the signatory of these contracts, the PCU will administer and process payments for field allowances for the ID staff directly involved in project field activities (surveyors, designers, site supervisors).

22. The key branches of the ID involved in the implementation of the component will be: (i) the Investigation branch; (ii) the Design branch; (iii) the Construction branch (primarily the construction circle # 5 which operates in the Nay Pyi Taw Union Territory), and (iv) the Maintenance branch.

23. **Awareness raising and Participatory Land Development Planning.** The local NGO responsible for conducting awareness raising and participatory Land Development planning meetings in each village tract targeted under the component will submit monthly work plans to the PCU Community Development/Gender Specialist (CDGS). The CDGS will coordinate the contracted NGO and the ID designers in carrying out joint field visits geared to develop the plans and build up consensus on the land development works. The NGO will also support the establishment of a Project Implementation Committee (PIC) at each block with elected farmers' representatives, whereby each farmer will have one vote regardless of holding size. Each PIC will comprise of one representative per tertiary canal or Water Users Group (corresponding to approximately 50 acres) and be responsible for monitoring the execution and for carrying out the acceptance of the works in the respective block. The membership in a PIC will be voluntary. Women participation in PICs will be encouraged.

24. **Detailed Topographic Survey.** The ID Investigation branch at the ID Head Office has staff, equipment and experience to carry out the required detailed surveys of the target areas within the projected implementation timeframe. A topographic survey team (consisting of 5 people led by an Assistant Engineer) equipped with a total station and experienced in the use digital mapping will be responsible to carry out the detailed survey of the potential sites identified for investments in land development. This will be indicatively based on a 30x30m grid with 15 cm contour intervals for all lands up to 1/100 slope. The topographic survey will report all the relevant drain levels and irrigation canal sections which are the basis for a comprehensive and accurate design. Data processing carried out by the survey team will also include the preparation of an overlay of topographic and cadastral maps reporting the current location of plot bunds. The location of borrow areas will be also assessed.

25. **Engineering Design.** A team from the Design branch at the ID Head Office will be assigned to the project and based in Nay Pyi Taw for the duration of the detailed design phase. All the 6 design units of the ID (each comprising of 6 staff led by an Assistant Engineer) are trained in the use of CAD software, but have limited experience in the designs of land development projects, having mostly focused on development of primary and secondary canals. To this effect, TA will be mobilized to support the designers with trainings on the job (possibly UNOPS civil works department). Capacity building for the ID designers is a pillar of the component exit strategy. With the current structure of institutional responsibilities and with farming HHs' limited ability to pay for irrigation water, ID is likely to retain a key role in the operation, management and development of irrigation infrastructure in the near future. The scaling up and replication of similar investments in land development to other areas in Myanmar either directly by the MoAI or by other projects will be also sustained by the availability of in-house design capacity at ID.

26. **Financing and Execution of Construction Works.** Upon completion of the detailed design of each block, the quantities of the key construction items will be validated by the TA and will serve as

a basis for computing the works' implementation budgets at each block. Based on the computed quantities (mainly earthwork volumes and number of standard structures by type) the direct cost of construction will be calculated following the ID standard practice. The cost of earthworks will be calculated based on the standard output of labour (for hand fill or excavation by hand) and on the output/fuel consumption of the proposed machinery combination for all the works carried out by machine. Applicable rates will be the official rates for hired labour and of fuel⁴⁴. For structures, unit rates issued at the township level and the official rates for the procurement of specific construction items (cement, reinforcing bars, precast pipe culverts) applied to all government entities will apply.

27. Following IFAD prior review, the PCU will enter contracts with the ID for the implementation of land development works on a block-by-block basis, each block consisting of a contiguous area of indicatively 500 acres. The provisions of the contract will specify: (i) the duration of the works (to serve as a basis for reimbursement of field allowances for supervisors); (ii) the type of equipment to be made available on site as per the requirements of the design⁴⁵; (iii) the number of man days of hired labour required; and (iv) the applicable rates of machine hire for the specific combination of equipment selected (to quantify the GoM in kind contribution). Levelling will be subcontracted by ID to either the AMD or to private contractors⁴⁶, mandatorily using laser controlled equipment. In both cases the reference rates will be based on existing norms, capacity and fuel consumption of equipment. Such arrangement for the construction works will be subject to be reviewed by the IFAD supervision missions depending on developments and possible increased competitiveness of the private sector.

28. IFAD will cover 100% of the direct cost (fuel and lubricants, materials and workmanship) of the land development works while Government will finance 100% of indirect costs (machinery works) in kind. The PCU will release the loan funds in two advance tranches on the basis of work done. Fifty-percent of IFAD funding will be transferred to ID as advance payment, the remainder being released after at least 50% of the work is certified by the ID appointed supervising engineer. A 10% retention will apply to both instalments and this will be released upon acceptance of works by an acceptance committee including members from MoAI, UNOPS and a representative of the PIC established at each block.

29. Where appropriate, targeted procurement of maintenance of public civil works under FARM may consider outsourcing to Labour Contracting Societies (LCS), an IFAD award-winning modality successfully tested in Bangladesh to transfer financial benefits and empower marginalized people, particularly women and landless. The PCU and the community development specialized NGO will organize these LCS in which priority will be given to poor women on the community. Training of these women in relation with operation and maintenance will be organized by the ID, while training in group management will be provided by the NGO. LCS will be implemented concomitantly to the work done on each block.

30. **Complementary Activities.** The project will strengthen participatory water management by: (i) registering these VWMCs into formal WUGs (of 20 members each along a tertiary canal) in accordance with the evolving legal framework; (ii) strengthening WUGS through capacity building in governance and technical aspects; (iii) supporting WUGs to establish a cost recovery mechanism to be utilized for operation and maintenance purposes as well as emergency repairs; and, (iv) empowering WUGs to channel their concerns on the timing and quantity of water delivery from ID, and to air any grievances. In the medium term, the project may support WUGs to federate into water users' associations (WUAs) at secondary level, in line with best practice, or to be placed within a broader cooperative structure, as appropriate. To achieve the support to WUGs, the project will use service providers contracted by the PCU and organized at the level of KCs.

31. The same implementation and financing arrangements applicable for the land development works will apply to the construction of micro hydro turbines in the main canals of the irrigation

⁴⁴ Currently 3,500 Kyats/day with a 8 hours working day and 3,720 Kyats/gallon, respectively

⁴⁵ The ID Construction circle n.5 has acquired a large number of heavy duty equipment during the past two years; the key combinations of equipment to carry out the works would be: (i) tracked dozer and excavator for the canals compacted fill; and (ii) tracked dozer, excavator, dump track and vibrating roller for the roads.

⁴⁶ Currently the ID does not have agricultural machinery such as tractors and box levellers.

schemes in the project area. The ID Construction circle # 9 has experience to carry out the design and construction of such facilities. A Feasibility study reporting on the projected power output based on actual flow records and on the number of direct beneficiaries will be carried out by the ID prior to proceeding with the detailed design.

32. Other capacity building activities foreseen under Component 1, consisting of training courses delivered at the ITC and international study tours for ID managers will be organized by the PCU in close consultation with IFAD. Opportunities to arrange the study tours in conjunction with IFAD operations in Asia or elsewhere will be explored.

33. **Sub-component 2-1: Investing in Knowledge.** This sub-component will mainly be implemented using the following service providers: (a) extension officers from the MoAI department of extension services, and (b) PCU-contracted service providers.

34. **KCs implementation and governance.** The PCU will contract a local firm based on a national bidding process to build 55 KCs over a period of 3 years starting PY1 or to rehabilitate premises that have been identified by the MoAI in the project area. Representatives from each 4 blocks included in the KC's catchment area will participate in the selection of the most appropriate location and the KC design or will validate the choice of the MoAI. Representative's selection process will be supported by the PCU Community Development-Gender Specialist. S/he will also support farming HHs within the KC catchment area with the election process of the KC Board. Legal aspect of KC Manager and KC Board members will be explained by a PCU-contracted legal advisor (role and responsibilities of Board members, legal environment of KCs) while the project-contracted NGO and the PCU Rural Finance Specialist will also provide training to Board members in long-term planning, development and management of KCs. The KC Board shall meet twice per year to define the KC annual work plan and budget (AWP&B) and strategy and review the half-year progress made against the AWP&B and strategy. The AWP&B and policy shall be elaborated with a close participation from beneficiaries (farming HHs and landless HHs) as well as from service providers (NGO supporting landless HHs, NGO selected to develop outreach of microfinance institutions). Participation of both landless and farming HHs will be ensured by the KC managers (representatives from each type of households - better-off, moderately poor, poor and very poor, with also participation of women and youth).

35. **Strengthening capacity of extension officers.** The appointment of KCs managers will be strictly restricted to existing extension staff of MoAI Extension Department. The process will start early 2014, will be supported by an IFAD-contracted consultant, and will be in compliance with IFAD guidelines. The following six steps will be followed: (i) publication of vacancy announcements in local newspaper, internet and MoAI internal newsletter; (ii) shortlisting of qualified candidates according to pre-defined criteria; (iii) short-listing of qualified candidates based on an objective scoring matrix; (iv) interviews of short-listed candidates by a panel composed of MoAI staff (department of agricultural planning, extension department, irrigation department, department of human resources); (v) preparation of the panel report with recommendations for selection of candidates, and (vi) IFAD prior review and no-objection. The PWC will oversee the appointment of all KCs managers. Selected extension officers will be awarded a performance-based contract of one year renewable upon satisfactory assessment carried out by the PCU and beneficiaries.

36. The PCU will contract through a national bidding process a NGO to strengthen the capacity of DoA extension officers. 55 extensionists operating in the Nay Pyi Taw Union Territory will be trained to become KCs managers. Training will deal with, among others: update on agriculture techniques and technologies; value chains upgrading and contractual linkages; networking skills; marketing; innovations (especially in processing and new cultures); information technologies; water management; planning; business management and group management.

37. Apart from training, the PCU will also finance KC Managers' operating expenses as well as equipment (motorcycle and mobile phone). For both the motorcycle and the mobile phone, the KC manager will have to pay them back within 3 years on a monthly basis, before enjoying full ownership. To avoid distorting the MoAI salary scale, extension officers will be seconded by the MoAI to the

project. MoAI will continue to finance and pay their basic salary in line with MoAI salary scale. The project will pay the travel expenses that are part of the extension officers package but that are not paid by the MoAI due to lack of resources, thus leading to few field visits and weak extension services. The KC Manager will detain a logbook to be signed by farming HHs after visit (with remarks and comments on services provided). Based on this logbook and controls carried out by the NGO responsible for providing services to landless entrepreneurs (to avoid conflict of interest), the PCU will pay the travel expenses allowance to the Department of Agriculture (DoA) at township level on a monthly basis, and then the township DoA staff will then proceed to the payment of the travel expenses allowance to KCs managers.

38. **Support to KCs managers.** A NGO already operating in Myanmar will be selected to provide the following services: (i) assistance to KCs managers with regards to support to farming HHs, and (ii) assistance to KCs managers with regards to support to landless entrepreneurs. The selection of the NGO will be based on simple criteria such as: (i) experience in similar activities in Myanmar; (ii) human resources availability to implement the project's activities; (iii) willingness to work in the project area; (iv) capacity to link with financial institutions; (v) existing network of service providers to complement staff, and (vi) cost of intervention. The selection will be done through a request for proposals, initiated in early 2014, supported by an IFAD-contracted consultant and in line with IFAD procurement guidelines. For the NGO selection, a specific panel will be established composed of representatives from the MoAI, from the MoNPED and from the PCU. A selection panel report with recommendation for the NGO selection will be submitted to the NPSC for final approval. The NPSC will oversee the procurement and contracting of NGO while IFAD prior review of the process and the proposed award of contract will be necessary.

39. The selected NGO will second 7 to 8 officers responsible for 7 to 8 KCs each during 4 years (2 years full-time and 2 years part-time). Contract between selected NGO and PCU will be performance-based with gender-disaggregated performance indicators detailed in the contract (number of landless HHs trained both in skills and business management training; number of landless HHs accessing a loan; number of IGAs effectively created). The project will pay a lumpsum for each of the 7 to 8 NGO officers seconded to the project inclusive of per diem and travel costs.

40. **KCs activities for farming HHs.** Once trained, selected and approved by their respective KC Board, the KC manager will plan and organize KC activities, in accordance with the annual work plan and budget (AWP&B) and long-term strategy defined by the KC Board: (i) training sessions for representatives of farming HHs in each farmers groups; (ii) demonstrations and trials; (iii) linkages with other commodity chain stakeholders such as input suppliers, traders, processors, and other service providers; (iv) field visits to ensure effectiveness of knowledge sharing among farmers groups; (v) assistance to WUGs; (vi) linkages with professional associations, and (vii) assistance to farmers' groups based on their demand.

41. **Value chains analysis.** The selected NGO will also undertake value chain analyses on crops already grown in the project area as well as on alternative crops that have a strong market potential, comparative advantage and can substantially increase farming HHs income (inclusion in the existing cropping pattern). A minimum of 6 value chain analyses will be undertaken during the first 4 years of the project. Value chain analyses will also focus on identifying potential commercial partners (processors, buyers, and others) that could help developing and strengthening these value chains. Based on a SWOT analysis of each value chain and identification of possible partners, KC Managers will intermediate between project-supported farming HHs and these potential partners for possible investments and contractual arrangements. The NGO together with the PCU Rural Finance Specialist and the PCU Manager (agricultural specialist) will promote contract farming and tripartite contracts on the basis of what is already been implemented in the sugar cane industry. The value chain analysis will also be used at the level of the Agri-Business Fund to ensure that proposed investments are compliant with the options and recommendations of the value chain analysis.

42. **Demonstrations/trials.** Farmers demonstrations and trials will be organized through partnership agreements between the PCU, the DAR, the YAU, and private sector companies (inputs

suppliers) based on a planning issued by each KC manager. KC managers will supervise selected individual farmers (1 per 500-acre block) for trials on their own land. KC managers and DAR/YAU staff will disseminate lessons learned in the form of leaflets and brochures to all farming HHs in the project area and to the MoAI. Gradually, input suppliers and other stakeholders will also participate technically and financially in demonstrations/trials.

43. Demonstrations and trials as well as partnership developed with potential private sector investors will be the cornerstone for the development of alternative crops in the project area and the related change in the current cropping pattern. The project will develop a bottom-up approach with regards to change in the cropping pattern which will be materialized by the following steps: (i) identification of possible alternative crops on the basis of their potential to grow in the area, their market potential and their potential for increasing farming HHs income; (ii) demonstrations and trials will be organized with the assistance of the DAR and YAU (and latter with private sector) under the monitoring of the KC Managers, and (iii) adoption by farming HHs once demonstrations and trials have proven to be successful and that these alternative crops have potential to generate a larger income than the traditional cropping pattern and once potential partners are ready to either invest in new processing plants or other needed investments or enter into equitable contractual arrangements with project-supported farming HHs.

44. **Water Use Management.** The PCU Water Management/WUG specialist and the project-contracted NGO will strengthen participatory water management by:

- i. Transforming the existing Village Water Management Committees (VWMCs) into formal Water Users' Groups (WUGs) of 20 members each along a tertiary canal;
- ii. Assisting WUGs to implement a governing structure (WUG representatives);
- iii. Registering WUGs in accordance with the evolving legal framework;
- iv. Strengthening WUGs' representatives through capacity building in governance and technical aspects;
- v. Supporting WUGs to establish a cost recovery mechanism to be utilized for operation and maintenance purposes as well as emergency repairs;
- vi. Empowering WUGs to channel their concerns on the timing and quantity of water delivery from ID, and to air any grievances.

45. The WUGs Manual of Procedures will be drafted under a participatory approach by the PCU Water Management/WUG specialist with the assistance of WUGs members. With a view to harmonizing approaches in Myanmar between donors, the draft Manual of Procedures will also be shared with other donors working in similar areas (JICA, LIFT, World Bank) to ensure common approach.

46. In the medium term, the project may support WUGs to federate into water users' associations (WUAs) at secondary level, in line with best practice, or to be placed within a broader cooperative structure, as appropriate. This form of project support for participatory water management, once successfully practiced in LC&D model units, may be extended across the entire irrigated project area (87,000 acres) through the delivery of services. KCs will instrumentalize this potential scaling up.

47. **Landless entrepreneurs.** Support to landless entrepreneurs will comprise:

- i. organization of groups based on common activity;
- ii. assistance to develop an IGA concept;
- iii. identification of technical training needs and linkage with vocational training institutes;
- iv. provision of business management training;
- v. assistance to elaborate business plan, market studies and financial projections and loan applications;

- vi. assistance to identify adequate business partners;
- vii. overall assistance based on demand.

48. **Sub-component 2-2: Financing Growth.** This sub-component will mainly be implemented by the following institutions: PCU, a selected microfinance institution and commercial banks.

49. **Funds management.** Both funds will be managed by the PCU Rural Finance Specialist. S/he will issue periodic calls for proposals (quarterly ones for landless entrepreneurs and semi-annually for MSMEs ones). The PCU Rural Finance Specialist will also:

- For rural businesses (landless entrepreneurs): (i) participate in the Grant Committee, assess each proposal against pre-determined selection criteria, and determine the amount of the project support on a case-by-case basis; (ii) ensure effective contribution for landless entrepreneurs before transferring the grant funds onto a special bank account opened in the name of the entrepreneur, and (iii) authorize disbursement of the grant funds based on proper documentation and in accordance with the business plan. Disbursements will be done directly to third parties (suppliers, service providers).
- For Agri-businesses (processors): (i) review each proposal together with the audit firm and ensure compliance with pre-defined selection criteria as well as with recommendations of the value chain analysis for the commodity considered; (ii) ensure entrepreneur's contribution in a specific bank account prior to the release of the first instalment of the performance-based grant, and (iii) ensure compliance with the indicators that trigger the disbursement of the second instalment of the performance-based grant.

50. The PCU Rural Finance Manager will issue a monthly activity report detailing the financial support provided during the month under review and the cumulative financial support since project inception. This monthly report will incorporate data from the selected MFI (for loans extended to landless entrepreneurs) and from commercial banks (for loans extended to project-supported processors). The report will be submitted to the PCU Manager and PCU Director.

51. At project inception, an international expert will strengthen the capacity of the PCU Rural Finance Specialist through the provision of training (risk management, business evaluation, business financing) and will assist him/her in elaborating a proper methodological evaluation process for submitted proposals. The International Expert will be contracted by the PCU based on recruitment carried out by UNOPS based on Qualifications.

52. The PCU Rural Finance Specialist will work in close relation with the PCU M&E/KM Specialist to establish: (i) a database that will capture main general information concerning each activity financed such as: annual turnover and result, number of employees, amount of investment per created, return on investment as well as specific information such as: incremental profit for landless entrepreneurs, number of project-supported farming HHs contracted by the SMEs and incremental profit for these HHs; (ii) a baseline survey on a sample of farming HHs and different activities undertaken by landless entrepreneurs. This baseline survey will identify the key characteristics of each selected HH such as assets owned, global income (broken down by source) and expenditures (broken down by main categories), and (iii) a dynamic follow-up during the 6-year lifetime of the project to evaluate the changes in the livelihoods of HHs sampled. The database will also be used as a norm for similar investment by the PCU Rural Finance Specialist to evaluate investment proposals submitted.

53. **Expanding microfinance outreach.** The PCU Rural Finance Specialist will participate together with the PCU Manager in the selection of the MFI that will extended financial services in the project area considering the MFI experience, its number of clients, its repayment rate and PAR, its resources already mobilized, its portfolio with landless HHs and with small IGAs, its number of staff in lending activities and in non-financial activities such as training and capacity building of landless HHs. In addition the PCU Rural Finance Specialist will also (i) review the documentation submitted by the MFI and validate investment and MFI's own contribution prior to the disbursement of the first tranche

of the implementation grant; (ii) validate compliance with triggering factors for the disbursement of the second tranche of the implementation grant; (iii) review financial statements issued by the MFI and monitor the key performance indicators (PAR, repayment rate), and (iv) assist the MFI to fine-tune its products and services with the project target population effective needs (redefine and design of loan and savings products, training of loan officers, change in the loan portfolio software).

Appendix 6: Planning, M&E and learning and knowledge management

Planning

1. Annual Work Plans & Budgets (AWP&Bs) will form the basis for the planning of FARM activities identified in the Project Design Report as well as in the 6-year roadmap. AWP&Bs will aggregate and consolidate planning and budgets elaborated under a participatory approach by project stakeholders such as PCU, ID, DAR, YAU, each KC manager, selected NGOs for assisting landless HHs and for improving access to rural finance. For each activity, communities at the level of a farmers' group, a 500-acre block or a KC will be involved in the identification, planning, and phasing of PCU activities. AWP&Bs will be finalized by the PCU and presented to all implementing partners in a plenary session for final arbitrage, financial evaluation and finalization. Together with the AWP&Bs, each implementing partner will also elaborate its procurement plan (PP) submitted to and consolidated by the PCU, in line with IFAD Procurement Guidelines.

2. AWP&Bs will also incorporate data from the project M&E as well as recommendations from Supervision Missions and PSC. They will be submitted to the PSC for approval, and then to the GoM and IFAD for concurrence. As the project will require a budgetary contribution from the GoM, co-financing of land development works in addition to duties and taxes, the timing for the preparation of AWP&Bs and PPs will follow the GoM's budget calendar and fiscal year to allow the incorporation of the relevant contribution into the national budget. Table 1 illustrates the different steps for the elaboration of the AWP&B together with the responsible and deadlines.

Table 1: AWPB and PP Preparation⁴⁷

Action	Responsibility	Participants	Timing
Annual Review of Accomplishments by Township	PCU Township Focal Person	Members of the TPCC, representatives from covered KC and VTFMC	Early April
Annual Review of Accomplishments at Project Level	Project Manager	PCU core staff, representatives from the TPCC	Middle April
Preparation of AWPB and PP by component in consultation with the Townships	Component/Sub-Component Heads/ In-charge		Early May
Review and Consolidation of Draft AWPB and PP	Project Manager, Finance Manager, Accountant	PCU staff	Middle May
Submission of Draft AWPB and PP to PSC for Approval	Project Director, Project Manager		June
Submission of PSC approved AWPB and PP to IFAD for no objection	Project Manager		July
Submission of Work Plan and Budget to MOAI (according to ROUM format)	Project Director, Project Manager		August-September

3. The project logical framework as well as the project detailed report will be presented and discussed at project inception with all implementing agencies, partners, PCU staff and PSC members. During that presentation, participants will elaborate a 6-year roadmap inclusive of outputs and budgets for each activity that will also serve as basis for the elaboration of the AWP&Bs by each implementing agency. Such an exercise will increase the ownership of the project by the PCU and all other implementing agencies.

⁴⁷ Most likely, the project will be implemented in July 2014 after its approval by the IFAD Board in April 2014. Project Year (PY) 1 AWP&B will cover only nine months at the most or six months at the least. Thus, it would be practical that the Project Final Design team in consultation with relevant implementing partners will prepare the PY1 AWP&B and PP, and prepare an indicative PY2 AWP&B and PP in line with the GoM timing of budget submission in September for the next fiscal year.

Monitoring and evaluation

4. The project M&E will be designed to offer comprehensive and reliable information to improve planning and decision-making for results-based management. Considering the extent to which impact depends on access to financial and non-financial services, and on building sustainable linkages with commodities stakeholders, the system will be participatory, decentralized, actively involving target groups and service providers, and RIMS-compliant. The logical framework will constitute the basis for results-based M&E. The M&E system will have a three-tier structure: (i) output monitoring with focus on physical and financial inputs, activities, and outputs; (ii) outcome monitoring the use of outputs and measuring benefits at beneficiary and village tracts levels, and (iii) impact assessment assessing programme impact for the target groups in comparison with objectives. All M&E data, analysis, and reporting will be disaggregated by gender.

5. The responsibility for M&E activities will rest with the PCU M&E Officer who will establish a data collection, analysis and reporting system to track physical and financial performance and emerging impact. This system will also be discussed with implementing partners to ensure they can provide the necessary data and information to feed the project M&E system. Main sources of data will include farming HHs, KC managers, entrepreneurial landless HHs, implementing partners, agencies and NGOs, as well as private sector (SMEs and entrepreneurs engaged into contractual agreements with target groups). Table 2 illustrates the information and data collecting process and responsibilities.

Table 2: Data/Information collecting and reporting process

Level	Collectors/ Reporters	Timing	Product	Users
Village and Village Tract	Farmer Leaders, Extension Officers, NGO Village Facilitators	Monthly	Activities/Services report	FOs, KCs, VTFMCs, TPCCs, PCU
	PCU with Farmer Leaders, Extension Officers, NGO Village Facilitators	Annually	Benefit report	FOs, KCs, VTFMCs, TPCCs, PCU, PSC, IFAD
Township	Implementing Partners	Quarterly/ Annually	Physical and financial progress report	TPCCs, PCU, PSC, IFAD
Project-wide	PCU care of M&E/KM Officer (consolidating and validating reports from implementing partners and from the villages)	Quarterly/ Annually	Physical and financial progress, including benefit report	FOs, KCs, VTFMCs, TPCCs, PCU, PSC, IFAD
	Supervision mission teams with participation from all stakeholders	Annually	Supervision report	FOs, KCs, VTFMCs, TPCCs, PCU, PSC, IFAD

6. The project logical framework will be reviewed and M&E indicators fine-tuned at a start-up workshop. At project inception, a baseline survey will be conducted by the PCU in selected village tracts to assess their physical and socio-economic status and that of related HHs and to define their benchmark status against which the project performance will be evaluated. The survey will be undertaken by a contracted service provider and will focus on collecting data related to the selected M&E indicators.

7. Project progress reports will be produced monthly, quarterly, semi-annually and annually for each irrigated area as well as consolidated for the project area.

8. **Baseline and Outcome/Impact Studies.** As a basis for assessing project benefits and measuring project outcomes/impact, the project will conduct: (i) a baseline study, and (ii) a profiling of target groups. The current socio-economic baseline study (SEBS) on the six targeted irrigation schemes conducted by NAG in July-August 2013 will be complemented by a RIMS baseline impact survey on project target groups and areas. The methodology and reporting of RIMS impact surveys will be in line with IFAD's "RIMS: Practical Guidance for Impact Surveys". The RIMS survey will be

undertaken by a contracted independent research entity or an NGO. Profiling of target groups will be done by the NGO contracted for community development.

9. By PY2 and PY4, outcome surveys will be conducted. Outcome surveys will coincide with mid-term reviews (MTR). Results of outcome studies will provide guidance to project management to make necessary adjustments in activities undertaken. Simultaneously, profiles of target groups will also be updated. Outcome surveys will be undertaken by an external and independent entity.

10. At project's completion, a project and RIMS impact study will be undertaken in order to measure the extent to which the project has achieved its development objectives and goal. The study will use the same methodology applied during the SEBS and RIMS baseline survey.

11. **Reporting.** Considering the lack of experience in project monitoring, two mid-term reviews will be undertaken in end-PY2 and end-PY4 covering: (i) physical and financial progress in comparison with AWP&Bs; (ii) performance assessment of service providers and implementing partners; (iii) overall progress towards the achievement of the project's objectives, and (iv) opportunities for deeper integration of implementation within national systems. At the end of the project, a Project Completion Report will be prepared by GoM, with IFAD support, to examine the overall project performance, taking into account a broader and longer-term perspective.

12. The project will use locally adapted RIMS surveys at baseline, mid-terms and completion as the main quantitative survey tools. Ad hoc surveys, qualitative case studies and thematic reviews will be outsourced to independent institutions to verify results and draw lessons on themes such as food security, change in cropping patterns, climate resilience and adaptation, sustainability of rural businesses established by landless HHs, sustainability and effectiveness of WUGs, and impact on land development on farming HHs income and mechanization development.

Learning and knowledge management

13. Operational experiences will create valuable knowledge in the above-mentioned areas, which will be captured by the PCU and utilized to generate lessons and best practices to be shared with public institutions, IFAD, partners, farmers organizations, and others. The results of project support for developing sustainable activities for landless people, developing alternative cropping patterns to reduce poverty, strengthening knowledge through knowledge centers, improved natural resources management through sustainable users' groups as well as expanding microfinance and rural finance operations in rural areas will be widely publicized.

14. The project will partner with several local institutions to disseminate lessons learned and best practices such as the Myanmar Business Coalition, a local NGO established by traders and businessmen and created in the dry zone to better connect farmers to traders, identified information/communication gaps and established a market information system maintained by local traders and using FM radio stations, the Myanmar Agri-Business journal from MoAI, the Farmers journal and Agro-cyclopedia journals (private newsletter) which are providing farmers with updated seed technology, cultural practices, GAP systems, integrated pest and diseases management practices, as well as the Farmers Channel from Myanmar Radio and Telecommunication (MRTV) which disseminates agricultural information for rural households. In addition, the project will also promote: (i) in-country knowledge through periodic seminars/workshops jointly organized with partners, and (ii) IFAD Asia portal and any other regional networks including those supported by IFAD grants. Finally, the PCU will also participate in donors/GoM working groups to share experience, harmonize operations and methodologies and adopt similar approach with regards to GoM capacity building and sectoral development.

Appendix 7: Financial management and disbursement arrangements

1. *Project fiduciary risk.* Project financial management arrangements will ensure that: (i) funds are used for intended purposes in an efficient and cost effective manner; (ii) disbursement of project funds facilitates rapid implementation of activities; (iii) funds are well managed and flow smoothly; (iv) accurate financial reports are issued on timely basis; (v) a robust flow of reliable information on project activities facilitates accountability, transparency and disclosure; and (vi) project resources and assets are safeguarded. Fiduciary risk assessment is drawn from the review of Myanmar's PFM system by the World Bank and published in the Public Financial Management Performance Report, and the Public Expenditure and Financial Accountability Performance Measurement Framework which rates the inherent country fiduciary risk as "High".

2. In view of high country fiduciary risk, the project will apply a ring-fenced approach in its financial management arrangements, with focus on: (i) procurement and installation of an accounting software, and associated capacity building, through a capacity building grant in favour of MOAI; (ii) hiring of key financial management staff from the market with relevant experience and qualifications; (iii) preparation of a financial management manual through the grant, integrating controls closely linked to the project's operational dimensions; (iv) establishment of the PCU with delegated authority to plan, manage, disburse and control project resources (including counterpart financing); (v) capacity building support and oversight by external financial management specialists; (vi) establishment of a control framework integrating periodic internal audits, independent external audits, and social safeguards to be adopted based on IFAD policies; (vii) adoption of a good governance and *mutual accountability framework* to strengthen accountability and transparency in line with international best practices.

3. *Budgeting and counterpart funds.* The PCU will be responsible for preparation of the budget as part of the AWPB exercise, supported by a narrative of proposed activities aligned with the logical framework indicators. Government will ensure that counterpart funds are budgeted in MOAI's national annual budgets, and that these resources are released to the project account on a timely basis as part of the mutual accountability framework.

4. *Financial management responsibilities.* The PCU will be accountable to the NPSC as part of the mutual accountability framework, and will maintain a full set of accounts in accordance with the international public sector accounting standards (IPSAS) on cash basis. This delegation of authority requested by the MOAI and approved by MOF will be established as a disbursement condition.

5. *Flow of funds and disbursement arrangements.* The project will use the imprest fund method for operating the Designated Account (DA), the modalities for which will be detailed in the Letter to the Borrower. Advances to the DA, for the loan and grant, will be transferred to separate accounts held in USD in the Central Bank of Myanmar (CBM) or another bank acceptable to IFAD. The PCU will be authorised to open operational accounts for IFAD resources and Government funds in USD and MMK in the Myanmar Economic Bank or other commercial bank acceptable to IFAD. On the basis of the approved AWPB and procurement plan, the PCU will request a three month advance for the implementation of activities from CBM to the respective MMK accounts. On the justification of 75% of the previous advance and 100% of any preceding advances, the next 3-month advance will be provided. The SOE thresholds will be defined in the Letter to the Borrower.

6. *Internal controls.* The project's internal controls will be designed to ensure effectiveness and efficiency of operations, reliability of reporting and compliance through dynamic processes. Roles and responsibilities will be aligned to project objectives. This will include elements such as the control environment, risk assessment, communication and monitoring to ensure coherence with good governance and the mutual accountability framework. The project implementation manual and the

financial management manual will detail the control framework based on best practises. These manuals should be endorsed by the NPSC prior to the first disbursement.

7. *Accounting system.* The project will procure off-the-shelf accounting software through a service provider that will be tasked with installing and operationalizing it. The accounting software and chart of accounts will be set up to ensure separate project accounts to monitor implementation progress, identify works, goods and services, and disclose their use in the project. The PCU's and MOAI's accounting and finance personnel will be trained in using the accounting software by the service provider, which will also commit to providing periodic off-site and on-site support and training as part of the capacity building initiative at least for the first two years.

8. *Financial accounting and reporting.* Financial statements will be prepared as per IPSAS cash basis for each fiscal year. The PCU will generate quarterly financial reports to be submitted to MOAI, MOF and IFAD. Consolidated financial reports for each source of financing will include: (i) statement of sources and uses of funds by category and component with information on resources received, cash forecasted, and analysis of actual vs. budgeted expenditures; (ii) vendor reports on contracts, disbursements and progress against milestones; (iii) outstanding advances and unpaid commitments.

9. *Internal Audit.* As another mitigation measure in view of the inherent country risk, in addition to the annual external audit, the PCU's procedures will be assessed every six months through internal audit. The project will establish retainer contracts with local audit companies that are accredited and internationally affiliated to assist in the review of project operations, internal controls and compliance measures. The TORs of internal auditors will include the review of accounting and internal controls including proper segregation of duties, financial operations through bank controls, safeguard of cash, and tracking of assets and inventory. Internal audit will be supported by auditors from the Office of the Auditor General as part of efforts to enhance knowledge networking, learning and skill development.

10. *Audit.* An external auditor will be selected by the PCU based on a prequalified list of local audit companies accredited and internationally affiliated with an international auditor (as international audit firms currently do not hold licences to operate in Myanmar). The OAG will participate in the annual audit lead by the external auditor as part of the project's commitment to develop local capacities. As part of audit deliverables, the auditor will examine the documentation related to SOE expenditures. As per IFAD requirements, external auditors will provide separate opinions on the consolidated financial statements, the DA operations, and the SOE facility. External auditors will submit audited financial statements along with the related opinions and management letter no later than six months after the end of each fiscal year. The management letter will include audit observations with opinion on internal control systems and recommendations for improvement. IFAD will provide its feedback on the quality of the audit report and will ensure follow up on audit observations through supervision missions.

Appendix 8: Procurement

1. The Government of Myanmar, is progressively undertaking a major political and economic reform program embarking on a range of political and economic reforms aimed at attaining national reconciliation, good governance, and economic development. To date key economic reforms undertaken include adoption of a more liberal exchange rate policy, relaxation of trade restrictions, rationalization of tax rates, and fiscal decentralization. In this note, procurement was recently decentralised from a central control environment by the Ministry of Commerce and delegated to spending bodies giving them authority to increase the use of open competitive tender. Each spending body was left to develop its own detailed procedures and systems. Given the lack of reforms in the public procurement system which encompasses an integrated procurement law supported by regulations and procedures, the decentralisation of procurement currently does not ensure that spending bodies observe at least a minimum level of controls. In many cases, the minimum requirements are either not defined or not clear or outdated.

2. The Office of the Auditor General (OAG) has not produced reports on compliances of any of these minimum requirements (even where they are defined), given the variations in the effectiveness of the procedures and control regime implemented by individual spending bodies. There is also a lack of statistical information such as the value of procurement processed through different procurement method to be used in the mission analysis. This is also supported by the unavailability of internal audit, in many spending bodies to provide adequate assurances that the financial systems and procurement processes (not just individual transactions) are being conducted effectively, efficiently and economically and if the rules, regulations procedures are being adequately complied or enforced. The Office of the Auditor General (OAG) acknowledges significant problems in procurement at all levels due to the lack of assurances, which exposes the control system to risks and unevenness of application. The challenge remains of achieving an appropriate level of assurance without undermining the beneficial aspects of delegation systems which shares the similar common principle such as value for money, fair treatment, non-discrimination, integrity, transparency and competition and social and economic development as subscribed by the IFAD Procurement Guidelines.

3. Based on a broad rule of law assessment produced in June 2012 by the Perseus Strategies and New Perimeter, in partnership with the Jacob Blaustein Institute for the Advancement of Human Rights, and the World Bank Public Financial Management Performance Report, the current PFM system is stated to be practice-based and operates without benefit of foundational laws (such as an organic budget law, procurement law, or public information law) or up to date regulations. These practices can be traced back to colonial documents (when Burma was a part of India), which contain guidelines for many but not all of the practices observed, however with one over-arching document: the Constitution of 2008. While there has been considerable decentralization of fiscal authority to ministries, states/regions, and state economic enterprises, this is however without all the controls and standards that would not allow the top down approach to reinforce the bottom up approach in a positive way. Ministries hold significant powers, which enable them to determine their own procurement systems, but are not always subject to clear laws and procedures for implementing their budgets and reporting on the results of their spending. Myanmar current ranking with regards perceived corruption based on 2012 TI index, is 172 over 176 countries.

4. As part of its reform agenda, Myanmar's parliament approved an anticorruption law in June 2013, one year after the bill was first proposed and reviewed by legislature. The law was enacted by the Union Assembly parliament in August 7, 2013 and took effect on September 17, 2013. Myanmar has also signed UN anti-corruption framework on 20 December 2012 by ratifying the [UNCAC](#). While this is said, it has still to establish an independent anti-corruption agency and judiciary.

5. The Public Financial Management Performance Report produced by the World Bank summarises the inherent country fiduciary risk as "high" which includes an overall "high" procurement

risk due to the lack of: (i) legal framework for public procurement; (ii) procedures and processes (iii) weak governance environment; (iv) limited experience and capacity and (v) redress mechanism.

6. The current assessment of the procurement capacity of the Ministry of Agriculture and Irrigation (MOAI), the Lead Agency for carrying out procurement under FARM is described under Annex 1. Annex 2 summarizes the WB Analysis against the 6 PEFA dimensions.

Arrangements for Procurement under FARM.

7. Procurement of goods, works and services financed from resources provided or administered by IFAD will be undertaken in accordance with IFAD's Procurement Guidelines and Handbook (dated September 2010, or as amended from time to time as an exception to the provisions of the General Conditions.

8. International Competitive Bidding (ICB) shall be undertaken in accordance with the rules and regulation for ICB as established by the World Bank in line with the provisions of the IFAD Procurement Guidelines.

9. National Competitive Bidding, Shopping and Direct Contracting. Goods and Civil works and goods procured using NCB, Shopping and Direct Contracting will follow the procedures and processes defined in the Project Implementation Manual approved by Project Steering Committee and the IFAD. The procedures would be adapted and adopted in accordance with the provisions of IFAD Procurement Guidelines and the Procurement Handbook with the following emphasis to mitigate risk ensuring compliance to the provisions of the Procurement Guidelines.

- ✓ **Registration of Bidders.** It is general agreement that Registration of Bidders as a condition for bidding is not a good practice and the World Bank does not accept it for ICB. However, it is a very common practice in Countries to have registration previous to bidding as a due diligence process for screening bidders legal and fiscal capacity. It is also usual (in some countries) to use registration as a means for prequalification, especially for civil works.
- ✓ **Open Bid - National Competitive Bidding.** Procedural rules play an important role particularly when it comes to open competitive bidding. The Project will impose through the Project Implementation Manual (PIM) the use of well-formulated bidding documents which will result in bid submissions that are free from qualifications. The PIM would expand and articulate the following rules and procedures for the implementation of FARM:
 - a/ **Effective Advertisement:** Advertisement should be broad enough (using the appropriate media), giving enough time to bidders for preparing their bid. To the extent possible, bidding opportunities should also be advertised electronically. The minimum requirement should be: (i) Mandatory publication in one local newspaper in addition to the official gazette (if existent); (ii) Web-page: if the borrower (or the Country) has a web-page, all bidding opportunities should be advertised; (iii) advertisement in United Nations Development Business or other electronic means.
 - b/ **Eligibility:** Eligibility criteria and procedures should not deny bidders access to a bidding process or an award for reasons which are not related to their qualification to carry out the contract. Consequently the procedures should: (i) Be based on the ability of bidders to carry out the contract and should not include additional restrictions (not related to such ability); (ii) No restrictions to foreign bidders; (iii) Local blacklisting for fraud and corruption carried out with due process and with rights for accused firms to defend themselves could be assessed by IFAD and accepted.
 - c/ **Qualification of Bidders:** The procedures should define post qualification as the preferred rule. Prequalification should be restricted to civil works specially for large or complex contracts or for special cases with due justification. The review of bidders qualification should be conducted by examining whether the bidder does or does not meet qualification criteria and not by using a point system reflecting the bidders' qualification. Conducting a pre-selection instead of a pre-qualification should not be accepted, i.e., pre-qualification

means that all candidates who have been determined to be qualified should be invited to bid whereas pre-selection means that the government agency is free to invite any of those candidates but does not have to invite all of them. No bidder should be disqualified due to bureaucratic or non-substantial reasons.

- d/ **Standard Bidding Documents & Standard Contract:** Standard Bidding Documents are of paramount importance for transparency, speed of the process, increase competition and creation of capacity (standardization of procedures). The SBD to be used in all local open bidding processes would be described in the PIM and it should include: (i). Time to submit bid: minimum 30 days; (ii). Bids may be submitted by post or by hand; (iii) Budget: could be disclosed (if local legislation so requires); (iv). Clear instructions on how to buy bidding documents indicating address and price to buy the bidding documents. However, bidders who decide to submit a bid without having bought the bidding documents should not be disqualified, submitting their bids under their own risk; (v) Clarifications to bidding documents should be in writing only; (vi) Amendments to bidding documents should be advertised with the same procedure used for advertisement of bidding documents; (vii) Bid Forms should be similar to those used for ICB, however, with the flexibility required; (viii) Number of Envelopes: use the same procedure for ICB (one envelope); (ix) Evaluation Criteria: the bid evaluation criteria should be non-discriminatory. It should be disclosed and rigorously quantified in monetary terms to define the "lowest evaluated bidder". This allows to indisputably identify the lowest evaluated responsive bid. Quantifying bid evaluation criteria in monetary terms is the only method that leads to transparent evaluation and that allows bidders to submit an effective protest to the awarding authority.
- e/ **Language (bidding documents and contract):** the language of commercial use in the country along with English translations.
- f/ **Bid Prices (and Payments):** the PIM should define in the bidding documents, the price (and payments) conditions: (i) the local (or any internationally used) currency could be used; (ii) for countries with high inflation all contracts should have price adjustment; (iii) for countries with stable currency, price adjustment should be included for contracts longer than 12 months; (iv) the method of payment should be defined in the bidding document; (v) the currency of payment should be the same of the bid prices; (vi) the employer should automatically pay interest for late payments; (vii) price adjustment formulas should not be used in bid evaluation.
- g/ **Bid & Performance security:** the PIM would prescribe the generally accepted practice used in the local market (securities issued by banks or by sureties). Alternative methods (like automatic penalty to bidders failing to honour a bid) in lieu of bid securities could be accepted. Retention of payment could also be used instead of performance security.
- h/ **Liquidated damages:** should be similar to the ICB document.
- i/ **Complaints & Settlement of disputes:** Modern procurement regulations attempt to provide to losing bidders an effective way to submit protests pertaining to contract award. More generally, the private partner in a government contract must be proactive in implementing competitive mechanisms and, in fact, should be a guardian of those mechanisms exactly in the same manner as government agencies. The goal in the protest handling system should be:
- Complaints should be accepted at any time. Those received before bids are submitted should be addressed before bid opening. All others should be taken into account but the response should be announced only after award is recommended.
 - The PIM would outline an administrative process for dealing with complaints including an independent reviewer for the answers provided by the procuring entity
 - The protests should be submitted to an independent entity and not simply to the supervisor of the contracting agency. Specifically, tender committees, which are the arm

- of the government, can only carry administrative reviews. Their membership does not allow for arbitration or quasi-arbitration of the dispute and therefore an independent protest mechanism should be provided in order to review award disputes before the contract award is final;
- When protests are submitted before award they may lead to revisit the award of the contract; when protests are submitted after the award, their only consequence should be the bidder's entitlement to compensatory damages for the cost of bid preparation.
 - Contracts should include a system for Settlement of Disputes. The use of a Dispute Resolution board should be encouraged before disputes be submitted to arbitration or to courts.
- j/ **Bid Opening:** Public bid opening of all bids, and recording of the opening in minutes signed by all bidders in attendance is required. In addition: (i) late bids should be rejected; (ii) procedures for bid opening should be the same as those used for ICB; (iii) minutes should follow the same procedure as for ICB, and (iv) safeguard of price envelope (when two envelopes are used).
- k/ **Confidentiality:** After bid opening and until contract award, all information about bids and their evaluation should be confidential. For transparency reasons, the evaluation report and all non-proprietary information could be made available to the public after an award recommendation has been published.
- l/ **Evaluation of Bids:** Bids should be evaluated by an independent evaluation committee to the defined in the PIM at the level of the PIU and the PWC, taking special consideration for: (i) Clarification of bids: should follow the same procedures used for ICB; (ii) Responsiveness: should follow the same procedures used for ICB; (iii) Qualification of the bidder should be conducted separately from the evaluation of its bid; (iv) Lowest evaluated cost criteria: The award should be made to the bidder having submitted the lowest evaluated responsive bid; (v) Use of a point system to evaluate bids: scoring is an indirect way to express the outcome of post-qualification or of the technical analysis of the bid a point system should not be accepted. We recognize that a point system may better suited for complex systems, however, it would be extremely exceptional that such procurement would not follow ICB, and (vi) Rejection of all bids: borrower may reject all bids if: (i). all bids are not responsive; (ii) the price offered by the lowest bidder is substantially higher than the confirmed good estimate for the contract; (iii) the process was not competitive, i.e., only few bids (less than 3) were offered although several bidders could be interested in bidding.
- m/ **Domestic preference:** IFAD could accept domestic preference in national bidding, provided it is defined by law and following quantified conditions on how to take it into consideration in bid evaluation. IFAD would not accept the use of non-quantified bid evaluation criteria, such as the scope of the lots or the value of the products to be domestically subcontracted, as those criteria would affect the predictability of the evaluation, or use of any other form of non-quantified preference.
- n/ **Award Criteria:** The award should be made to the bidder having submitted the lowest evaluated responsive bid. Award of contract should be without negotiations, since negotiations would lead bidders not to submit their best bid at the time of bid submission and would affect the perception of transparency, one of the main benefits deriving from public bidding.
- ✓ **Reserved Invitations – Private Bidding or “shopping”:** Procurement procedures other than open competitive bidding must be restricted and contained within appropriate limits. Restricted bidding is appropriate for small value contracts, and situations in which there is only a very small number of potential candidates. Consequently, very specific thresholds should be defined below which this method of procurement could be applied. In addition the following minimum requirements should apply:

- a) Number of invitees & criteria for choosing:
 - Minimum of 3 proposals received. However, the process should be open to whoever wants to bid, even if not invited.
 - Invited firms should not be repeated, if possible. Except if other firms do not exist
- b) Standard request for bids. Simplified document asking proposals by letter, by fax or using electronic means.
- c) Evaluation.
 - Minimum price or
 - Combination of price and delivery time, in which case delivery time would be evaluated in monetary terms added to price. Minimum overall evaluated price would result in award.
- ✓ **Direct Contracting:** This should be used only in exceptional cases with due justification to be kept on records. The conditions justifying the use of direct contracting would be elaborated in the PIM.
- ✓ **Local Consultants Selection Process:** The PIM shall elaborate the provision as prescribed in the Procurement Handbook in term of selection of consultants in line with the Provisions of IFAD Procurement Guidelines. However, for assignments below a certain threshold and for contracts where enough capacity exists in the country compatible with the complexity of the assignment, the short-list may comprise entirely national consultants. In this case this minimum requirements should prevail:
 - ✓ **Registration:** The same conditions described for bidder for goods and works above should be complied with.
 - ✓ **Advertising:** Borrowers should advertise the assignment for expression of interest by firms. The advertisement should include:
 - ✓ Mandatory publication in one local newspaper, in addition to the official gazette (if existent).
 - ✓ Web-page: if the borrower (or the Country) has a web-page the bidding opportunities should be advertised including UN Development Business or other electronic means.
 - ✓ **Short-List:** Borrowers should use a short-list of 3 to 6 firms to request proposals. This short-list may result from comparing qualifications and experience among firms that have expressed interest. Borrowers could use a prequalification process for preparation of the short-list if:
 - ✓ the local law so requires
 - ✓ the prequalification exercise is used for the preparation of a short list, i.e., the process is not for open competition.
 - ✓ **Standard RFP & Standard Contract:** The standard RFP would be described and included in the PIM similar to that used for Selection of consultants by the World Bank.
 - ✓ **Language (RFP and Contract):** the language of commercial use in the country.
 - ✓ **Selection Process:** Short-list; QCBS (other methods when justified) to be elaborated in the PIM.
 - ✓ **Award criteria:** highest combined score (preferably using the following range between 70% to 90% for the technical score and 30% to 10% for the price).

10. All procurement for goods, works and services financed from resources funded or administered by IFAD require bidding documents and the contracts to include a provision requiring suppliers, contractors and consultants ensure compliance with IFAD zero tolerance anticorruption policy and to permit IFAD to inspect their accounts, records and other documents relating to the bid submission and contract performance, and to have them audited by IFAD-appointed auditors.

11. Civil works undertaken by the Labour Contracting Societies (LCS) which should be formed through a defined selection criteria, contracted directly by the FARM Project. The selection criteria and the operational and implementation arrangement for the LCS would be defined in the Project Implementation Manual. The use of LCS incapable of handling implementation, administration, financial management and procurement related activities, the Project Implementation Manual shall

define the roles and responsibilities of the intermediaries who will assist the LCS in performing the activities.

12. As provided in appendix I, paragraph 1 of IFAD's Procurement Guidelines, IFAD review of and no objection to the Recipient's procurement plans is compulsory and the 18 month procurement plans submitted by the Recipient must include as a minimum:

- (i) A brief description of each procurement activity to be undertaken during the period and name of the implementing agency responsible for the procurement.
- (ii) The estimate value of each procurement activity;
- (iii) The method of procurement to be adopted for each procurement activity and;
- (iv) The method of review IFAD will undertake for each procurement activity indicating either post review or prior review.

13. Any changes and amendments to the procurement plan shall be subject to IFAD's No Objection.

Procurement Methods Thresholds

14. International Competitive Bidding (ICB) shall be the default procurement method for the following activities :

- (i) Goods estimated to cost above USD 200,000
- (ii) Civil works estimated to cost above USD 1,000,000
- (iii) Services estimated to cost above USD 100,000

15. Procurement of Goods and Works. Methods for procurement of goods/works as per thresholds is established as follows:

a. Goods

- i. National Competitive Bidding (NCB), for contract values greater than USD 25,000 and less USD 200 000.
- ii. National shopping for contracts less than USD 25,000 up to USD 1,000,
- iii. Direct contracting for contracts below USD1,000

b. Works

- i. National Competitive Bidding (NCB), for contract values greater than USD 50,000 and less USD 1,000 000.
- ii. National shopping for contracts less than USD 50,000

16. The Irrigation Department shall be contracted to undertake design services and the implementation of land consolidation works, the construction irrigation system and structures which include farm roads with the oversight and support of an independent design quality and supervision intermediary. The detail of the implementation would be elaborated in the PIM.

17. Consultancy and Services. Consulting service will include project management technical assistance, implementation support technical assistance for different components, conducting studies, mobilisation/establishment of community groups, technical training and strengthening of community groups, and monitoring and evaluation. Services would be provided by consulting firms and individual consultants.

- i. Each contract for the selection of consultancy services estimated to cost USD 50,000 equivalent or above, shall be selected in accordance with the IFAD Procurement Guidelines following any one of the selection methods listed below:
 - a. Quality and Cost Based Selection
 - b. Fixed Budget Selection

c. Least Cost Selection

- ii. Each contract for the selection of consultancy services estimated to cost below USD50,000 equivalent, shall be selected in accordance with the IFAD Procurement Guidelines following any one of the selection methods listed below:
- a. Quality and Cost Based Selection
 - b. Fixed Budget Selection
 - c. Least Cost Selection
 - d. Selection Based on Consultants Qualification

18. Selection of individual consultants. Individual consultants are selected on the basis of their qualifications for the assignment. They shall be selected through comparison of qualifications of at least three candidates among those who have expressed interest in the assignment or have been approached directly by the Borrower. Individuals employed by Borrowers shall meet all relevant qualifications and shall be fully capable of carrying out the assignment. Capability is judged on the basis of academic background, experience and, as appropriate, knowledge of the local conditions, such as local language, culture, administrative system, and government organization.

19. Consultancy Services and Individuals consultants may be selected on a sole-source basis with due justification in exceptional cases such as: (a) tasks that are a continuation of previous work that the consultant has carried out and for which the consultant was selected competitively; (b) assignments lasting less than six months; (c) emergency situations resulting from natural disasters; and (d) when the individual consultant or consulting firm is the only consultant qualified for the assignment.

Review of Procurement Decisions by IFAD

20. IFAD will undertake to review the provisions for the procurement of good, works and services to ensure that the procurement process is carried out in conformity with its Procurement Guidelines. For the purposes of IFAD's Procurement Guidelines, the following procurement decisions shall be subject to prior review by the Fund for the award of any contract for goods, equipment, materials, works, consultancy and services under FARM.

- (a) Procurement of goods, materials and works
 - (i) Prequalification documents and shortlist when prequalification is undertaken;
 - (ii) Bid Documents for goods, materials and works;
 - (iii) Evaluation Report and Recommendation for Award; and
 - (iv) Contract and amendments.
- (b) Procurement of consultancy services and services
 - (i) Prequalification documents and shortlist when prequalification is undertaken;
 - (ii) Request for Proposal;
 - (iii) Technical evaluation report;
 - (iv) Combined (technical and financial) evaluation report and the recommendation for award; and
 - (v) Contract and amendments.

21. All contracts to be issued to the Irrigation Department for the design services and the implementation of land consolidation works, the construction irrigation system and structures which include farm roads with the oversight and support of an independent design quality and supervision intermediary. IFAD prior review process would be to ensure the process and reviews have been undertaken by the intermediary and free and prior informed consents have been obtained from the farmers.

22. Prior or Post Review. Except as IFAD may otherwise agree, the prior or post which applies to various procurement of good, works and consultant recruitments shall be defined as follows:

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works and Goods	Prior	All Contracts
Civil Works by Irrigation Department	Prior	All Contracts
NCB Works and Goods	Prior	Except procurement valued below USD 25,000
Shopping for works (quotations)	Post	
Shopping for goods (quotations)	Post	
Direct Works	Prior	All Contracts
Direct Goods	Prior	Except procurement valued below USD 1,000
Recruitment of Consulting Firms		
Quality and Cost-Based Selection (QCBS)	Prior	Except procurement valued below USD 25,000
Fixed Budget Selection (FBS)	Prior	Except procurement valued below USD 25,000
Least Cost Selection (LCS)	Prior	Except procurement valued below USD 25,000
Selection Based of Consultants Qualification	Prior	Except procurement valued below USD 25,000
Sole Source Selection (SSS)	Prior	All contracts
Recruitment of Individual Consultants		
Individual Consultants	Prior	Except procurement valued below USD 10,000

GOVERNANCE AND ANTI-CORRUPTION (GAC)

23. Anticorruption measures will include (a) undertake necessary measures to create and sustain a corruption-free environment for activities under the Project; (b) institute, maintain and ensure compliance with internal procedures and controls for activities under the Project, following international best practice standards for the purpose of preventing corruption, money laundering activities, and the financing of terrorists, and shall require all relevant ministries and agencies to refrain from engaging in any such activities; (c) comply with requirements of IFAD's Policy on Preventing Fraud and Corruption in Its Activities and Operations (2005, as amended to date); (d) ensure that the Good Governance Framework is implemented in a timely manner. is actively engaged to allow potential Project beneficiaries and other stakeholders to channel and address any complaints they may have on the implementation of the Project.

ANNEX 1.

MOAI CAPACITY ASSESSMENT

Part A. General Agency Resource Assessment	Response
A.1. Is there a procurement department?	There are no organizational units with direct responsibility for establishing procurement standards. The Ministry of Commerce had this responsibility in the past, which was superseded by the Presidential Order issued by the President's Office on 2nd June, 2011. The MOIA has no specific procurement department but rather this function is undertaken by the Administration Unit of specific Departments within MOIA. There is a Procurement Review Committee at the level of the Ministry, chaired by the Minister or the Vice Minister.
A.2. What procurement does it undertake?	The Ministry undertakes all kinds of public procurement related to goods, works and services. However reliable information not is available on the total percentage volumes. No statistics are available
A.3. Are the staff provided with written job descriptions?	Administrative Unit staff do not specific job descriptions which define role and responsibilities on procurement. There is no specific procurement unit with MOAI for the Departments of Irrigation and Agriculture
A.4. How many years' experience does the head of the procurement unit have in a direct procurement role?	N/A – No specific individual appointed as head of procurement unit. Administrative Unit head acts as head of procurement unit but role not specifically defined.
A.5. How many staff in the procurement department are:	N/A
i. Full Time?	N/A
ii. Part Time?	N/A
iii. Seconded?	N/A-
A.7. Does the staff that will be involved with the procurement have sufficient English language skills	Yes most officers within departments have sufficient proficiency in English. It may be mentioned here that the whole procurement document in terms of bidding document, specification, public procurement law and rules are currently non-existent. Most communication and internal documents are in Myanmar language
A.8. Is the number and qualifications of the staff sufficient to undertake the additional procurement that will be required under the proposed project?	The Project would be undertaking a ring fenced approach which ensures separation of functions, roles and responsibilities and it would have a procurement officer selected from the open competitive market.
A.9. Does the unit have adequate facilities such as PCs, internet connections, photocopy facilities, printers etc. to undertake the expected procurement?	No. The procurement under the proposed project will be undertaken by the Project Management Office (PMO). The PMO will be equipped with adequate facilities such as PCs, Internet Connections, photocopy facilities, printers etc. for smooth implementation of procurement.
A.10. Is there a procurement training program?	Currently none. However the Project and Ministry would benefit from WB initiatives in this regard. The Project will be supported by a TA and IFAD periodically to build capacities of the Departments within MOAI.
Part B. Agency Procurement Processes, Goods and Works	
B1. Are there individual procurement plans prepared for each department and consolidated by the Ministry	No, there are no consolidated procurement plans prepared. No evidence presented on individual procurement plans for Department of Agriculture or Department of Irrigation. Most closed tenders or purchases are done through state enterprises.
B.2. If the above is yes, what where the major challenges?	Please refer to PEFA and analysis ratings listed below.
B.3. Is there a procurement process manual for goods and works?	No
B.4. If there is a manual is it up to date and does it cover foreign assisted procurement?	No.
B.5. Is there a systematic process to identify procurement requirements (1 year or more)	No
B.6. Who drafts the specifications?	N/A.
B.7. Who approves the specification?	N/A
B.8. Are there standard bidding documents in use and have they been approved for use on IFAD funded projects?	No. Specific standard bidding documents would be developed and included in the Project Implementation

Part A. General Agency Resource Assessment	Response
	Manual.
B.9. Who drafts the bidding documents?	N/A
B.10. Who manages the sale of the document?	N/A
B.11. Are all queries from bidders replied to in writing?	N/A.
B.12. Is there a minimum period for preparation of bids and if yes how long?	N/A
B.13. Does the bidding document state the date and time of opening and how close is it to the deadline for submission?	N/A
B.14. Is the opening public?	N/A
B.15. Can late bids be accepted?	N/A
B.16. Can bids be rejected at bid opening?	N/A
B.17. Are minutes taken?	N/A
B.18. Who may have a copy of the minutes?	N/A
B.19. Are the minutes free of charge?	N/A
B.20. Who undertakes the evaluation (individual(s), permanent committee, ad-hoc committee)?	N/A
B.21. What are the qualifications of the evaluators in respect to procurement and the goods and works under evaluation?	N/A
B.22. Is the decision of the evaluators final or is the evaluation subject to additional approvals?	N/A
B.23. Using at least three real examples how long between the issue of the invitation for bids and contact effectiveness?	N/A
B.24. Are there processes in place for the collection and clearance of cargo through ports of entry?	N/A.
B.25. Are there established goods receiving procedures?	N/A
B.26. Are all goods received recorded as assets or inventory in a register or similar?	N/A
B.27. Is the agency/ procurement department familiar with letters of credit?	N/A
B.28. Does the procurement department register and track warranty and latent defects liability periods?	N/A
Part C. Agency Procurement Processes, Consulting Services	
C.1. Has the agency undertaken foreign assisted procurement of consulting services recently (last 12 months, or last 36 months)?	No. There were consulting service procured under a technical assistance grant funded by JICA and Korean Government but these services were procured by JICA and Korean Government directly. The consultants provided technical assistance to MOAI in the procurement of agricultural equipment also funded by JICA and the Korean Government under tied financing. The procurement was advertised undertaken in Japan and Korea in accordance with the procurement guidelines as applicable to JICA and Korean financing.
C.2. If the above is yes what were the major challenges?	N/A
C.3. Is there a procurement process manual for consulting services procurement?	N/A
C.4. Is the manual up to date and does it cover foreign assisted projects?	N/A
C.5. Who identifies the need for consulting services requirements?	N/A
C.6. Who drafts the ToR?	N/A
C.7. Do the ToR followed a standard format such as background, tasks, inputs, objectives and outputs?	N/A
C.8. Who prepares the request for proposals?	N/A
C.9. Are assignments advertised and expressions of interest called for?	N/A
C.10. Is a consultants' selection committee formed with appropriate individuals in terms of	N/A
C.11. What criteria is used to evaluate EOIs?	N/A
C.13. Do firms have to pay for the proposal document?	N/A
C.14. Does the evaluative criteria follow a pre-determined structure and is it detailed in the RFP?	N/A
C.15. Are pre-proposal visits and meetings arranged?	N/A

Part A. General Agency Resource Assessment	Response
C.16. Are minutes prepared and circulated after pre-proposal meetings?	N/A
C.17. To who are minutes distributed?	N/A
C.18. Are all queries from consultants answered to in writing?	N/A
C.19. Are the financial and technical proposals in separate envelopes?	N/A
C.20. Are proposal securities required?	N/A
C.21. Are technical proposals opened in public?	N/A
C.22. Do the financial proposals remain sealed until technical evaluation is completed?	N/A
C.23. Are minutes of technical opening distributed?	N/A
C.24. Who determines the final technical ranking and how?	N/A
C.25. Are the technical scores published and sent to all firms?	N/A
C.26. Is the financial proposal opening public?	N/A
C.27. Are there minutes taken and distributed of financial proposal opening?	N/A
C.28. How is the financial evaluation completed?	N/A
C.29. Are face to face contract negotiations held?	N/A
C.30. How long after financial evaluation is the selected firm to negotiate?	N/A
C.31. What is the usual basis for negotiation?	N/A
C.32. Are minutes of negotiation taken and signed?	N/A
C.33. How long after negotiations until the contract is signed?	N/A
C.34. Are advance payments made?	N/A
C.35. Is there an evaluation system for measuring the outputs of consultants?	N/A
Part D. Process Oversight and Control	
D.1. Is there a standard statement of ethics and are those involved in procurement required to formally commit to it?	N/A
D.2. Are those involved with procurement required to declare any potential conflict of interest and remove themselves from the procurement process?	N/A
D.3. Is the commencement of procurement dependent on external approvals (formal or de-facto) outside of the budgeting process?	N/A
D.4. Who approves procurement transactions and do they have procurement experience and qualifications?	N/A
D.5. Which of the following actions require approval outside of the procurement unit or a permanent evaluation committee and who grants the approval?	N/A
a) Bidding document, invitation to pre-qualify or request for proposal	N/A
b) Advertisement of an invitation for bids, pre-qualification or call for expressions of interest	N/A
c) Evaluation reports	N/A
d) Notice of award	N/A
e) Invitation to consultants to negotiate	N/A
f) Contracts	N/A
D.6. Is contractual performance systematically monitored and reported upon?	N/A
D.7. Does the agency monitor and track its contractual payment obligations?	N/A
D.8. On average how long is it between receiving a firm's invoice and making payment?	N/A
D.9. What is the standard period for payment included in contracts?	N/A
D.10. When payment is made late are the beneficiaries paid interest?	N/A
D.11. Are payments authorized by the same individuals empowered to approve invitation documents, evaluations and contracts?	N/A
D.12. Is there a written auditable trail of procurement decisions attributable to individuals and committees?	N/A
D.13. Are procurement decisions and disputes supported by written narratives such as minutes of evaluation, minutes of	N/A

Part A. General Agency Resource Assessment	Response
negotiation, notices of default/withheld payment?	
D.14. Is there a formal non-judicial mechanism for dealing with complaints?	N/A
D.15. Is a complaints resolution mechanism described in national procurement documents?	N/A
Part E. Records Keeping	
E.1. Is there a referencing system for procurement files?	N/A
E.2. Are original contracts secured in a fire and theft proof location?	N/A
E.3. Are copies of bids or proposals retained with the evaluation?	N/A
E.4. Are copies of the original advertisements retained with the pre-contract papers?	N/A
E.5. Is there a single contract file with a copy of the contract and all subsequent contractual correspondence?	N/A
E.6. Are copies of invoices included with contract papers?	N/A
E.7. For what period are records kept?	N/A

N/A = Not Available for review or not provided for review or not applicable.
 Details of the procedures and processes would be outlined in the PIM in reference to this evaluation.

Annex 2.

PEFA – Procurement Analysis Summary

Dimension	Analysis	Indicated Score	Framework Definition	Evidence Used
(i) Transparency, comprehensiveness and competition in the legal and regulatory framework	There is no centralized framework. Each ministry has delegated powers to make its own arrangements within a general requirement to exercise open competitive tendering as the default method.	D	The legal framework meets one or none of the requirements listed in the PEFA framework.	The Order issued by the President's Office on 2nd June, 2011. Discussion with MFR and four line ministries
(ii) Use of competitive procurement methods	There is no central collection of data about the different procurement methods used and spending bodies do not keep records in this form.	D	Reliable data is not available.	
(iii) Public access to complete, reliable and timely procurement information	Some information is given and some tenders are advertised, but there is no framework for ensuring systematic supply of information and transparency.	D	The Government lacks a system to generate substantial and reliable coverage of key procurement information and does not make key procurement information available to the public.	Discussion with MFR and four line ministries
(iv) Existence of an independent administrative procurement complaints system	There is no independent procurement complaints review body.	D	There is no independent procurement complaints review body.	
Overall Score		D		

Republic of the Union of Myanmar
Fostering Agricultural Revitalization in Myanmar (FARM)
Final project design report
Appendix 8: Procurement

Myanmar - Fostering Agricultural Revitalisation in Myanmar (FARM)							
Procurement Plan 18 months							
Detailed Costs							
	Procurement Method	Classification	Implementation Agency	Base Cost Amount Loan	Base Cost Amount Grant	Total	Prior or Post Review
Technical Assistance Support & Training ^a	UN Agency	Consulting Services	UN Agency	1092,1	485	1577,1	Prior
Extension, Rehabilitation of Minors, Mains Drains and Tertiary Canals	Direct Contract per block	Civil Works	ID	1544	0	1544	Prior
Resurvey and reregistration of New Alignments including field allowances	Direct Contract per block	Civil Works	SLRD	23	0	23	Post
Construction of Pico Hydropower Units	Direct Contract per block	Civil Works	ID	30	0	30	Prior
KC Design and Location Survey	Direct Contract	Civil Works	ED	15	0	15	Post
Construction and Rehabilitation of Knowledge Centres ^c	NCB	Civil Works	PCU	675	0	675	Prior
Purchase of Generators and installation	Local Shopping	Goods	PCU	50	0	50	Prior
Purchase of Furniture for KCs	Local shopping	Goods	PCU	33	0	33	Prior
Purchase of cooking and eating utensils for KCs	Local Shopping	Goods	PCU	1,7	0	1,7	Post
Motor Cycles and standard accessories for KC based Extension Staff	Local Shopping	Goods	PCU	60,1	0	60,1	Prior
Mobile Phones and standard accessories for KC based extension Staff	Local Shopping	Goods	PCU	4,5	0	4,5	Post
Technical Equipment (Agriculture)	International Shopping	Goods	PCU	23,5	0	23,5	Prior
IT equipment for KC (Computer, Printer and Projector)	NCB	Goods	PCU	67,5	0	67,5	Prior
IT equipment for PCU (Computer, Printer and Projector etc)	Local Shopping	Goods	PCU	21	0	21	Prior
Recruitment Project Agriculturalist & Manager	Selection of Individual Consultants	Individual Consultants	PCU	49	0	49	Prior
Recruitment Community Development & Gender Specialist	Selection of Individual Consultants	Individual Consultants	PCU	42	0	42	Prior
Recruitment Water Management/WUG Specialist	Selection of Individual Consultants	Individual Consultants	PCU	42	0	42	Prior
Study Value Chain Analysis	QCBS	Consulting Services	PCU	60	0	60	Prior
Market Promotions (Marketing)	CQS	Consulting Services	PCU	10	0	10	Post
Recruitment Rural Finance Specialist	Selection of Individual Consultants	Individual Consultants	PCU	30	0	30	Prior
Rehabilitation or Upgrade of PCU Premises	Local Shopping	Civil Works	PCU	20	0	20	Post
Purchase of Furniture for Project Office (PCU)	Local Shopping	Goods	PCU	5	0	5	Post
Purchase of Computers & Other Electronic Equipment	Local Shopping	Goods	PCU	21	0	21	Post
Purchase of Vehicles ^b	Local Shopping	Goods	PCU	525,7	0	525,7	Prior
Selection of Internal Audit Firm	CQS	Consulting Services	PCU	60	0	60	Prior
Selection of Independent Auditors for Annual Audit	CQS	Consulting Services	PCU	90	0	90	Prior
Communication and Knowledge Management (Printing and Publications)	Local Shopping	Services	PCU	10	0	10	Post
Recruitment Procurement/Contract Management Specialist	Selection of Individual Consultants	Individual Consultants	PCU	42	0	42	Prior
Recruitment of Finance Manager	Selection of Individual Consultants	Individual Consultants	PCU	42	0	42	Prior
Recruitment of Monitoring & Evaluation Specialist	Selection of Individual Consultants	Individual Consultants	PCU	42	0	42	Prior
Recruitment of Accountant	Selection of Individual Service Provider	Individual Services Provider	PCU	10,8	0	10,8	Post
Recruitment of Secretary	Selection of Individual Service Provider	Individual Services Provider	PCU	6,3	0	6,3	Post
Recruitment of Book Keeper	Selection of Individual Service Provider	Individual Services Provider	PCU	6,3	0	6,3	Post
Recruitment of 2 Administration Staff	Selection of Individual Service Provider	Individual Services Provider	PCU	9	0	9	Post
Recruitment of 4 Drivers	Selection of Individual Service Provider	Individual Services Provider	PCU	10,8	0	10,8	Post
Notes							
a). UN Agency Contract Includes cost of included under Component 1, legal adviser, support to KC Managers, training and refresher training of seed inspectors, NGO support to Landless Entre, Int TA under Value Chain under Component 2 and capacity building of staff under Component 3							
b). Local shopping is selected to ensure only vehicles supplied by official dealerships ensuring extension of original warranties and services by manufacturer's in Myanmar based on the respective trade agreements.							
c). Packaging of Procurement to be decided by PCU given that it involves rehabilitation of 45 different KCs							

Appendix 9: Project cost and financing

Project Costs

- The total project costs including taxes and contingencies are estimated at USD 27.8 million.

Table 1: Summary Project Cost per Expenditure Accounts

	(MMK Million)			(US \$ '000)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
I. Investment Costs								
A. Civil Works	8,204.9	3,495.4	11,700.3	8,415.3	3,585.0	12,000.3	30	47
B. Vehicles	360.0	223.2	583.2	369.3	228.9	598.2	38	2
C. Equipment	89.5	97.1	186.6	91.8	99.5	191.4	52	1
D. Technical Assistance	359.3	567.0	926.3	368.5	581.5	950.0	61	4
E. Studies, Training & Local Services	1,357.5	514.8	1,872.4	1,392.4	528.1	1,920.4	27	8
F. Agricultural & Other Inputs	476.5	84.1	560.6	488.8	86.3	575.0	15	2
G. Matching Grants /a	2,320.5	3,110.3	5,430.8	2,380.0	3,190.0	5,570.0	57	22
Total Investment Costs	13,168.3	8,091.8	21,260.1	13,505.9	8,299.3	21,805.2	38	85
II. Recurrent Costs								
A. Salaries of Government Staff	536.3	-	536.3	550.0	-	550.0	-	2
B. Salaries of Contractual Project Staff	1,104.9	-	1,104.9	1,133.2	-	1,133.2	-	4
C. Staff Allowances	634.5	-	634.5	650.8	-	650.8	-	3
D. Other Operating Costs	590.7	233.5	824.2	605.8	239.5	845.3	28	3
E. Irrigation Maintenance	464.1	81.9	546.0	476.0	84.0	560.0	15	2
Total Recurrent Costs	3,330.4	315.4	3,645.8	3,415.8	323.5	3,739.3	9	15
Total BASELINE COSTS	16,498.7	8,407.2	24,905.9	16,921.7	8,622.8	25,544.5	34	100
Physical Contingencies	646.9	263.8	910.7	663.5	270.6	934.1	29	4
Price Contingencies	2,512.2	897.0	3,409.2	991.1	355.1	1,346.2	26	5
Total PROJECT COSTS	19,657.8	9,568.0	29,225.8	18,576.3	9,248.5	27,824.8	33	109

/a Includes both grant from project and matching funding by beneficiaries.

- They are estimated to be distributed by year as follows:

Table 2: Summary Project Cost per Components

	Base Cost						Total
	14/15	15/16	16/17	17/18	18/19	19/20	
A. Agricultural Infrastructure Improvements	266.7	2,443.6	4,424.6	4,236.4	200.0	200.0	11,771.3
B. Agricultural & Business Services							
1. Investment in Knowledge	948.6	1,435.9	1,155.1	775.3	663.1	466.6	5,444.5
2. Finance for Growth	133.2	1,298.6	2,315.6	1,790.6	130.5	-	5,668.4
Subtotal	1,081.8	2,734.5	3,470.7	2,565.9	793.6	466.6	11,112.9
C. Project Coordination	854.7	315.4	385.4	376.8	342.0	386.1	2,660.3
Total BASELINE COSTS	2,203.1	5,493.5	8,280.7	7,179.1	1,335.5	1,052.7	25,544.5
Physical Contingencies	99.5	200.3	287.0	258.2	48.7	40.4	934.1
Price Contingencies	43.7	179.0	384.8	468.1	132.6	138.0	1,346.2
Total PROJECT COSTS	2,346.3	5,872.9	8,952.5	7,905.3	1,516.8	1,231.0	27,824.8
Taxes	421.5	94.7	117.9	104.4	29.3	24.7	792.3
Foreign Exchange	706.9	2,066.7	3,350.3	2,610.8	301.6	212.1	9,248.5

- About 46% of project costs are allocated to Agricultural Infrastructure Improvements, 44% for Agricultural & Business Services and 10% for Project Coordination.

- Base costs were estimated end 2013 prices with annual price contingencies of 5% for local currency. This is in line with the Ministry of Finance and Planning's estimate of 4-5% and around shorter term estimates made by ADB, OECD and IMFs of around 5% and 6%. The rate for foreign exchange (USD) is 2.0%, based on a rounded average of the MUV index, as projected by the World Bank in July 2013. Project years have been aligned to the fiscal years of Government, which run from April to March. It is assumed that the project will start on July 1 2014 and end on March 31 2020, so that the first project 'year' lasts 9 months but the subsequent ones are all for 12 months. Physical

contingencies have been computed at 5% of base cost on most items. The exceptions are Government Staff on whom no physical contingencies have been applied, and the proposed investments made with matching grants, which have been estimated in USD terms and are subject to neither physical contingencies nor price contingencies. In USD terms, overall physical contingencies will amount to USD 0.9 million and price contingencies to USD 1.4 million, resulting in total contingencies of USD 2.3 million (9% of Total Base Costs). Because of the assumed maintenance of constant purchasing power parity between the USD and the MMK, yet different inflation rates, total contingencies in Kyat terms are higher at 17% overall. Working Paper 5 gives more details of how project costs were estimated and includes additional summary cost tables and the detailed cost tables for each component.

Project Financing

5. The proposed project financing will include: (a) IFAD loan of USD 18.7 million (67%); (b) IFAD grant of USD 0.8 million (3%) giving a total IFAD financing of USD 19.6 million (70%); (c) contributions from Farm HHs of USD 0.6 million (2%); (d) USD 2.4 million or (9%) from the private sector, and (d) Government's gross counterpart of around USD 5.3 million (19%). Direct taxes included in project cost are low, estimated at about USD 0.8 million, so that the net of direct tax contribution of Government will be slightly lower at USD 4.5 million. Expenditure accounts and component accounts by financier are shown below.

Table 3: Expenditure Accounts by Financiers (USD '000)

	The Government		IFAD Loan		IFAD Grant		Private Sector		Rural HH		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
I. Investment Costs															
A. Civil Works	3,279.9	24.5	9,755.8	72.9	-	-	-	-	341.3	2.6	13,376.9	48.1	4,004.7	9,308.4	63.7
B. Vehicles	383.0	59.7	258.9	40.3	-	-	-	-	-	-	641.9	2.3	246.3	12.6	383.0
C. Equipment	15.3	7.3	193.2	92.7	-	-	-	-	-	-	208.5	0.7	108.5	84.7	15.3
D. Technical Assistance	4.9	0.5	261.0	25.0	778.5	74.5	-	-	-	-	1,044.4	3.8	638.0	401.5	4.9
E. Studies, Training & Local Services	51.0	2.4	2,080.8	96.4	-	-	27.8	1.3	-	-	2,159.5	7.8	596.2	1,509.6	53.8
F. Agricultural & Other Inputs	32.6	5.0	345.1	52.9	-	-	274.7	42.1	-	-	652.4	2.3	97.9	521.9	32.6
G. Matching Grants /a	-	-	3,190.0	57.3	-	-	2,100.0	37.7	280.0	5.0	5,570.0	20.0	3,190.0	2,184.0	196.0
Total Investment Costs	3,766.8	15.9	16,084.7	68.0	778.5	3.3	2,402.4	10.2	621.3	2.6	23,653.7	85.0	8,881.5	14,022.8	749.4
II. Recurrent Costs															
A. Salaries of Government Staff	593.8	100.0	-	-	-	-	-	-	-	-	593.8	2.1	-	593.8	-
B. Salaries of Contractual Project Staff	-	-	1,273.2	100.0	-	-	-	-	-	-	1,273.2	4.6	-	1,273.2	-
C. Staff Allowances	-	-	705.6	100.0	-	-	-	-	-	-	705.6	2.5	-	705.6	-
D. Other Operating Costs	286.6	30.2	662.5	69.8	-	-	-	-	-	-	949.2	3.4	269.6	636.7	42.9
E. Irrigation Maintenance	649.4	100.0	-	-	-	-	-	-	-	-	649.4	2.3	97.4	552.0	-
Total Recurrent Costs	1,529.8	36.7	2,641.3	63.3	-	-	-	-	-	-	4,171.1	15.0	367.0	3,761.2	42.9
Total PROJECT COSTS	5,296.5	19.0	18,726.0	67.3	778.5	2.8	2,402.4	8.6	621.3	2.2	27,824.8	100.0	9,248.5	17,784.0	792.3

/a Includes both grant from project and matching funding by beneficiaries.

Table 4: Components by Financiers (USD '000)

	The Government		IFAD Loan		IFAD Grant		Private Sector		Rural HH		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
A. Agricultural Infrastructure Improvements	3,808.4	28.9	8,736.2	66.3	283.9	2.2	-	-	341.3	2.6	13,169.8	47.3	4,290.8	8,876.2	2.8
B. Agricultural & Business Services															
1. Investment in Knowledge	775.1	12.9	4,583.4	76.2	357.5	5.9	302.4	5.0	-	-	6,018.4	21.6	994.7	4,855.1	168.5
2. Finance for Growth	-	-	3,300.2	58.1	-	-	2,100.0	37.0	280.0	4.9	5,680.2	20.4	3,190.0	2,294.2	196.0
Subtotal	775.1	6.6	7,883.6	67.4	357.5	3.1	2,402.4	20.5	280.0	2.4	11,698.6	42.0	4,184.7	7,149.4	364.5
C. Project Coordination	713.1	24.1	2,106.2	71.2	137.1	4.6	-	-	-	-	2,956.4	10.6	773.0	1,758.4	425.0
Total PROJECT COSTS	5,296.5	19.0	18,726.0	67.3	778.5	2.8	2,402.4	8.6	621.3	2.2	27,824.8	100.0	9,248.5	17,784.0	792.3

6. The Government, will finance (i) all of the indirect cost of irrigation works; (ii) the subsequent maintenance of the irrigation works constructed under the project; (iii) base salaries of the extension workers, other KC staff involved in the project as well as support PMU staff; (iv) the rent for the Project Office and electricity for the KCs (either electricity from the grid or fuel for generators), and (v) taxes

and duties except those on matching grant-supported investments which would be borne by the private sector/beneficiaries..

7. Farming HHs will finance (mainly through their own labour) realignment of bunds in the 12 000 acres of newly developed plot level irrigation. Landless entrepreneurs will also contribute 25% of the funding for rural businesses investments which are supported by 75% matching grants.

8. The private sector will contribute towards materials for farm demonstration plots and market promotion related to Value Chain development. They will also provide 60% of the funding for agro-businesses investments which are supported by 40% matching grants.

9. All other elements of project cost will be financed by IFAD, mostly through the loan of USD 18.7 million. The IFAD grant, currently estimated at USD 0.8 million will be used to finance Technical Assistance and/or Studies and Training. The IFAD funding rates will be 100% of direct costs for infrastructure (about 66% of overall infrastructure costs) and 100% of the costs of project staff and consultancies procured through the SP and 100% net of taxes for all other items which it finances, except for the cost of inputs to demonstration plots, for which funding will gradually be shared with the private sector.

Appendix 10: Economic and Financial Analysis

Benefits and Beneficiaries

1. *Benefits and Beneficiaries. Benefits and beneficiaries.* The project will directly impact on a farmed area of about 112,000 acres of which 87,000 acres are within irrigation command areas and 25,000 acres are rainfed. It will cover 82 village tracts within 5 townships populated by about 59,000 households (290,000 people) of which about 34,000 are farming households and 25,000 are landless. About 82% of these households are 'moderately poor', 'poor' or 'very poor', with an average per capita income of about USD 0.8 per day. These are considered the project's primary target group; however, because the project is area based and its targeting strategy is inclusive, there will also be beneficiaries who are 'better off'.

2. Within the project area, about 37,600 households will directly benefit from the Project.

	Total HH in Project Area 1/	Percent Involved	Total HH Directly Involved	of which IFAD Target Group 2/	IFAD Target Group beneficiaries
Land Development Component and Imp Ag	3.300	100%	3.300	67%	2.211
Agricultural Productivity Imp only	30.700	85%	26.300	75%	19.500
<u>All Farm HH 3/</u>	<u>34.000</u>	<u>87%</u>	<u>29.600</u>		<u>21.711</u>
Incremental Landless Labour on Farms		10%	2.500	85%	2.125
Landless making Investments		19,6%	4.900	100%	4.900
Employed on Landless' Investments 4/		0,4%	100	85%	85
Value Chain Investment Employees		2%	500	85%	425
<u>All Landless HH 5/</u>	<u>25.000</u>	<u>32%</u>	<u>8.000</u>	<u>94%</u>	<u>7.535</u>
<u>Totals</u>	<u>59.000</u>	<u>64%</u>	<u>37.600</u>	<u>78%</u>	<u>29.246</u>

1/ Mission estimate - 3% of population to include retirees, civil servants, private sector workers, non agricultural entrepreneurs e.g. operators of food outlets, taxis, shops etc.

2/ Excludes the 'better off' farm HH.

3/ Estimated based on average holding size of about 3.3 acres

4/ Based on 0.6 million incremental person days needed for agriculture less a saving of about 0.2 million from reduced cartage on the 10,000 acres of Land Development. Overall this amounts to 80 days/person/year for 5,000 persons. Assumption is that 50% would be within families of existing beneficiaries so the number of incremental beneficiary households in this category is halved.

5/ See WP 1 which indicates a ratio of landless households to farmer households of 42:58.

3. The target group consists of farmers with small and marginal landholdings and poor landless households interested in investing in rural micro-business (off-farm and non-farm activities). It will embrace the small proportion of ethnic minorities (2%) and women headed households (about 7%).

4. The project aims to both improve agricultural infrastructure by (a) upgrading the irrigation on 10,000 acres and (b) enhancing agricultural productivity both on that area and the balance of the 112,000 acres covered by the project, through (i) the encouragement of and support to widening the use of improved practices (improved water management, better seed, increased fertilizer usage etc.) and (ii) improving availability to finance through (a) supporting MFI(s) to operate within the project area; (b) providing matching grants to landless entrepreneurs for income generating activities (IGAs) and (c) making available investment grants and TA for value chain development, inter alia, enabling diversification and widening the availability of microfinance.

5. Direct Project beneficiaries are enumerated in the table above and will include:

- **Smallholders in the 10,000 acres of irrigated land selected for further land development (about 3,300 families).** The average irrigated landholding size is about 3 acres (1.2 ha) on which their cropping pattern consists of monsoon paddy, grams or other winter crops grown on residual moisture and a summer crop, which could also be paddy if there is sufficient water. These smallholders will benefit from land development and an improved irrigation and field road network. They will be supported to improve productivity of existing or alternative crops,

including developing their knowledge and skills, facilitating access to finance, and widening market access. The mission's estimate is that these farmers will increase annual income on the upgraded area by about \$320/acre by the end of the project period, partly as a result of increased cropping intensity (up from about 255% to 293%) and partly due to a shift into higher input/output practices (see table 1) as well as from substantially reduced field to roadside haulage costs

- **Other smallholders in the selected command areas and on associated rainfed land** (about 102,000 acres in total). About 85% of farm households on this land **26,300 families**) are expected to benefit from project support to improve productivity of existing or alternative crops, to further their knowledge and skills, access finance, and enhance market access but not from the land development work. Average benefit per family from project support over the *102,000 acres not included in the irrigated development* would be about \$100 per acre after allowing for incremental labour requirements or by \$120/acre, say \$400 per farm for a 3.3 acre unit if incremental family labour rather than hired labour were used.
- **Poor landless people interested in micro-businesses**, particularly with unemployed young women and men, will be supported to establish viable rural micro-businesses responding to market demand (e.g. seed cleaning, poultry, fish production in tanks, drip irrigation and non-farm activities). This might involve about **20% of the households or 4,900 HHs**. Based on an average grant size of \$170 per household it would provide net additional income of about \$1,030 per annum for people previously unemployed.
- Those benefitting from **employment generated by the project**. This includes incremental agricultural employment, employment on constructing and maintaining project funded irrigation works, employment in micro businesses and employment on project supported Value Chain Investments. The number of families, not already included elsewhere, to benefit from this would be for **on farm labour (2,500 HHs)** and for employment in **micro businesses or Value Chain development (600 HHs)**.

Estimation of Project's Financial and Economic Impact

6. The Project's economic analysis is undertaken in two parts firstly the agricultural related elements and secondly the funds for investment. To undertake an economic evaluation of the project components, financial prices have been converted to economic prices using estimated Economic Conversion Factors (ECFs) which are intended to take out the price distorting effects of taxes and duties and of underemployment in the rural sector. In this regard, a standard conversion factor of 0.95 has been used for most commercial input items and one of 0.9 for transport and related services. There is underemployment in rural areas, but not at peak times, when most agricultural labour is used. Consequently the ECF for labour is the average of the peak rate of 1.0 and a low season rate, estimated at 0.7 to give a weighted average of 0.9 overall. Family labour has generally been valued at the unskilled rural wage rate of USD 3 per day and the conversion factor of 0.9 applied to give an average economic cost of family labour of USD 2.70 per day.

7. The **agricultural elements**, together with associated project management costs amount to about 75% of project costs. The benefits from this investment have been assessed by (i) preparing budgets for different types of crop production that are likely to be undertaken within the project area and estimating the proportion of each crop which might be produced at each budget level, before and after the project. This is done both for the 10,000 acres subject to Land Development and for the project area as a whole. A summary of (i) the per acre budgets and (ii) the 'before' and 'after' cropping and production estimates (including input use and labour use) for the whole area are shown as Appendices 1 & 2 to this Annex. Details of crop budgets are shown in the Appendices to WP 4.

8. The likely overall financial returns to the project participants are attractive. The farm level incremental financial Benefit: Cost ratio is 2.6:1 for the whole agricultural element of the project and

2.3:1 in the case of the area under Land Development, where there will be first year disruption due to the loss of a crop while land development works take place.

9. For the economic analysis, financial flows are converted to economic flows using the ECFs and estimated With Project Benefits (WIP) for the agricultural components are compared with counterfactual Without Project Benefits (WOP). In the base case it is assumed that for the project period, there would be a 2% real growth in agricultural net economic margins, even without project. Once the project is over, i.e. from year 7 onwards, real WIP growth, not shown in the year by year calculations is assumed to equal real WOP growth - a slightly pessimistic assumption.

10. For all the farm level activities, the project, when evaluated over a 20-year time period shows a sound EIRR of 30% and a Benefit: Cost ratio 2.2, which are quite robust.

11. The estimated economic returns for the Land Development element, viewed in isolation are about 12% (see WP 4 for details). This is quite low, but acceptable for a priority infrastructure activity.

12. It is difficult to estimate with any reliability the likely financial and economic performance of the as yet to be decided investments under the '**Finance for Growth**' component. Nevertheless, models for different types of activity have been outlined by the mission and are described in Working Paper 6. The two types of investment to be supported are (i) investments for the landless in support of income generating activities (IGAs) and (ii) investments in processing and other value chain (VC) support mainly to enable crop diversification.

13. Initial indications of typical possible **IGA investments** (in USD '000) and projected financial returns per unit are summarised below.

	Number of Investments	No. of Jobs 1/	Investment per Unit	Assumed Grant/Unit	Working Capital	Revenue Full devt	Annual Labour Cost	Earnings per job	Net Income/Unit after costing all labour	Wages +Profit yr 6	B:C ratio OCC=12%	FIRR before financing
									CF Y2	CF Y6		
In USD '000/Unit												
Seed processing	3	8.0	7.997	5.998		12.00	5.55	0.69	3.96	6.03	11.58	62%
Poultry	410	1.0	0.720	0.540	0.906	6.89	1.10	1.10	0.36	0.43	1.53	30%
Basketry	1,800	1.0	0.138	0.104	0.104	1.46	0.62	0.62	0.18	0.20	0.82	85%
Hand looms	2,610	1.0	0.144	0.108	0.089	1.35	0.90	0.90	0.13	0.15	1.05	66%
Drip Irrigation 2/	25	1.2	2.300	1.725	0.947	5.25	0.83	0.69	1.55	2.29	3.12	50%
Fish in Tanks	40	0.7	2.965	2.224	0.526	3.24	0.55	0.78	1.50	1.66	2.21	37%
Total/Average All Units	4,888	4,902	1,120	840	837	1.90		0.81	0.19	0.22	1.030	
Earnings per person yr 6 (USD '000)											1.027	

1/ Full time job equivalents

2/ Because this is a land using enterprise, a rent of \$300/acre/year or \$100/crop has been included in the costs, to represent the opportunity cost of land.

14. The characteristics of these types of investment are that they have quite high FIRRs, but rather low Benefit Cost ratios. This is because, except in the case of seed processing, they are businesses whose turnovers and operating costs are very high in relation to investment. Only the seed processing units and perhaps the drip irrigation would employ labour in the other cases, the 'labour' cost is probably the imputed cost at for a family member.

15. Experience with small businesses worldwide indicates that quite a high proportion of start-ups fail. Even with project support and matching grants, it can be expected there would also be failures among IGA investments under the project. The mission's best guess is that there will be perhaps 25% failing in the year of start-up followed by a decreasing rate of failure subsequently so that by the last year of the project, 60% of those which started IGAs are still trading and performing in line with model budgets. Based on these assumptions, the average financial benefits to investors after covering the full cost of labour is about 26% after grant and the EIRR of the component (without counting project overhead) is 33%. (Appendix 5 with more Details in WP4)

16. For **Value Chain** investments Indicative models have been prepared for rice milling, frozen chilli production and tomato processing. Details are shown in WP6 and a summary of the financial and

economic characteristics in WP4. The financial rates of return for these models before financing are 24% for the rice mill, 35% for tomato processing and 37% for the chili plant. Base FRRs, net of the proposed 40% capital grants but before income or corporation tax, which is a measure of the return to the investor, at 33%, 49% and 50% respectively are attractive. B: C ratios though are quite low. At 12% OCC they are 1.11, 1.47 and 1.15 respectively. As with the IGA models it is assumed that there will be some failures among these investments (20% after 3 years from start-up and a further 15% after 4 years from start-up, giving 32% overall). Based on this, the weighted average net FRR of the combined VC models is 22.8% and the weighted average EIRR half a percent higher at 23.3% (Appendix 6).

17. The overall economic internal rate of return (**EIRR**) of the whole project is estimated at 27%. (see Appendix 7) Assumptions used in the economic analysis are (i) an economic life of 20 years; (ii) a standard conversion factor of 0.95 for commercial inputs, 0.9 for transport and services, and 0.9 for labour; (iii) an opportunity cost of unskilled labour of USD 3/day in financial terms and USD 2.7/day in economic terms; (iv) With Project agricultural growth is offset by an assumed counterfactual 2% real growth without the project (WOP), (v) project costs in 2013 economic prices do not include physical contingencies, price contingencies, duties or taxes, and (vi) no residual values for capital investments are assumed.

18. Sensitivity analysis shows that the project is robust in the event of delays in flow of benefits, unforeseen cost overruns or changes in assumptions on WOP development of agriculture (results below). Shortening the project period from 20 to 15 years would reduce the EIRR slightly to 26%. Detailed calculations are in WP4.

	Improved Parameters		Base Case	Worse Parameters		Switching Value 2/
Without Project (WOP) Agricultural Growth	1.0%	1.5%	2.0%	2.5%	3.0%	3.7%
Project ERR	34%	30%	27%	23%	19%	
Project Cost and Post Project Maintenance	-20%	-10%	Base	20%	40%	133%
Project ERR	31%	29%	27%	23%	21%	
Net Benefits from Components	30%	15%	Base	-15%	-30%	-35%
Project ERR	35%	31%	27%	21%	15%	
Gross Sales from Components (costs stay same) 1/	15%	10%	Base	-10%	-15%	-18%
Project ERR	39%	34%	27%	19%	14%	
Net Benefits from Components Delayed 1 Year			20%			
Net Benefits from Components Delayed 2 Years			16%			
Evaluated over 15 Years not 20			26%			
Evaluated over 12 Years not 20			23%			

1/ Increase in Agricultural Sales plus total IGA sales plus total sales minus raw material costs for VC models.

2/ Percentage change needed to reduce EIRR to 12%

19. In conclusion, the proposed project, which is likely to have an economic rate of return of about 27% is financially and economically sound and will impact on about 37,600 beneficiary households (183,400 persons) over 78% of whom are within the IFAD target group.

Appendix 1: Summary of Farm Budgets per Acre

	Input level	Common Unit	Yield/acre in common units	Yield/ acre in kgs	Value of Production per acre	Non Labour Costs per acre	Total labour Person days per acre	Margin before Labour Costs per acre	Margin after labour costs per acre USD	Margin per person day USD
Monsoon Paddy										
Hybrid Paddy - Monsoon (harvested dry)	high inputs	basket	125.8	2,625	617	235	49.1	382	234	7.8
Improved Variety Paddy - Monsoon (dry)	medium inputs	basket	91.5	1,910	449	141	41.6	308	183	7.4
Low input paddy - Monsoon (harvested dry)	low inputs	basket	75.2	1,570	320	78	36.8	241	131	6.6
Summer Paddy										
Hybrid Paddy - Summer (harvested wet)	high inputs	basket	150.0	3,130	661	276	42.7	385	257	9.0
Improved Variety Paddy - Summer (wet)	medium inputs	basket	110.2	2,300	485	157	34.5	329	225	9.5
Low Input Paddy Summer (harvested wet)	low inputs	basket	76.7	1,600	331	87	28.9	245	158	8.5
Maize										
Maize - Irrigated	high inputs	basket	120.3	3,000	960	258	18.0	702	648	39.0
Maize - Rainfed	low inputs	basket	68.1	1,700	544	195	14.0	349	307	24.9
Black Gram										
Black-Gram improved variety (winter)	high inputs	basket	29.2	915	448	82	17.7	366	313	20.7
Black-Gram improved variety (winter)	Medium inputs	basket	25.1	785	385	62	17.1	323	272	18.9
Black-Gram improved variety (winter)	Low Inputs	basket	19.6	615	301	32	15.5	269	223	17.4
Black-Gram old variety (winter)	Low Inputs	basket	18.8	588	288	29	15.4	259	213	16.9
Green Gram										
Green-Gram improved variety (winter)	high inputs	basket	35.1	1,100	649	87	18.4	562	507	30.5
Green-Gram improved variety (winter)	medium inputs	basket	31.5	985	581	66	17.9	515	461	28.7
Green-Gram improved variety (winter)	low inputs	basket	24.0	750	443	37	16.0	406	358	25.4
Green-Gram old variety (winter)	low inputs	basket	20.1	630	372	33	15.5	339	292	21.8
Groundnut										
Groundnut improved seed	high inputs			778	505	128	19.0	377	320	19.8
Groundnut improved seed	medium inputs			685	445	106	18.0	338	284	18.8
Groundnut improved seed	low inputs			595	386	76	16.0	310	262	19.4
Groundnut own seed	low inputs			475	308	60	15.0	248	203	16.5
Sesame										
Sesame improved seeds	medium inputs	basket	23.9	585	562	78	11.0	484	451	44.0
Sesame improved seeds	low inputs	basket	18.4	450	432	53	9.0	379	352	42.1
Sesame farmers own seed	low inputs	basket	14.1	345	331	47	8.0	284	260	35.5
Vegetables (Fresh)										
Tomatoes (Proxy for Fresh Veg) - rainfed	high inputs			3,500	1,050	292	51.8	759	603	14.6
Tomatoes (Proxy for Fresh Veg) - rainfed	medium inputs			2,500	750	227	48.2	524	379	10.9
Tomatoes (Proxy for Fresh Veg) - rainfed	low inputs			1,700	510	85	41.8	425	300	10.2
Processing Crops										
Processing Tomatoes - Irrigated	high inputs			20,000	1,400	539	82.3	861	614	10.5
Processing Tomatoes - Tubewell	high inputs			25,000	1,750	698	90.7	1,052	780	11.6

Appendix 2: Estimate of Overall Cropping and Production Before and After Project

	Base Cropped Area (acres)	Percent by category	Margin USD M	Production '000 t	Production Value USD M	Employment Person days (Million)	Non labour inputs USD M	Area After Project (acres)	Percent by category	Margin USD M	Production '000 t	Production Value USD M	Employment Person days (Million)	Non labour inputs USD M	Incremental Margin after full cost of labour USD M	Incremental Production '000 tons	Incremental production Value USD M	Incremental Employment Million days	Incremental Non Labour Inputs USD M
Monsoon Paddy	80,000							78,200							1.32	11.74	3.77	0.109	2.12
high		10%	1.87	21.00	4.94	0.393	1.88		25%	4.58	51.32	12.06	0.960	4.60					
med		45%	6.59	68.76	16.16	1.496	5.08		55%	7.88	82.15	19.31	1.787	6.07					
low		45%	4.72	56.52	11.51	1.325	2.81		20%	2.05	24.55	5.00	0.576	1.22					
Summer Paddy	10,500							12,000							0.57	8.31	1.76	0.098	0.90
high		30%	0.81	9.86	2.08	0.134	0.87		67%	2.07	25.17	5.31	0.343	2.22					
med		50%	1.18	12.08	2.55	0.181	0.82		25%	0.68	6.90	1.46	0.104	0.47					
low		20%	0.33	3.36	0.70	0.061	0.18		8%	0.15	1.54	0.32	0.028	0.08					
Maize	3,400							7,500							2.56	11.94	3.82	0.073	1.04
irrigated		20%	0.44	2.04	0.65	0.012	0.18		60%	2.91	13.50	4.32	0.081	1.16					
unirrigated		80%	0.84	4.62	1.48	0.038	0.53		40%	0.92	5.10	1.63	0.042	0.58					
Black Gram	44,000							40,000							0.74	2.88	1.41	- 0.021	0.74
high		5%	0.69	2.01	0.99	0.039	0.18		30%	3.75	10.98	5.38	0.212	0.99					
med		5%	0.60	1.73	0.85	0.038	0.14		30%	3.26	9.42	4.62	0.206	0.74					
low		10%	0.98	2.71	1.33	0.068	0.14		20%	1.78	4.92	2.41	0.124	0.26					
v low		80%	7.50	20.70	10.14	0.540	1.02		20%	1.70	4.70	2.30	0.123	0.23					
Green Gram	21,000							21,000							2.15	4.58	2.70	0.029	0.47
high		5%	0.53	1.16	0.68	0.019	0.09		30%	3.19	6.93	4.09	0.116	0.55					
med		5%	0.48	1.03	0.61	0.019	0.07		30%	2.91	6.21	3.66	0.113	0.42					
low		10%	0.75	1.58	0.93	0.034	0.08		20%	1.50	3.15	1.86	0.067	0.15					
v low		80%	4.91	10.58	6.24	0.261	0.55		20%	1.23	2.65	1.56	0.065	0.14					
Groundnut	12,000							12,000							0.48	1.16	0.75	0.014	0.23
high		5%	0.19	0.47	0.30	0.011	0.08		15%	0.58	1.40	0.91	0.034	0.23					
med		15%	0.51	1.23	0.80	0.032	0.19		35%	1.19	2.88	1.87	0.076	0.45					
low		10%	0.31	0.71	0.46	0.019	0.09		30%	0.94	2.14	1.39	0.058	0.27					
v low		70%	1.71	3.99	2.59	0.126	0.51		20%	0.49	1.14	0.74	0.036	0.14					
Sesame	24,500							24,000							1.55	1.88	1.81	0.020	0.20
med		5%	0.55	0.72	0.69	0.013	0.10		30%	3.24	4.21	4.04	0.079	0.56					
low		15%	1.29	1.65	1.59	0.033	0.20		40%	3.38	4.32	4.15	0.086	0.51					
v low		80%	5.10	6.76	6.49	0.157	0.92		30%	1.87	2.48	2.38	0.058	0.34					
Vegetables (Fresh)	6,400							5,500							0.12	0.03	0.01	- 0.033	- 0.01
high		5%	0.19	1.12	0.34	0.017	0.09		40%	1.33	7.70	2.31	0.114	0.64					
medium		70%	1.70	11.20	3.36	0.216	1.01		40%	0.83	5.50	1.65	0.106	0.50					
low		25%	0.48	2.72	0.82	0.067	0.14		20%	0.33	1.87	0.56	0.046	0.09					
Processing Crops								3,600							2.41	78.00	5.46	0.306	2.13
Irrigated									67%	1.47	48.00	3.36	0.198	1.29					
Tubewell									33%	0.94	30.00	2.10	0.109	0.84					
Other Crops1/	13,200							13,200											
Totals 2/	215,000		45.27		79.27	5.349	17.95	217,000		57.16		100.75	5.945	25.76	11.90		21.49	0.595	7.81
Croppable Area 3/	112,000							111,400											
Crop Intensity	192%							195%											

1/ pasture, sugar and minor crops, which amount to about 6% of the area, are excluded from the analysis

2/ Increase in cropped area comes from Land development area (2,000 acres).

3/ Croppable area decreases by 6% of the 10,000 acres on which Land Development takes place.

Appendix 3: Estimate of Economic Impact of Farm Level Activities Overall (USD Million)

Project Year		1	2	3	4	5	6	7	8-20
	ECF								
Gross Value Improved Agricultural Production 1/	Var	0.00	2.11	4.18	8.31	12.37	16.37	20.31	20.31
less - Increased Inputs 1/	Var	(0.18)	(0.81)	(1.59)	(2.80)	(3.94)	(5.04)	(5.78)	(5.78)
less increased labour 2/	0.90	(0.04)	(0.20)	(0.40)	(0.72)	(1.05)	(1.37)	(1.61)	(1.61)
Net Value of Improved Ag Production			1.09	2.19	4.79	7.38	9.97	12.92	12.92
Savings in Cartage Costs on Crops 3/	1.00	0.00	0.03	0.16	0.39	0.58	0.61	0.64	0.70
Savings in Cartage Costs on Inputs 4/	0.80	0.00	0.00	0.02	0.03	0.04	0.04	0.04	0.04
Benefits		0.00	1.13	2.37	5.21	8.00	10.62	13.60	13.67
Loss of one crop (winter gram) 5/	1.03	0.00	(0.51)	(1.02)	(1.02)	0.00			
Cost of Project Irrigation Component 6/	1.00	(0.27)	(2.43)	(4.38)	(4.08)	0.00	0.00	0.00	0.00
Cost of Ag Prod Comp. 7/	0.99	(0.98)	(0.14)	(0.12)	(0.75)	(0.66)	(0.46)	(0.23)	(0.23)
Cost of Investment Component excluding Funds	0.99	(0.20)	(0.46)	(0.48)	(0.17)	(0.10)	(0.04)	0.00	0.00
Cost of project management 7/	0.97	(0.83)	(0.29)	(0.36)	(0.36)	(0.32)	(0.36)	0.00	0.00
Incremental Irrigation Maintenance \$20/ac 6/	0.95	0.00	0.00	(0.04)	(0.11)	(0.19)	(0.19)	(0.19)	(0.19)
Costs		(2.27)	(3.84)	(6.41)	(6.50)	(1.27)	(1.05)	(0.42)	(0.42)
Net Incremental Economic Flow WIP		(2.27)	(2.72)	(4.04)	(1.29)	6.74	9.58	13.18	13.25
Adj for Incremental WOP growth 8/ at a rate of	2.0%	(0.00)	(0.38)	(1.24)	(2.24)	(3.27)	(4.32)	(5.32)	(5.32)
Net Incremental Economic Flow WIP-WOP		(2.27)	(3.10)	(5.28)	(3.53)	3.47	5.26	7.87	7.93
EIRR Net of WOP	30%	B:C ratio at OCC = 12%				2.26			
ECF For Inc Ag Prod over time 9/			0.981	0.974	0.966	0.959	0.952	0.945	0.945
ECF for Inc Ag Non Labour Inputs over time 10/	0.901	0.833	0.814	0.796	0.777	0.759	0.741	0.741	
Combined ECF for WOP inc. Ag Value Added 11/			1.152	1.155	1.119	1.108	1.103	1.086	1.086

1/ Ag inputs are impacted by commercial tax and historic high taxes in transport sector so ECF on average is estimated at 0.9

2/ Ag labour is a combination of critical labour (harvesting and planting) where ECF is 1.0 and other labour, e.g. weeding and fertilizing with an ECF of 0.7 - average 0.9.

3/ cartage of crop is at critical times, so ECF 1.0

4/ cartage of inputs partly critical, partly not - estimated ECF 0.8

5/ a review of output and cost elements for black gram give an overall ECF of 1.03

6/ equipment fuel etc. is all free of tax, but labour is lower so ECF is taken to be 0.95

7/ ECF reflects elements of tax on running project office, fuel and repairs for vehicles, audit fees, studies etc. Costs continue at 50% of with project level beyond project period

8/ Assumes that over the project period from when new KCs are established and new areas join the project, there would be WOP growth over and above the base figure. After that period - years 7-20 WIP and WOP growth resulting from non project factors are assumed to be the same so that the WOP benefits remain at their year 7 level.

9/ takes account of forecast fall in price of rice, which by value is 35% of incremental production (in relation to 2013 financial price, ECF rice falls from 1.06 in 2013 to 0.84 in 2020)

10/ Takes account of fall in fertilizer prices. Ferts average 70% of incremental inputs ECF in relation to 2013 financial price ECF for fertilizer falls from 0.92 in 2013 to 0.68 in 2020.

11/ Applies to WOP net benefits and combines 9 and 10 above and labour.

Appendix 4: Estimate of Economic Impact of Land Development Activities (USD Million)

Project Year		1	2	3	4	5	6	7-19	20
	ECF								
Gross Value Improved Agricultural Production 1/	Var	0.00	0.00	0.27	1.08	2.42	3.47	3.98	3.98
less - Increased Inputs 1/	Var	0.00	(0.21)	(0.55)	(0.87)	(1.03)	(1.06)	(1.03)	(0.77)
less increased labour 2/	0.90	(0.00)	(0.05)	(0.13)	(0.21)	(0.26)	(0.27)	(0.27)	(0.20)
Net Value of Improved Ag Production			(0.26)	(0.41)	0.00	1.13	2.14	2.68	3.00
Savings in Cartage Costs on Crops 3/	1.00	0.00	0.03	0.16	0.39	0.58	0.61	0.64	0.64
Savings in Cartage Costs on Inputs 4/	0.80	0.00	0.00	0.02	0.03	0.04	0.04	0.04	0.04
Benefits		0.00	(0.23)	(0.23)	0.43	1.76	2.80	3.36	3.68
Loss of one crop (winter gram) 5/	1.03	0.00	(0.51)	(1.02)	(1.02)	0.00			
Cost of Project Irrigation Component 6/	1.00	(0.27)	(2.43)	(4.38)	(4.08)	0.00	0.00	0.00	0.00
Allocation (9%) of cost of Ag Prod Comp. 7/	0.99	(0.09)	(0.13)	(0.11)	(0.07)	(0.06)	(0.04)	(0.02)	(0.02)
Half cost of project management 7/	0.97	(0.41)	(0.15)	(0.18)	(0.18)	(0.16)	(0.18)		
Incremental Irrigation Maintenance \$20/ac 6/	1.00	0.00	0.00	(0.04)	(0.12)	(0.20)	(0.20)	(0.20)	(0.20)
Costs		(0.77)	(3.22)	(5.73)	(5.47)	(0.42)	(0.42)	(0.22)	(0.22)
Net Economic Flow WIP		(0.77)	(3.45)	(5.96)	(5.05)	1.34	2.38	3.14	3.46
Adjustment for WOP Growth 8/ at annual rate	2.0%		(0.02)	(0.09)	(0.20)	(0.31)	(0.42)	(0.42)	(0.42)
Net Economic Flow WIP less WOP		(0.77)	(3.47)	(6.05)	(5.25)	1.03	1.95	2.72	3.04
EIRR (20 years)	12%								
ECF For Inc Ag Prod over time 9/			0.982	0.976	0.969	0.963	0.956	0.950	0.950
ECF for Inc Ag Non Labour Inputs over time 10/			0.833	0.814	0.796	0.777	0.759	0.741	0.741
Combined ECF for WOP inc. Ag Value Added 11/			1.152	1.155	1.119	1.108	1.103	1.086	1.086

1/ Ag inputs are impacted by commercial tax and historic high taxes in transport sector so ECF on average is estimated at 0.9

2/ Ag labour is a combination of critical labour (harvesting and planting) where ECF is 1.0 and other labour, e.g. weeding and fertilizing with an ECF of 0.7 - average 0.9.

3/ cartage of crop is at critical times, so ECF 1.0

4/ cartage of inputs partly critical, partly not - estimated ECF 0.8

5/ a review of output and cost elements for black gram give an overall ECF of 1.03

6/ equipment fuel etc. is all free of tax, so ECF is taken to be 1.0

7/ ECF reflects elements of tax on running project office, fuel and repairs for vehicles, audit fees, studies etc. Costs continue at 50% beyond project period

8/ Assumes that over the 6 year project period from when areas join the project, there would be WOP growth over and above the base figure. After that period - years 7-20 WIP and WOP growth resulting from non project factors are assumed to be the same so that the WOP benefits remain at their year 6 level.

9/ takes account of forecast fall in price of rice, (by value is 32% of incremental production). In relation to 2013 financial price, rice ECF falls from 1.06 in 2013 to 0.84 in 2020

10/ Takes account of fall in fertilizer prices. Fertilizers average 70% of incremental inputs ECF. In relation to 2013 financial price ECF falls from 0.92 in 2013 to 0.68 in 2020.

11/ combines 9 and 10 above and labour.

Appendix 5 Estimate of Economic Rate of Return for IGA Investments

Weighted Average Investment per IGA	0.229
Weighted Average Grant per IGA	0.172
Weighted Average Working Capital per IGA	0.171

Weighted Average Performance - all IGAs meeting budget (financial prices USD '000)

	Year	0	1	2	3	4	5	6	7	W. Capital recovered
Weighted Av Revenue		0.000	1.882	1.889	1.896	1.896	1.896	1.896	1.896	0.171
Weighted Av labour Costs		-	0.813	0.813	0.814	0.814	0.814	0.814	0.814	
Weighted Av Other Input costs		0.400	0.846	0.846	0.846	0.846	0.846	0.846	0.846	
Weighted Average Costs		0.400	1.659	1.660	1.661	1.661	1.661	1.661	1.661	
Weighted Av CF		(0.400)	0.222	0.229	0.235	0.235	0.235	0.235	0.235	0.171
Weighted Average IRR		55%								
Benefit: Cost Ratio (12% discount rate)		1.091								
Benefit: Cost Ratio - excluding labour (12% discount rate)			2.041							

Weighted Average Performance for Entrepreneur after grant - with all IGAs meeting budget

	Year	0	1	2	3	4	5	6	7	W. Capital recovered
Weighted Av Revenue		0.000	1.882	1.889	1.896	1.896	1.896	1.896	1.896	0.171
Weighted Av labour Costs		-	0.813	0.813	0.814	0.814	0.814	0.814	0.814	-
Weighted Av Other Input costs		0.228	0.846	0.846	0.846	0.846	0.846	0.846	0.846	-
Weighted Average Costs		0.228	1.659	1.660	1.661	1.661	1.661	1.661	1.661	
Weighted Av CF		(0.228)	0.222	0.229	0.235	0.235	0.235	0.235	0.235	0.171
Weighted Average IRR		99%								
Benefit: Cost Ratio (12% discount rate)		1.115								
Benefit: Cost Ratio - excluding labour (12% discount rate)			2.127							

Average Financial Results with 40% Business Failures after 3 Years (USD '000)

	Year	0	1	2	3	4	5	6	7	W. Capital recovered
Attrition factor during year			25.0%	12.5%	9%	0.0%	0%	0%	0%	0%
Still in business at YE		100%	75.0%	65.6%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
<u>Average Proportion in business during year</u>			<u>87.5%</u>	<u>70.3%</u>	<u>62.8%</u>	<u>60.0%</u>	<u>60.0%</u>	<u>60.0%</u>	<u>60.0%</u>	<u>60.0%</u>
Av Revenue after Attrition 1/		0.000	1.611	1.314	1.183	1.138	1.138	1.138	1.138	0.103
Average Costs after Attrition 1/		0.400	1.659	1.245	1.090	0.997	0.997	0.997	0.997	-
CashFlow after Attrition		(0.400)	(0.048)	0.070	0.093	0.141	0.141	0.141	0.141	0.103
IRR adjusted Cash flow after attrition		13.3%								
Benefit: Cost Ratio (12% discount rate)		1.004								

Average Financial Results, net of grant with 40% Business Failures after 3 Years (USD '000)

	Year	0	1	2	3	4	5	6	7	W. Capital recovered
Av Revenue after Attrition 1/		0.000	1.611	1.314	1.183	1.138	1.138	1.138	1.138	0.103
Average Costs after Attrition 1/		0.228	1.659	1.245	1.090	0.997	0.997	0.997	0.997	-
CashFlow after Attrition		(0.228)	(0.048)	0.070	0.093	0.141	0.141	0.141	0.141	0.103
IRR adjusted Cash flow after attrition		26.4%								
Benefit: Cost Ratio (12% discount rate)		1.035								

1/ Assumes entities closing down earn 80% of average revenues in year of attrition, but incur full costs.

Economic Rate of Return from IGA investment with 40% Business Failure after 3 years (USD '000)

	ECF	0	1	2	3	4	5	6	7	W. Capital recovered
Investment	0.970	(0.222)	-	-	-	-	-	-	-	
Wcapital	0.970	(0.166)								
Sales	1.000		1.611	1.314	1.183	1.138	1.138	1.138	1.138	
Labour Costs	0.900		(0.732)	(0.549)	(0.481)	(0.440)	(0.440)	(0.440)	(0.440)	
Other Costs	0.970		(0.821)	(0.616)	(0.539)	(0.493)	(0.493)	(0.493)	(0.493)	0.100
Net Economic Revenue		(0.388)	0.059	0.150	0.163	0.205	0.205	0.205	0.205	0.100
ERR adjusted Cash flow after attrition		33.0%								

Appendix 6 Estimate of Economic Rate of Return for Value Chain Investments

Combined VC Basic Cash Flow (no failures)

Based on Investments in 1 rice mill (PY2 starts trading PY3), 3 frozen Chilli plants and three Tomato processing plants, one each in years 2, 3 and 4.

At Financial Prices USD '000

	Project Year	2	3	4	5	6	7	PY 8- 12	13	14
Sales (Benefit Stream)		0	1,409	4,485	8,402	12,122	14,592	16,113	9,912	4,956
Labour Costs		-	162	515	845	1,100	1,100	1,101	661	330
Raw Materials ex Farm		-	1,304	3,259	5,825	8,135	9,560	10,532	6,370	3,185
Other Costs (includes collection point to mill transport)		-	248	641	1,120	1,467	1,617	1,673	1,000	500
Investment Costs		1,333	1,001	1,001	-					
Total Cost Stream		1,333	2,715	5,416	7,790	10,702	12,277	13,305	8,031	4,016
Net overall CF before financing (no failures)		(1,333)	(1,306)	(931)	612	1,421	2,315	2,808	1,881	940
	FIRR	34.6%								

Adjust for Failure of 20% in PY 5 and further 15% in PY 6
In Year of Failure Revenue is 60% but costs are 100%

Business Failure Adjustment Factors	Sales		100%	100%	92%	75%	68%	68%	68%	68%
	Costs		100%	100%	100%	80%	68%	68%	68%	68%
	Project Year	2	3	4	5	6	7	PY 8- 12	13	14
Sales (Benefit Stream)		0	1,409	4,485	7,730	9,092	9,923	10,957	6,740	3,370
Labour Costs		-	162	515	845	880	748	748	449	225
Raw Materials ex Farm		-	1,304	3,259	5,825	6,508	6,501	7,161	4,332	2,166
Other Costs (includes collection point to mill transport)		-	248	641	1,120	1,173	1,100	1,138	680	340
Investment Costs		1,333	1,001	1,001	-					
Total Cost Stream		1,333	2,715	5,416	7,790	8,561	8,348	9,048	5,461	2,731
Net CF after Failure		(1,333)	(1,306)	(931)	(60)	530	1,574	1,909	1,279	640
	FIRR	22.7%								

Economic Flows

	ECF									
Sales (Benefit Stream) 1/	0.98	0	1,381	4,395	7,575	8,910	9,724	10,738	6,605	3,303
Labour Costs 2/	0.95	-	154	489	803	836	711	711	427	213
Raw Materials ex Farm 2/	0.98	-	1,278	3,194	5,708	6,378	6,371	7,018	4,245	2,122
Other Costs (includes collection point to mill transport) 3	0.97	-	240	622	1,086	1,138	1,067	1,104	660	330
Investment Costs 3/	0.99	1,319	991	991	-	-	-	-	-	-
Total Cost Stream		1,319	2,663	5,296	7,597	8,352	8,148	8,833	5,332	2,666
Net Economic Benefit Stream		(1,319)	(1,282)	(901)	(22)	558	1,576	1,905	1,274	637
	EIRR	23.2%								
Economic Value Added (ex Raw Materials)		0	103	1,201	1,867	2,532	3,354	3,720	2,360	1,180

1/ Rice adjusted downwards for likely long term price falls, other products assumed to be unprotected or taxed. (except for CT)

2/ Includes both skilled at 1 and unskilled at 0.9

3/ Only the rice mill would not be able to recover CT, so the main distortion would be fuel tax, largely offset by subsidised electricity.

Appendix 7 Overall EIRR for Whole Project at 2013 constant prices (USD M)

	Proj Yr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15-20
Net Incremental Agricultural Production Value at Ec Prices		-	2.11	4.18	8.31	12.37	16.37	20.31	20.31	20.31	20.31	20.31	20.31	20.31	20.31	20.31
Cost Savings Due to Farm Roads		0.00	0.03	0.18	0.42	0.62	0.65	0.68	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Incremental Ag Input Costs (takes account of VC)		(0.18)	(0.81)	(1.59)	(2.80)	(3.94)	(5.04)	(5.78)	(5.78)	(5.78)	(5.78)	(5.78)	(5.78)	(5.78)	(5.78)	(5.78)
Incremental Labour Costs (takes account of VC)		(0.04)	(0.20)	(0.40)	(0.72)	(1.05)	(1.37)	(1.61)	(1.61)	(1.61)	(1.61)	(1.61)	(1.61)	(1.61)	(1.61)	(1.61)
Net Cost of Lost Crop		0.00	(0.51)	(1.02)	(1.02)	-	-	-	-	-	-	-	-	-	-	-
Net Incremental Margin from Ag Production		(0.22)	0.62	1.35	4.19	8.00	10.62	13.60	13.67	13.67	13.67	13.67	13.67	13.67	13.67	13.67
IGA Sales at Economic Prices		0.00	0.79	2.22	4.23	6.00	6.12	5.72	5.59	5.01	3.89	2.23	0.56	0.00		
IGA Costs at Economic Prices		(0.19)	(1.14)	(2.66)	(4.48)	(5.63)	(5.33)	(4.80)	(4.60)	(4.06)	(3.10)	(1.68)	(0.31)	0.05		
Net Incremental IGA Economic Flows		(0.19)	(0.35)	(0.44)	(0.26)	0.38	0.79	0.91	0.98	0.95	0.80	0.55	0.25	0.05		
	33%															
Processing Sales net of Raw Material Costs at Ec Prices			0.00	0.10	1.20	1.87	2.53	3.35	3.72	3.87	3.87	3.87	4.03	2.36	1.18	
Economic Processing Costs excl RM from Farmers			(1.32)	(1.39)	(2.10)	(1.89)	(1.95)	(1.78)	(1.81)	(1.83)	(1.83)	(1.83)	(1.83)	(1.09)	(0.54)	
Net Incremental VC Economic Flows			(1.32)	(1.28)	(0.90)	(0.02)	0.58	1.58	1.91	2.05	2.05	2.05	2.21	1.27	0.64	
	23%															
Overall Net Inflow from Project Components		(0.41)	(1.05)	(0.37)	3.03	8.36	11.99	16.09	16.55	16.66	16.51	16.26	16.12	14.99	14.30	13.67
Project Investment Costs (at Econ Prices)		(1.44)	(3.95)	(5.83)	(4.66)	(0.44)	(0.35)									
Project Recurrent Costs (at Econ Prices)		(0.30)	(0.55)	(0.64)	(0.71)	(0.75)	(0.67)									
Post Project Recurrent Costs								(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)
Maintenance of Project Irrigation		0.00	0.00	(0.04)	(0.11)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)
Project Costs Including Post Project Maintenance		(1.74)	(4.50)	(6.50)	(5.49)	(1.38)	(1.20)	(0.48)	(0.48)	(0.48)	(0.48)	(0.48)	(0.48)	(0.48)	(0.48)	(0.48)
Adjustment for WOP Ag growth at Ec Prices	2%	(0.00)	(0.38)	(1.24)	(2.24)	(3.27)	(4.32)	(5.32)	(5.32)	(5.32)	(5.32)	(5.32)	(5.32)	(5.32)	(5.32)	(5.32)
Overall Project Economic Flow		(2.15)	(5.93)	(8.12)	(4.70)	3.71	6.47	10.29	10.75	10.86	10.71	10.46	10.32	9.19	8.50	7.86
Overall Project EIRR	27%															

Appendix 11: Draft project implementation manual - Outline

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Financial Management Arrangements

IFAD Grant Number

Financial Management Arrangements to the PIM

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Annex I: Sample Job descriptions related to Financial Management and Administration

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 PMO , 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.
- Responsible for all project procurement, either directly or by delegation.
- 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, LPA 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.
- Responsible for developing and managing an effective and performance based human resources management system.
- Supervise and coordinate the work of staff placed under his/her direct authority.
- Review and regularly update the Financial and Administrative Manual of the PMO.
- Develop together with the Financial accountant the Accounting manual of the PMO.
- Responsible for the organization and supervision of the PMO office, assets, logistics, and all administrative matters.
- Undertake any other activities assigned by the Project Director.

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 PCU accounting system before submission to the Finance Manager for approval;
- Process all payments, ensuring that PCU procedures are strictly adhered to;
- Process monthly payroll, payment of salaries to staff and project contributions;
- Manage and report on the use of Petty Cash in accordance with the approved procedures;
- Assist the Accountant in the preparation of withdrawal applications;
- Prepare cash flow forecasts as required;
- Monitor financial returns from Implementing Partners, including periodic visits to their offices;

- Assist in the preparation and monitoring of annual operational budgets
- Functional supervision and training of Accounts & Administrative Assistants in PCU.
- 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 Accountant in the preparation of the accounting manual of the PCU
- Provide assistance to the external auditors as required;
- Undertake any other activities assigned by PCU management.

Accounts/Admin Assistant

- Under the direct supervision of the Accountant. Specific duties include:
- Assist the Financial Accountant in the implementation of a sound financial management system.
- Assist the Financial Accountant in preparing financial reports, including monthly funds reconciliation, and monthly expenditure statements;
- Assist the FA in prepare transaction vouchers, and input all transactions into the PMO accounting system before submission to the Accountant for approval;
- Assist the FA in process all payments, ensuring that PMO procedures are strictly adhered to;
- Assist the FA in process monthly payroll, payment of salaries to staff and Project contributions;
- Assist the Financial Accountant and Accountant in the preparation of withdrawal applications;
- Assist the FA and FC in prepare cash flow forecasts as required;
- Assist in reviewing and monitor financial returns from Implementing Partners, including periodic visits to their offices;
- Assist in the preparation and monitoring of annual operational budgets
- Collate data received from colleagues into the system.
- Manage a well organized and up-to-date filing system for accounting and financial records;
- Assist in providing assistance to the external auditors as required;
- Undertake any other activities assigned by PCU management.
- Supervise the driver(s) and office attendant.
- Perform secretarial duties, including maintenance of a well organized filing system.
- Collect and review financial reports from implementing partners at district level.

TORs of Individual Consultants

Monitoring, Evaluation and Knowledge Management Specialist (MEK Specialist) :

Background: The Monitoring Specialist is the Key Consultant in the M&E unit of the project and will assist the project management with regard to monitoring and evaluation of all intended outputs and outcomes of the project. He/she will be responsible for baseline and Results and Impact management System (RIMS) Surveys, annual outcome surveys and collection of regular monitoring data, as well as project reporting , MIS and Knowledge Management . MEK specialist will review the Project Log Frame and develop a plan for monitoring each of the key indicators listed in the Log-Frame. The incumbent will need to have an ability to organize and manage a project M&E system, analyze and interpret monitoring data, and prepare reports. He will also be responsible for Knowledge Management and learning. He/She will report to the Project Director, and will liaise regularly with the relevant consultants of the Design and Supervision consultants (DSC) and Management Support Consultancy (MSC) teams of the project.

- Total Nos: 1 (one)
- Duty Station:

- **Qualifications:** Degree in Development Practice/Planning Studies/Statistics/ Economics/ Agricultural Economics or other relevant Social Sciences, with some formal training in M&E as an advantage..

Relevant Experience: The M&E Specialist should have 7 (Seven) years relevant working experience at project level M&E. Relevant experience in foreign aided projects would be an added advantage. She/he also requires excellent proficiency in both written and oral communication skills in English and Bangla language. Besides, he/she should have basic Computer skills including MS Office, MS Project, SPSS and familiarity with relevant M&E database and statistical software;

Duties and Responsibilities:

- (i) Establish the M&E unit within the PMO set-up and specification of MIS system and systematic M&E framework in line with the systems of other relevant LGED projects for regular monitoring, undertaking outcome survey and impact studies. All related results will be monitored against the indicators cited in project Log frame and RIMs.
- (ii) Guide project staff on the data to be collected for each log-frame indicator and develop method of collection, frequency and responsibility for collection as per the Project Implementation Manual.
- (iii) He will be responsible for all steps of monitoring tasks such as Activity Monitoring, Process Monitoring, Outcome Monitoring and Impact Monitoring;
- (iv) The incumbent will support a comprehensive base line survey to assess the impacts of the project. Among the surveys and studies, participatory beneficiary assessment, special studies and regular periodic studies will be undertaken to understand the project outcomes.
- (v) She/he will be assigned for related performance reporting that includes monthly, quarterly, half yearly and annual reports. The whole M&E system will be computerized and will be equipped with M&E related standard softwares for producing all types of reports. He/she will specify the M&E tools for monitoring and Evaluation and get co-financier's clearance on reporting templates of both physical and financial achievements.
- (vi) The incumbent will focus on monitoring project outcomes including its process of achievement and lessons learned based on that described in the Project Design Reports. A huge documentation needs to be prepared by the incumbent in various forms under M&E work.
- (vii) Draw-up schedules to carry out survey and studies with preparation of reports and other documents related to project performance, outcome and impact in accordance with the requirement of project log-frame. Work on producing M&E reports with regard to all project co-financier's requirements.
- (viii) Coordinate with any external socio-economic survey/studies related to project activities.
- (ix) Support Project Management to prepare guidelines/ comprehensive manual and all formats of data collection to orient and induce the staff and project partners on Project Management and approaches related to evaluation and monitoring activities.
- (x) Support Project Management in knowledge management of the project. In collaboration with the Knowledge Management Development Specialist (International) of MSC consultancy team the MEK will develop a suitable Knowledge Management Framework to store and disseminate knowledge products from the project implementation. into different stakeholders.
- (xi) MEK will share project results and lessons within LGED and other stakeholders. This will involve contribution to LGED and IFAD Newsletters and websites with the key information and learning of the project.
- (xii) Support the project management to organize knowledge and experience sharing workshops.
- (xiii) He will be responsible for maintaining and updating project website to be developed by the project.
- (xiv) He will assist the project Management in implementation of Rural Radio Programme Initiative and conducting other research and study programmes of the project.
- (xv) Assist the Project Management in preparing Annual Work Plan and Budget in accordance with the intended output and outcomes.

- (xvi) Contribute to the training of PMO and LGED staff under a set M&E modules and follow-up their performance.
- (xvii) Guide and supervise the work of Monitoring Assistant .and validate the data and information provided by the Field Staff . Ensure that the data is reported in sufficient detail to meet the reporting requirements, including a breakdown by gender of beneficiaries. Advise the relevant personnel to improve data gathering and reporting.
- (xviii) Draw-up Terms of References for M&E studies to be contracted to consulting companies or engagement of short terms consultants, assist in recruitment process, and supervise their work to ensure quality output.
- (xix) Ensure timely preparation and submission of the progress report in the prescribed format to Ministry, ERD, GOB and co-financiers when required.
- (xx) Coordinate with different line agencies, local government bodies and stakeholders in planning and implementation with relation to the M&E system of the project.
- (xxi) Prepare documents related to quality and impact of the evaluation and monitoring activities of the Project for Steering Committee, IMED, co-financiers and other external agencies as required.
- (xxii) Will accomplish any other related task assigned by the PD and his authorized representative.

Appendix 12: Compliance with IFAD policies

1. **Compliance with IFAD policies.** FARM is compliant with all relevant IFAD policies, strategies and guidelines. In particular: (i) its goal and objective are aligned with the *Strategic Framework 2011-2015* in terms of market-driven smallholder development and non-farm rural business growth; (ii) its targeting strategy is consistent with the *Targeting Policy* approach of focusing on economically active poor rural women and men farming and landless households; (iii) its investments in rural economic growth are compliant with the *Rural Finance Policy* focus on promoting inclusive financial systems to improve the access of the rural poor to a range of financial services; (iv) its participatory approach to land consolidation is consistent with the *Land Tenure Policy*'s focus on the principle of free, prior and informed consent; (v) its environmental impact assessment procedures for infrastructure investments are aligned with the *Climate Change Policy* on proper adaptation and mitigation measures.
2. The project is also consistent with the Myanmar COSOP 2014-2018, the goal of which is to contribute to reducing rural poverty, specifically of smallholders, the landless, ethnic groups and other marginalised groups. The COSOP defines three Strategic Objectives (SOs) for IFAD's engagement in the country. The SO1 aims *to empower rural women and men to access agricultural resources, technologies, services and markets*. The SO2 aims *to create business and employment opportunities for rural women and men*. The SO3 aims *to promote the social and economic empowerment of marginalised groups, particularly ethnic groups*. FARM directly addresses SO1 and SO2.

Key File 1: Rural Poverty and Rural Sector Issues

Priority areas	Affected group	Major issues	Actions needed
Low productivity of Agriculture, livestock and fisheries sectors	<ul style="list-style-type: none"> Poor and marginal farmers; Farmers with small (>2ha) and medium (>4ha) landholdings; Landless dependent on livelihoods from farm labour, livestock or subsistence fisheries; Communities dependent on food security and livelihoods from use of natural resources such as forest and fisheries; Female-headed households are especially vulnerable; National ethnic groups are particularly vulnerable. 	<ul style="list-style-type: none"> High incidence of small land holdings, landlessness in the agriculture production areas; Insecurity of land tenure and user rights; Climate change resulting in increased incidence of severe droughts in the Central Dry Zone (Sagaing, Mandalay, and Magway Divisions), as well as seasonal droughts in other parts of the country such as the border areas and the Ayeyarwady Delta; Food insecurity, particularly on a seasonal basis; Lack of productive farming resources and agriculture inputs including land, irrigation, draught power, equipment, fertilizer and improved HYV seed; Lack of effective water harvesting and management practices; Relatively weak agriculture extension service especially in minority and remoter border areas; Inadequate investment in agricultural research services; Lack of market oriented production – top-down directives on quota for rice production for export; High dependency on a single annual rice crop for main source of income for farmers in many areas; Lack of access to credit, markets, marketing information, trading skills and input supplies; Agriculture value chain is inefficient; Traditional systems of livestock husbandry with high incidence of mortality (poultry) and production inefficiency (pigs, cattle & buffalo); High incidence of animal diseases with limited monitoring and surveillance systems and poor access to vaccination. 	<ul style="list-style-type: none"> Increased public and private sector investment in agriculture and rural infrastructure and services. Development of differential policies for promoting market-driven agriculture and other interventions related to using agriculture as a tool for poverty alleviation. Promote evidence-based policy development for the agricultural sector. Support dissemination of improved crop and livestock production technology for sustainable agricultural intensification and diversification. Support community seed production for multiplication of the foundation seed at the farm level Strengthen linkages between agricultural research and extension services Build links with the private sector for marketing, input supply and other services. Introduce cash-for-work programme to provide rural employment and reduce rural poverty. Focus on integrated farming system to promote livestock development. Strengthen the capacity of the agriculture extension service and livestock agent Promote income generation of resource poor household through on – farm and off – farm activities. Promote climate change adaptation practice at community level Promote evidence-based policies and action plans for adaptation to climate change Strengthen the role of water user community for O&M of the irrigation scheme
Irrigation	<ul style="list-style-type: none"> Poor and marginal farmers, especially those with small (>2ha) landholdings and female headed households; Landless, especially female headed households dependent on livelihoods from farm labour; National ethnic groups. 	<ul style="list-style-type: none"> Severe water scarcity in some areas, e.g. Mandalay, Sagaing, and Magway Divisions, and seasonal water constraints elsewhere in the country – e.g. parts of Bago and Yangon divisions, as well as Kachin and Shan States; Poor operations and maintenance of irrigation schemes; Provision of irrigation facilities not well-supported by adequate extension and agricultural research services; Lack of water management and water catchment strategies; Strict cropping pattern required by the central government for those receiving irrigation, limiting farmers' choices in selection of appropriate cropping patterns; Absence of an enabling environment for the formation of effective water users associations; Absence of sufficiently experienced technical and facilitating staff in participatory planning, management and training; 	<ul style="list-style-type: none"> Promote local planning of seasonal cropping based on farmers' preferences and collaboration among scheme operators, water user groups and farmers. Review of the Current Water Charges Creation of an Enabling Environment for the Formation of Water User Associations Establishment of a Water Resource Management System Enhanced training for extension staff in participatory approaches to planning and implementation of irrigation projects; Improved access to credit for rural poor to enable them to pay water charges and fees.

Priority areas	Affected group	Major issues	Actions needed
Rural Finance	<ul style="list-style-type: none"> Poor and marginal farmers, especially those with small (>2ha) landholdings; Landless dependent on livelihoods from small businesses, livestock or subsistence fisheries; National ethnic groups 	<ul style="list-style-type: none"> Inadequate financial capacity of farmer and water users to pay water charges and fees. High incidence of debt distress; The poor are still largely dependent on high cost informal credit; Extreme shortage of credit shrinks bargaining power of the poor farmer Household indebtedness is high and rising; Formal micro-finance fails to reach the poorest households; Lack of finance limits option for improved agricultural production; Self-help requires more than credit but provision of livelihood promotion services need to be developed. Financial viability of SRG-bank linkage and of other micro-finance initiatives is poor but has started to be addressed. Legislation to nurture the sector has been passed but not as yet fully implemented. Targeting the poorest for micro-finance will require addressing the issues of vulnerability and risk, especially measures to re-capitalize the poorest households. Limited opportunities for off-farm income diversification. 	<ul style="list-style-type: none"> Provide inputs (in kind and cash) to groups of poor households, with repayments used to establish self – help group or savings and credit groups to finance investments and for emergencies. Development of a national institutional framework and schemes for providing rural credit, micro-finance and group lending, especially for women. Fostering development of second tier organizations of SRGs – federations to take over support and promotional tasks and to provide a stronger base for lobbying for entitlements of the poor. Institutional development of intermediary and support organizations such as NGOs, banks, training institutions and apex organizations. Promote off – farm activities that add value to agricultural, fisheries and non-timber forest products e.g. simple processing, grading etc. Provide appropriate vocational skills training. Promote flow of information on off-farm income diversification opportunities. Build linkages with the private sector.
Gender Disparities	<ul style="list-style-type: none"> Women and women-headed households especially poor and marginal farmers from national ethnic groups; , Women and women-headed landless households, especially those dependent on livelihoods from small businesses, livestock or subsistence fisheries. 	<ul style="list-style-type: none"> Low participation by women in economic activities Lack of participation by women in decision-making bodies at local (village and village-tract) levels; Lack of participation by women in elected bodies at regional and national levels; Poor access to assets, especially land and livestock; Lack of access to formal and informal credit facilities; Heavy burden on women to collect water and fuel wood Lack of opportunities for off-farm IGA. 	<ul style="list-style-type: none"> Empowerment of women in social and community affairs through membership of SRGs, village councils, etc. Capacity building for leadership and management for both men and women. Policies and programmes to promote equitable access to land and other productive assets for both men and women. Enhanced and equitable education, literacy, skills and income generation training for both men and women rural poor. Improved and equitable access to financial services for both men and women rural poor. Reduce women's workloads by improving access to water and fuel wood and labour saving technologies for rural poor.

Key File 2: SWOT analysis of key partner organizations

Organisation	Strengths	Weaknesses	Opportunities/Threats	Remarks
Enablers				
1. Ministry of Agriculture and Irrigation	<ul style="list-style-type: none"> Potential to take considerable action once convinced; Composed of a number of departments covering a range of agricultural related issues; Synergies between different departments under one umbrella Ministry; Strong national network covering all agro-ecosystems; Good network of facilities located in all agro-ecological regions; Strong senior cadre of committed managers. 	<ul style="list-style-type: none"> More priority on production than on policies and service delivery; Top down and ad hoc approaches to planning and decision-making; Lack of transparency in budgets; Decision making centralized Poor coordination with other line agencies including forestry, livestock and fisheries; Recent lack of investment in service delivery and facilities; Emphasis on production rather than on food security, especially in the CPF; Paucity of new qualified and skilled personnel to replace retiring staff; Centralised decision-making not responsive to local priorities. 	<ul style="list-style-type: none"> CPF provides for coordinated approach to farming systems under one Ministry; Potential for a more strategic approach to planning in CPF; Climate change: unusual rainfall patterns, salinization, flooding, drought; National Economic problems are likely to impact on further investment in agriculture; Lack of investment in educational institutions will reduce availability of qualified staff; Potential for conflict with other natural resourced based Ministries e.g. Forestry, Fisheries. 	<ul style="list-style-type: none"> Has potential to be a strong partner for IFAD investment in Myanmar; New Government may positively influence role of MOAI in rural development; CPF offers a potential strategic and systematic approach to agricultural development; NCDP, FESR and PARDAP provide a vision for inclusive rural development in Myanmar.
Potential partner agencies within MOAI:				
a. Department of Agriculture (DOA)	<ul style="list-style-type: none"> Committed staff keen to help poor farmers; Presence of staff at all levels of governance in country; Ability to take a farming systems approach to extension Linkages with DAR (for research and YAU (for training) Townships and District Agricultural Supervisory Committee provides opportunity for coordination with other Government agencies and local councils. Technical expertise in land-use planning in Land Use Division. 	<ul style="list-style-type: none"> Lack of investment has resulted in a decline of number and quality of extension staff; Lack of well-trained personnel with participatory skills; Insufficient resources for effective field visits; 	<ul style="list-style-type: none"> Successful implementation of CPF will provide opportunity for coordinated action; Continued lack of availability of qualified extension personnel; Under-resourced department unlikely to be able to meet demand for extension services. 	<ul style="list-style-type: none"> Potential partner in helping to provide extension services for IFAD project(s); Potential partner in giving farmers choice in selection of economically viable crops best suited to local conditions; Potential for partnerships with civil society in delivery of extension services. Potential to build on coordination structures at village tract and township levels. Potential to promote local level land use planning, working with SLRD and local councils.

Organisation	Strengths	Weaknesses	Opportunities/Threats	Remarks
b. Department of Agricultural Planning (DAP)	<ul style="list-style-type: none"> Commitment of staff, desire to really help the poor; Well-trained senior staff; Potential for coordinating different departments in MOAI. 	<ul style="list-style-type: none"> Few well-qualified staff to replace retiring managers; Tends to be Nay Pyi Daw focused with little feel for regions. 	<ul style="list-style-type: none"> Move to Nay Pyi Taw likely to increase distance from farmers; Emphasis on policy influenced by politics rather than field realities New post-election Government structures may allow for better responsiveness in planning for regional needs. 	<ul style="list-style-type: none"> Potential partner in coordinating IFAD activities with other Depts. of MOAI; Can help to ensure lessons from projects are fed back into the policy development process at the national level.
c. Irrigation Department (ID)	<ul style="list-style-type: none"> Technically qualified and committed staff; Potential for strong linkages with other MOAI departments and with Local Authorities; 	<ul style="list-style-type: none"> Tendency to take a technological approach to delivery of services Lack of financial resources for investment in irrigation facilities and service delivery; Lack of a farming systems and water management approach; Lack of trained personnel with participatory skills. 	<ul style="list-style-type: none"> Climate change likely to increase demand for irrigation but will reduce consistent supply of water; Potential for good coordination with other line depts. under MOAI; Poor coordination with other line agencies such as forestry; Potential for conflicting demands for water. 	<ul style="list-style-type: none"> Potential partner in giving farmers choice in selection of economically viable crops best suited to local conditions in cooperation with DOA; Potential partner in IFAD projects to provide irrigation and supporting services to poor farmers.
d. Settlement and Land Records Department (SLRD)	<ul style="list-style-type: none"> Potential ability to coordinate land tenure issues with agricultural priorities; Ability to work with other MOAI depts. to foster a farming systems approach; Mandate allows for a systematic approach to land-use planning. 	<ul style="list-style-type: none"> Land tenure insecurity linked to failure by farmers to comply with top-down cropping directives; Political imperatives can influence access to land; Land-use decisions are made on an ad hoc basis. 	<ul style="list-style-type: none"> Lack of a national land policy that defines user rights and assures security of tenure; At local level, security of land tenure at whim of local officials 	<ul style="list-style-type: none"> Will play a key role in linkage between security of land tenure for farmers and their choice of cropping patterns. Potential to work with DOA in land-use planning.
e. Water Resources Utilization Department (WRUD)	<ul style="list-style-type: none"> Ability to work with other MOAI depts. to foster a farming systems approach; Mandate allows for a systematic approach to water resources planning 	<ul style="list-style-type: none"> Lack of a planned and strategic approach to water management and water catchment; Tendency to take a technological approach to delivery of services; Lack of investment in water resources; 	<ul style="list-style-type: none"> Climate change likely to increase incidence of droughts and floods; Potential for conflicting demands for water; Poor coordination with other line agencies such as forestry; 	<ul style="list-style-type: none"> Potential partner in IFAD projects to provide access to groundwater and supporting services to poor farmers.
f. Yezin Agricultural University (YAU)	<ul style="list-style-type: none"> Highly committed staff but the more experienced are now retiring; Close links with other MOAI depts. can foster a cooperative approach; 	<ul style="list-style-type: none"> Knowledge of teaching staff outdated; Poor teaching/research facilities; Lack of young well-trained staff to take over from retirees; Lack good access to external knowledge and resources; Poor infrastructure. 	<ul style="list-style-type: none"> Lack of investment by Government in infrastructure 	<ul style="list-style-type: none"> Neglect of national education institutions aggravated by international sanctions

Organisation	Strengths	Weaknesses	Opportunities/Threats	Remarks
g. Dep. of Agricultural Research (DAR)	<ul style="list-style-type: none"> Highly committed staff but the more experienced are now retiring; Strong foundation of applied research in the past; Network of agricultural research stations throughout the country; Strong links with DOA. 	<ul style="list-style-type: none"> Lack of young well-trained staff to take over from retirees; Lack of investment has resulted in a decline of number and quality of research staff; Lack of investment has resulted in a decline of research facilities; Lack of access to external knowledge and resources. 	<ul style="list-style-type: none"> Research driven by political priorities rather than by needs of farmers; Climate change offers both an opportunity (for adaptation) and threat (need for a new mind-set). 	<ul style="list-style-type: none"> Potential partner for IFAD project in selection and development of cultivars best suited to local conditions; Neglect of national research institutions aggravated by international sanctions
Ministry of Finance and Revenue	<ul style="list-style-type: none"> Main Government financial institution that has oversight of the Myanmar economy Central bank is now independent because of reforms; Financial and economic reforms provide a foundation for inclusive economic growth. 	<ul style="list-style-type: none"> Poor absorptive capacity to utilise new investment; Lack of skilled human resources; Poor institutional capacity; Segregated from economic planning processes Centralised decision-making being addressed to improve responsive to local priorities. 	<ul style="list-style-type: none"> As a Myanmar Government institution, the MoFR is subject to international sanctions. New parliamentary structure may improve transparency of budgetary processes. 	<ul style="list-style-type: none"> The sanctions on Myanmar mean that the MoFR cannot be a partner institution for management of IFAD funds.
Ministry of Livestock and Fisheries	<ul style="list-style-type: none"> Technically qualified and committed staff; Some laboratory services; Provides vaccination service in some areas of the country; Ability to respond to major disasters (e.g. Nargis) to help replace lost livestock; Fisheries is a major export sector Fishing legislation supports sustainable and equitable use of resource on paper; Good extension services in some areas of the country; 	<ul style="list-style-type: none"> Infrastructure is outdated and suffers from lack of investment; Lack of qualified younger staff Lack of resources for surveillance of major animal diseases; Fishing licensing system does not support small-scale and subsistence fisheries; Centralised decision-making not responsive to local priorities; Lack of effective implementation of national legislation at local levels. 	<ul style="list-style-type: none"> CPF provides a direction for future for livestock and fisheries; CPF recognises lack of human resources and provides for capacity building but resources not certain; Threat from too strong an emphasis on export sector for fisheries; Threats to livestock sector from increasing incidence of disease. 	<ul style="list-style-type: none"> Potential partner for alternative IGAs for landless in livestock production.
Ministry of Environmental Conservation and Forestry	<ul style="list-style-type: none"> Umbrella organization for all forest related activities – conservation and sustainable management of forest and biodiversity estate; High level of technical competence at national level; Extension services reach down to local level; History of working with local NGOs in community forestry; Forestry Instruction (1995) allows for community forestry. 	<ul style="list-style-type: none"> Lack of coordination with other Government agencies in natural resource management; Inability to implement forestry legislation in some remoter parts of the country; Centralised decision-making not responsive to local priorities; Lack of transparency in statistics on forest estate and illegal logging; 	<ul style="list-style-type: none"> CPF provides for sustainable management of forest resources, forest plantations, and for IGAs for rural poor; CPF does not address problems with lack of coordination with other sectoral agencies; 	<ul style="list-style-type: none"> Poverty root cause of deforestation and so MOECAF needs to work closely with MOAI; Could be a potential partner for IFAD (with MOAI) in providing IGAs and greening of CDZ project areas;
Service Providers				

Organisation	Strengths	Weaknesses	Opportunities/Threats	Remarks
Myanmar Agricultural Development Bank (MADB)	<ul style="list-style-type: none"> Sole financial institution permitted to loan money to farmers Network of branches all over the country down to township level Staff know local conditions 	<ul style="list-style-type: none"> Need to streamline loan procedures Too much bureaucracy Weak credit assessment skills Funding constraints limit ability to give loans to poor farmers; Access to loans is not equitable. 	<ul style="list-style-type: none"> Enhancement of institutional capacity needed Policy of requiring immediate repayment of loans creates severe burden on farmers 	<ul style="list-style-type: none"> MADB retains monopoly on agric. Credit Could be a potential partner for IFAD funds but this is subject to sanctions.
FAO	<ul style="list-style-type: none"> FAO presence in Myanmar since 1978; Good working relationship with Government – trusted partner; Sound local knowledge and works throughout the country; Good partnership with MOAI, MOLF, and MOECAP; Assisted the Government to prepare NMTPF and CPF; Experience of managing number of agricultural projects; UN agency with a mandate to work with the Government. 	<ul style="list-style-type: none"> Experience more with technical implementation; High level of technical and overhead costs; Substantial reliance on international consultants for TA; Lacks close relationships with local NGOs; Does not share information easily with other donors; Both NMTPF and CPF lack consultation with stakeholders; 	<ul style="list-style-type: none"> Previous history of working with IFAD in other countries; Government favours FAO as IFAD partner but concerned about costs; Potential for negotiating acceptable terms for IFAD assistance; Will provide strong linkages with NMTPF/CPF and UNCT country strategic framework for 2012-15; 	<ul style="list-style-type: none"> Could provide both technical support (with a cost); Strong complementary with IFAD for technical support in procurement and infrastructure development, financial management, and oversight. Potential partner for strategy development for agriculture and rural development.
UNOPS	<ul style="list-style-type: none"> Good experience of fund management in Myanmar; Manages 3MDG and LIFT funds; Ability to provide financial and project management services; Core support staff based in Yangon. 	<ul style="list-style-type: none"> Lacks technical expertise in agriculture; No existing strong links with MOAI, MOBA or MOLF. 	<ul style="list-style-type: none"> Previous history of working with IFAD in other countries; Provides potential linkages with LIFT; Linkage with country strategic framework for 2012-15 for IFAD. 	<ul style="list-style-type: none"> Could be a potential partner for procurement, project management and financial management;
WFP	<ul style="list-style-type: none"> Experience of food security situation in many parts of Myanmar Experience of vulnerability analysis in country Strong human and technical resources needed for surveys Has worked with MOAI in past Strong links with INGO sector 	<ul style="list-style-type: none"> Seen by the government as a UN watchdog on food security issues and human rights Links with local NGOs and CBOs are not as strong Some activities are restricted by Government; Focus is on food aid to tackle food insecurity. Does not have strong links with MOBA. 	<ul style="list-style-type: none"> Keen to work with IFAD on poverty and vulnerability analysis in project areas Provides linkage with UNCT country strategic framework for 2012-15 for IFAD 	<ul style="list-style-type: none"> A potential partner for IFAD in carrying out a baseline poverty and vulnerability analysis in CDZ for selection of project areas and beneficiaries

Organisation	Strengths	Weaknesses	Opportunities/Threats	Remarks
UNDP	<ul style="list-style-type: none"> • Experience with HDI since 1994 • ICDP operational in townships in 23 townships, including some in CDZ • Focus is on the poor in rural areas – marginal farmers and landless • Experience with microfinance in 22 townships • Solid body of experience in working with poor - documented through annual IAM reviews • Experience in working with Government agencies • Experience of strengthening community-based groups – SRG. • New full-scale country programme has now been approved 	<ul style="list-style-type: none"> • Spread very thinly over country so CDZ experience is limited • Previous Programme addressed five areas and lacked focus • Resources are insufficient for the areas addressed • Sustainability is not assured – relies too much on donor inputs • No Government ownership of HDI programme • Lack of a policy / legislative framework that will allow replication in other areas • Tension with donor community in coordinating donor activities. 	<ul style="list-style-type: none"> • HDI experiences provide lessons and best practices for IFAD • Body of evidence in building social capital through SRG – experiences + skilled people • Government tolerates community-based activities of HDI providing for acceptance of IFAD targeting of rural poor • HDI activities were subject to annual IAM reviews and continuity of UNDP support was not assured – this will be rectified in the full-scale country programme • New country programme developing partnership with the Government 	<ul style="list-style-type: none"> • A potential partner for IFAD in carrying out a baseline poverty and vulnerability analysis in CDZ for selection of project areas and beneficiaries, and a partner for implementation activities. IFAD project in CDZ could complement UNDP activities
LIFT programme	<ul style="list-style-type: none"> • MOU with Government allows LIFT to operate throughout country • Funding approved for livelihoods and food security projects in CDZ • Works through national and international NGOs • Building on previous experience to forge partnerships with Government agencies since lifting of sanctions. 	<ul style="list-style-type: none"> • Multi-donor consortium means that donor priorities may not always concur 	<ul style="list-style-type: none"> • Focus is on livelihoods and food security and on rural poor – allows for partnership with IFAD • LIFT consortium involves many donors – both an opportunity for partnerships and a threat in terms of continuity of funding • Assured funds have been less than requested but lifting of sanctions offers new opportunities. 	<ul style="list-style-type: none"> • LIFT keen to work with IFAD and other UN agencies • LIFT plans in CDZ will complement IFAD project • Funding mechanism provides a model for IFAD project
INGOs	<ul style="list-style-type: none"> • Some agencies (e.g. ActionAid) have good track record of working with Government; • Solid experience of working with communities in Myanmar; • Good participatory skills; • Some have a wide geographical coverage, including CDZ; • Mix of international and national staff in INGOs; • Work well with LIFT (a potential partner for IFAD); • Work well with local government. 	<ul style="list-style-type: none"> • Some activities were restricted by Government in the past; • Some did not have trust of old Government; • Some restrictions on where they can work in the country; • Some challenges in working with UN agencies in the country; • Lack of experience in managing size of funds such as the IFAD loan 	<ul style="list-style-type: none"> • Some degree of trust built up since Nargis with Government; • Distrust of INGOs amongst some parts of Government; • No solid linkage with UNCT activities in Myanmar; 	<ul style="list-style-type: none"> • Some INGOs could be potential partners in delivery of services to communities in IFAD project areas. • Some INGOs, e.g. SCF could be potential partner for baseline poverty and vulnerability assessments in CDZ. • Selection of potential INGO partner to be done with MOAI.

Organisation	Strengths	Weaknesses	Opportunities/Threats	Remarks
Local NGOs	<ul style="list-style-type: none"> • Strong commitment to empowering communities; • Some have teams of committed young people and retired Government officials able to work with national line agencies; • Work well with Local Authorities. • Good knowledge of local conditions; • Generally have trust of local communities 	<ul style="list-style-type: none"> • Lack of capacity in technical areas and participatory planning; • Lack of financial, technical and human resources; • Some NGOs are subject to political pressures; • Some NGOs are controlled by Govt. • Lack of project management and financial management skills. 	<ul style="list-style-type: none"> • Experiences with Nargis have fostered trust between NGO community and Government; • Nargis has built capacity of local NGOs for development activities; 	<ul style="list-style-type: none"> • Since cyclone Nargis more room and freedom to work
Client Organisations				
Formal Village Institutions: Village and township level development committees formed as a result of recent changes to the Village/tract administration law	<ul style="list-style-type: none"> • Strong links with local communities; • Sound local knowledge; • Support of national Government institutions; • Personnel committed to local communities • Townships and District Agricultural Supervisory Committee provides opportunity for coordination between relevant Government agencies and local councils and authorities. 	<ul style="list-style-type: none"> • Lack of capacity and trained human resources • Lack of financial resources – dependent on national Government for funding • Local level development committees have little experience; • Not clear if officials will be elected or not • Subject to national directives. 	<ul style="list-style-type: none"> • New constitution and changes in legislation give formal local institutions more powers; • Potential for role in participatory rural development; • Potential conflict between local and military priorities in some areas; • Potential for fostering partnerships between donors and Local development committees 	<ul style="list-style-type: none"> • LIFT projects able to work with Local Government; • Potential partner for delivery of IFAD project services to communities; • Potential to build on existing coordination structures at village tract and township levels • Government reforms and decentralisation provide opportunities for working with local government
Informal Village Institutions Farmers associations Water-user groups Self-reliance groups (SRG)	<ul style="list-style-type: none"> • Based on strong social capital; • Strong commitment to local issues; • Trusted by local communities; • Often associated with religious communities; • Ability to mobilise assistance in emergencies; • Brings private sector and local communities together • Sound local knowledge. 	<ul style="list-style-type: none"> • May lack Government support; • Lack organization and outside support at present; • Subject to pressure from local authorities and Peace and development councils; • Lack of capacity and resources – financial, human, etc. 	<ul style="list-style-type: none"> • Changing political situation may provide a stronger role for informal institutions. • Major role in participatory rural development; • Strengthen ability of community members to interact with Government agencies and outside service providers. • Legislative changes provide opportunities for formation of local level informal organizations. 	<ul style="list-style-type: none"> • Social capital provides a solid foundation for water user groups, women's organizations, and farmers' associations • UNDP programme on HDI offers some lessons and best practices for IFAD. • Government reforms and decentralisation provide opportunities for working with local informal organisations.

Key file 3: Donor activities and key partnership opportunities with IFAD

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
UN Family				
UNCT	<ul style="list-style-type: none">UN Strategic Framework (2012-2015) provides a framework for coordinated UN assistance to Myanmar.	Four strategic priorities: <ol style="list-style-type: none">Encourage inclusive growth (both rural and urban), including agricultural development and enhancement of employment opportunities.Increase equitable access to quality social servicesReduce vulnerability to natural disasters and climate changePromote good governance and strengthen democratic institutions and rights	2012-2015	<ul style="list-style-type: none">Potential for partnerships and synergies with UNCT on strategic priorities 1 (poverty alleviation in rural areas of CDZ), 3 (climate change adaptation) and 4 (policy advocacy).
WFP	<ul style="list-style-type: none">Agricultural/rural development;HealthEducation	<ul style="list-style-type: none">Relief food assistant to the victims of small scale and medium scale natural disaster.Nutrition support for people living with HIV and TBMother and child health and nutritionBasic education and early childhood developmentIntegrated livelihood support programmeSupport small holder purchases and development of government/ partner capacity	January 2010 – December 2012	<ul style="list-style-type: none">Strong complementarities with IFAD programmes and high potential for collaboration in the Central Dry Zone and upland area, where WFP is currently operatingProvide technical expertise to assist the Vulnerability Assessment of the Central Dry Zone
UNDP	New Country Programme focuses on 3 pillars: <ul style="list-style-type: none">Transition from HDI to sustainable community development;Climate change, environment and DRR;Policy advice and review on poverty reduction and democratic governance	Old HDI focused on activities such as: <ul style="list-style-type: none">Strengthen village community institutionsStrengthen Local Community Based organizationsCapacity building for local communities on basic social needs such as health, education, HIV/AIDSAssist communities to gain access to cultivable land and land development, agriculture inputs and tool.Community forestry activities.Provision of micro finance through NGOs;Renewed focus on Climate change, environment and DRRSupport policy dialogue and discussions with development partners.	2013-2015	<ul style="list-style-type: none">Strong complementarities with IFAD programmes and high potential for collaboration in community development and micro finance programme.Potential for lessons and best practices from HDI projects, especially SRG for IFAD initiatives.Regular assessment of Integrated Household Living Conditions.Regular review of Agricultural Sector. with FAO.Experience with self-reliance groups (SRG) provides lessons for IFAD.Potential for strong linkages with Pillars I and III of the 2013-2015 country programme.
FAO	<ul style="list-style-type: none">Agriculture / rural developmentHealth	<ul style="list-style-type: none">Support for sustainable agriculture and rural livelihoods in Northern Rakhine State;Capacity building and technology adoption for sustainable food security and the Wa Special Region;Support for ex-poppy farmers and poor vulnerable families in the border areas;Preparation of a National Medium Term Priority Framework and a Country Programme Framework;Support income generation of coffee small holders, oilseed crops farmer and oil palm small holders, and dairy farmers;	2012-2016	<ul style="list-style-type: none">Strong complementary with IFAD for technical support and policy intervention at higher levelStrong complementarities with IFAD programmes and high potential for collaboration in the Central Dry Zone.

Agency	Priority sectors and areas of focus	Period of current country strategy	Complementarities /Synergy Potential
	<ul style="list-style-type: none"> Strengthening the capacity and upgrading the Forest Research Institute; Avian Influenza programme 		

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
UNOPS	<ul style="list-style-type: none"> Multi-sectoral programme management Food Security & Livelihoods Health Rural infrastructure 	<ul style="list-style-type: none"> Increasing agricultural production Diversifying income sources (primarily, but not only for landless) Improvements in nutrition and hygiene Improved social protection measures in place Improvements in the enabling environment for food security and livelihoods, Reduce the burden of communicable disease mortality and morbidity for Tuberculosis (TB), Malaria and HIV and AIDS Turnkey project management & procurement of goods and services 	2010-2013	<ul style="list-style-type: none"> Strong complementarities with IFAD programmes and high potential for collaboration in the Central Dry Zone Strong complementary with IFAD for technical support in procurement, project management, financial management, and oversight
UNODC	Drug control	Supporting alternative livelihoods to opium production	On going	
ILO	Labour rights	<ul style="list-style-type: none"> Labour migration Social protection and discrimination Child labour and forced labour Assist Government with formulating legislation on trade unions and workers' rights 	On going	<ul style="list-style-type: none"> Potential for complementarities with IFAD in terms of ensuring that only voluntary paid labour is used for irrigation infrastructure and other project activities; Help to monitor land tenure and user rights in IFAD project areas.
UNAIDS	Health	<ul style="list-style-type: none"> AIDS policies and briefs Drivers of the epidemic Gender Greater Involvement of People Living with HIV/AIDS (GIPA) HIV care and support HIV prevention HIV testing and counselling HIV treatment Human rights Key populations Monitoring and evaluation Resources and funding for AIDS Science and research Security / humanitarian response to AIDS Sexual and reproductive health Stigma and discrimination TB/HIV The Impact of the Global Economic Crisis on HIV Prevention and Treatment 	On going	

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
UNHCR	<ul style="list-style-type: none"> Humanitarian assistance Refugees 	<ul style="list-style-type: none"> Builds houses, peace of mind for Cyclone Nargis victims Protect refugees and resolve refugee problems 	On going	
UNICEF	<ul style="list-style-type: none"> Health & Nutrition HIV/AIDS Education Water & Sanitation Child Protection Communication 	<ul style="list-style-type: none"> Work to protect children from many deadly diseases, improve their access to healthcare and essential drugs, and enhance their mental and physical development. Work to empower children, youth and women to protect themselves against HIV/AIDS, and help ensure that people infected with and affected by HIV/AIDS are given care and support. Work to help primary school children receive a quality education, and to help ensure that children are being taught fundamental life skills in the classroom. Work to increase children's access to safe drinking water and sanitary facilities, and to ensure that more children in disadvantaged areas are being taught safe hygiene habits. Work to protect women and children from trafficking, exploitation and abuse. Works to enhance the quantity and quality of child-focused media available to families in Myanmar, and to increase families' knowledge of beneficial care practices. 	On going	<ul style="list-style-type: none"> Potential for complementarities with IFAD projects in terms of improved incomes, food security and nutrition for rural poor. Potential for synergies in capacity building activities for communities
UN-HABITAT	Water Sanitation and Infrastructure , urban development and land records	<ul style="list-style-type: none"> Support for Coordination of Early Recovery Shelter Interventions The Mekong Water and Sanitation Initiative Agreement with the government on DRR and DRM Urban and regional development; Working with Settlement and Land Records Department on pilot project to modernise land tenure title records and cadastral maps. 	On going	<ul style="list-style-type: none"> Potential for cooperation with IFAD on land tenure rights and DRR
UNFPA	Health	<ul style="list-style-type: none"> Support to its partners focuses on reducing maternal mortality Preventing the spread of HIV 	On going	<ul style="list-style-type: none"> Potential for complementarities with IFAD projects in terms of improved maternal and child nutrition, and empowering women.
World Bank	Interim Strategy Note (2013-14)	<ul style="list-style-type: none"> Pillar I: Transforming Institutions – institutional strengthening for the government; Pillar II: Building Confidence in ability of current reforms to deliver benefits to the people; Pillar III: Preparation for resumption of full country programme for Myanmar. Grant programme for national community-driven development (CDD) of \$85million. 	2013-2014	<ul style="list-style-type: none"> Potential for working with community development programme and also with Pillar I of ISN on institutional strengthening. Experiences of CDD provide opportunities for joint activities and learning from experiences Carrying out Public Expenditure and Financial Accountability Assessment

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
				(PEFA) and Public Expenditure Review (PER) – useful for future IFAD investment

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
Asian Development Bank	Interim Re-engagement Strategy for Myanmar	<ul style="list-style-type: none"> Building human resources and capacities in ADB's areas of focus; Promoting an enabling economic environment; Creating access and connectivity in rural livelihoods and infrastructure development. 	2012-2014	<ul style="list-style-type: none"> Potential for working with IFAD programme in strengthening human resources, promoting an enabling environment, and improving access to services for rural livelihoods Sector assessments provide useful materials for IFAD project design
WHO	Health	<ul style="list-style-type: none"> Prevention and control of Communicable Diseases Health System Development Child, adolescent and Reproductive Health Non-Communicable Diseases and Mental Health Country Health Profile. 	On going	<ul style="list-style-type: none"> Potential for complementarities with IFAD projects in terms of improved nutrition, and health.
Donor Agencies				
Diseases Fund 3MDG Fund	Health	Reduce the burden of communicable disease mortality and morbidity for Tuberculosis (TB), Malaria and HIV and AIDS – now includes maternal and child health	On going	
Japan (JICA / JBIC)	<ul style="list-style-type: none"> Agricultural/rural development; Education; Health Provides grant aid, technical assistance, loans, and assistance through regional organizations Encourages private sector investment by Japanese companies 	<ul style="list-style-type: none"> JBIC provided bridging loans of \$900 million to clear WB and ADB arrears in January 2013 Eradication of Opium Poppy cultivation and improvement of drug law enforcement Agriculture extension human resource development Nutrition and child health Malaria control Rural Water supply in the Central Dry Zone Education, training, scholarship programme to government staff Rehabilitation of the Yangon port and main inland water transport facility Technical support to fishery and livestock sector Climate change early warning system Community reproductive health Social welfare administration Animal disease control Study on sustainable agriculture and rural development for poverty reduction programme in the Central Dry Zone 	On going	<ul style="list-style-type: none"> Recent discussions between JICA and IFAD have focused on possibilities to have collaboration in the Central Dry Zone.
The UK - DFID	<ul style="list-style-type: none"> Humanitarian Aid – Nargis and other areas; Non-humanitarian aid 	<ul style="list-style-type: none"> Health Rural development Education Civil society strengthening Environment 	On-going – now also contributing to LIFT	<ul style="list-style-type: none"> Potential for learning from experiences in environment (forestry) and rural development Potential for learning / synergies from policy advocacy experiences

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
Swiss Agency for Development and Cooperation SDC	<ul style="list-style-type: none"> Humanitarian Aid 	<ul style="list-style-type: none"> Access to and quality of social infrastructure and networks among vulnerable communities in the Delta, eastern of Myanmar and in/around the Myanmar refugee camps Food and livelihood security of internally displaced persons (IDPs), host communities and ex-poppy farmers 	On going	
The EU's Humanitarian Aid Department (ECHO)	<ul style="list-style-type: none"> humanitarian aid Health 	<ul style="list-style-type: none"> Nargis emergency Health care, sanitation, and malaria projects benefiting the most vulnerable victims of the crisis inside Burma/Myanmar as well as refugees along the border in Thailand 	On going	
The EU	<ul style="list-style-type: none"> Food Security & Livelihoods Rural development Health Rural infrastructure 	<ul style="list-style-type: none"> Increasing agricultural production Diversifying income sources (primarily, but not only for landless) Improvements in nutrition and hygiene Improved social protection measures in place Improvements in the enabling environment for food security and livelihoods, 	On going	<ul style="list-style-type: none"> Potential for complementarities with IFAD projects in terms of rural development and assisting rural poor (once Government approves LIFT activities in rest of country).
KOICA	<ul style="list-style-type: none"> Agriculture ICT 	<ul style="list-style-type: none"> A specialised laboratory in upper Myanmar to develop the agriculture sector and improve irrigation Myanmar ICT Development Master Plan Study of Fuel production The central dry zone Training programme on Hydro-graphic Survey 	On going	
US	<ul style="list-style-type: none"> Support for political and economic reform Democracy promotion Humanitarian assistance 	<ul style="list-style-type: none"> Income generation, Micro credit, Livelihood, health, and sanitation improvement May also contribute to LIFT Future programme details are yet to be announced 	On-going and expanding in the future	<ul style="list-style-type: none"> Potential for cooperation on projects in CDZ
LIFT Programme - Livelihoods and Food Security Trust Fund.	<ul style="list-style-type: none"> Food and livelihood security of the poorest and most vulnerable populations 	<ul style="list-style-type: none"> Agriculture production support for poor households; On-farm and off-farm market and employment support for target populations; Social protection measures for poor; Capacity building for local organizations to support livelihoods and food security; Support for poor households for nutrition and hygiene. 	Five year programme: 2009-2014	<ul style="list-style-type: none"> Donor Consortium of LIFT Fund comprises Australia, the European Community, the Netherlands, Sweden, Switzerland, New Zealand and the United Kingdom – others joining in. Initial focus on Nargis-affected areas but now expanded to other food insecure areas of Myanmar, including the CDZ- potential for collaboration on food security, poverty alleviation and capacity building
Coordination Mechanisms				
Thematic Group on Food	<ul style="list-style-type: none"> Food security Agriculture 	<ul style="list-style-type: none"> Forum for coordination of activities of UN system, donors, and INGOs in agriculture/ food security 	Five years – to align with NMTPF	<ul style="list-style-type: none"> Provides a mechanism of coordinating IFAD activities with poverty alleviation

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
Security and Agriculture in Myanmar (TGFA)	<ul style="list-style-type: none"> Assist Myanmar achieve MDG1 	<ul style="list-style-type: none"> Coordination of needs assessments for food security and poverty Design and implementation of strategies for food security and agriculture in specific areas Sharing experiences and lessons learned Information management on food security and agriculture 		<ul style="list-style-type: none"> and food security activities of other development partners in the CDZ and nationally. Government agencies are not members of the TGFA Presence at township level will also help in coordination activities with Local Authorities
Food Security Working Group (FSWG)	<ul style="list-style-type: none"> Food security Livelihoods Poverty alleviation 	<ul style="list-style-type: none"> Learning and exchange on best practices on food security Promote access to knowledge on new areas for improved food security and livelihoods Networking and collaboration Advocacy to help voice local issues at national level. 	On-going	<ul style="list-style-type: none"> Provides a mechanism of coordinating IFAD activities with poverty alleviation and food security activities of national NGOs and INGOs
INGOs				
Action Against Hunger	Humanitarian Assistance	Life-saving programs in nutrition, food security & livelihoods, and water, sanitation, & hygiene	On going	
Action Aid	Human Right	Activist rights to food, shelter, work, education, healthcare and a voice in the decisions making.	On going	<ul style="list-style-type: none"> Potential for synergies with IFAD projects in terms of improved extension services and utilisation of irrigation facilities in CDZ; Potential for synergies with IFAD projects for capacity building for participatory planning activities in CDZ.
ACTED	<ul style="list-style-type: none"> Humanitarian Assistance Micro finance Health Education 	<ul style="list-style-type: none"> Emergency relief Food security Health promotion Education and training Economic Development Micro finance Advocacy, institutional support, regional dialogue Cultural promotion 	On going	
Basic Human Needs Association	<ul style="list-style-type: none"> Grass-roots Telecom infrastructures 	<ul style="list-style-type: none"> Medical Radio Network Telemedicine Humanitarian Community Radio Other VHF radio network ICT vocational training for local people in developing countries Installation of PBX at rural medical facilities and educational institutions 	On going	
CARE	<ul style="list-style-type: none"> Agriculture and food security Education 	<ul style="list-style-type: none"> Support production more food and income generation Promotes and facilitates discussion between parents, teachers and other members of the community to 	On going	

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
	<ul style="list-style-type: none"> • Health • Economic development • Water, Sanitation and Environmental Health 	<p>overcome the barriers to education that can keep families in a cycle of poverty</p> <ul style="list-style-type: none"> • Improving access to quality health services, nutrition, family planning, immunisation and HIV awareness and prevention • Supporting money-making activities, especially those operated by women • Help prevent malnutrition, including demonstrating effective breast feeding, cultivating and preparing nutritious food, providing food as part of emergency relief efforts, and managing food-for-work projects to help communities improve infrastructure • Build and maintain clean water systems and latrines and educates people about good hygiene practice to reduce the risk of illness 		

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
Caritas	<ul style="list-style-type: none"> Peace and reconciliation Emergencies Economic justice Climate Change Health 	<ul style="list-style-type: none"> Bring divided communities together at the grassroots level Emergency release to post natural disaster Advocacy for economic justice Advocacy the impact of climate change Support HIV affected family 	On going	
IDE	<ul style="list-style-type: none"> Small – plot irrigation Agriculture Food security Rural Livelihood 	Introducing and promoting valuable small scale irrigation technologies to boost household income, food security and productivity including treadle pumps (food – powered irrigation pumps) and drip irrigation systems and low – cost water storage	Start from 2004	
MercyCrops	Humanitarian Aid and relief	<ul style="list-style-type: none"> Emergency response to bring relief and recovery Water and sanitation project Medical aid supply Clean up fold damaged village and replant rice paddies Repairing embankments, rebuilding irrigation canals, clearing walkways, and desalinating fields. 	On going	
PACT Myanmar	<ul style="list-style-type: none"> Micro Financial Services Health 	<ul style="list-style-type: none"> Provide credit without collateral for micro-enterprise development, mobilizing members' saving Strength community responses to TB/HIV and other disease burden Promote sustainable access to health for the needy communities by increasing community capacities in term of health awareness and income generation activity to support health 	On going	<ul style="list-style-type: none"> Potential for learning from PACT's activities in the provision of rural credit.
Cetana Educational Foundation	Education	<ul style="list-style-type: none"> Help support students to pursue university study at universities abroad 	On going	
Habitat For Humanity Myanmar	Humanitarian Aid	<ul style="list-style-type: none"> Support shelter to local community 	On going	
International HIV/AIDS Alliance	Health	Support the fight against AIDS with independent, accurate accessible and comprehensive information.	On going	
Japanese Organization -International Cooperation in Family Planning (JOICFP)	<ul style="list-style-type: none"> Health Youth Community Development 	<ul style="list-style-type: none"> Safe motherhood Youth HIV/AIDS Woman empowerment and gender equity Community Development 	On going	

Agency	Priority sectors and areas of focus		Period of current country strategy	Complementarities /Synergy Potential
Marie Stopes International (MSI)	Health	<ul style="list-style-type: none"> • Provide sexual and reproductive healthcare services 	On going	
Oxfam	<ul style="list-style-type: none"> • Emergency response • Development work • Campaigning for change 	<ul style="list-style-type: none"> • Save lives, swiftly delivering aid, support and protection • Help communities develop the capacity to cope with future crises. • Support poor people to take control, solve their own problems, and rely on themselves. • Campaigns hard, putting pressure on leaders for real lasting change 	On going	
Solidarités	<ul style="list-style-type: none"> • Health and Sanitation • Agriculture • Civil work 	<ul style="list-style-type: none"> • Access to drinking water • Sanitation • Hygiene • Rehabilitation program for agriculture and fishery activities • Civil work reconstruction 	On going	
Save the Children Fund	<ul style="list-style-type: none"> • Health • Nutrition • Food security 	<ul style="list-style-type: none"> • SCF is lead agency for Myanmar NGO Consortium on HIV/AIDS working with 3D fund; • HIV prevention for high risk groups; • Prevention of mother to child transmission; • Household food security and nutrition surveys in CDZ 	On-going 2007	Could be a good partner to carry out poverty and vulnerability assessments in CDZ for IFAD in partnerships with WFP.
World Vision	<ul style="list-style-type: none"> • Community development • Child • Responding to disasters • Health • Trafficking 	<ul style="list-style-type: none"> • Children in crisis • Child, maternal health & nutrition • Child rights & participation • Climate change • Conflict & peace building • Economic development • Gender • HIV & AIDS • Human trafficking • Urbanisation • Regional Priorities 	On going	

Key File 4: Target groups for the COSOP and proposed IFAD response

Typology	Poverty Level and Causes	Coping Actions	Priority Needs	Support from Other Initiatives	COSOP Response
Rural poor, especially small marginal and vulnerable farmers.	<ul style="list-style-type: none"> Living on less than \$1.25 per day; Chronic food insecurity Lack adequate access to productive assets (land, draught power, water control/irrigation facilities) High ratio of dependents to workers Little or no wage employment or off-farm income generating opportunities available locally; Small landholdings insufficient for household food security; • High level of Indebtedness Lack of access to credit services at an affordable cost; Poor level of education and literacy; High levels of illness and expenditure on health; Vulnerability to recurrent drought and floods 	<ul style="list-style-type: none"> Local agricultural wage labour with larger farmers; Seasonal migration for work (urban areas and overseas); Reduction in food intake Dependence on exploitation of natural resources such as forests; Homes gardening and subsistence fisheries for food security; Selling off assets Borrowing from money lenders 	<ul style="list-style-type: none"> Household Food security; Opportunities to intensify and diversify agricultural production Additional productive assets - (land, draught power, water control /irrigation facilities) Secure land tenure Access to public and private sector agricultural support services (extension, input supply, marketing, micro-finance etc.) Availability of off-farm income generating opportunities in rural areas and provision of associated support services; Improved health and education services Improved rural infrastructure Capacity building and strengthening of community based organizations to assist with extension and development activities 	<ul style="list-style-type: none"> Limited support services from Government; UN Strategic Framework will help coordinate support from UN agencies on poverty alleviation and food security activities; TWGFSA strategy for CDZ will complement IFAD project activities in CDZ; Proposed JICA support for poverty reduction initiatives in CDZ will target rural people in target villages in the area of the pilot project; FAO managed OFID project (since 2005) on oil seeds production in 37 townships in Myanmar to increase farmers' incomes through improved seeds, extension services and market outlets for their crops. Some sporadic and scattered INGO and local NGO initiatives on income generating opportunities; UNDP HDI programme was operational in limited areas but new country programme will have a wider geographical focus and is a potential partner for IFAD, especially in targeting rural poor; WFP only able to provide emergency food aid and food-for-work in a limited number of areas; LIFT active in all areas, including CDZ and is a potential partner especially its "learning and innovation" window; 	<ul style="list-style-type: none"> IFAD will target assistance to rural poor in project areas in the CDZ by providing access to irrigation services and supporting services; Coordination of IFAD activities with UNCT strategic framework, UNDP CP, LIFT and with TWGFSA activities in the CDZ
Rural women, particularly female — headed households	<ul style="list-style-type: none"> Living on less than \$1.25 per day; Chronic food insecurity Lack of adequate access to productive assets (land, draught power, water control/irrigation facilities) Little or no wage employment or off-farm income generating opportunities available locally; Small landholdings insufficient for household food security; High level of Indebtedness 	<ul style="list-style-type: none"> Local agricultural wage labour with larger farmers; •Seasonal migration for work (urban areas and overseas); • Reduction in food intake • Dependence on exploitation of natural resources such as forests; Homes gardening and subsistence fisheries for food security; Selling off assets 	<ul style="list-style-type: none"> Household Food security; Opportunities to intensify and diversify agricultural production Additional productive assets; Secure land tenure Access to public and private sector agricultural support services Off-farm income generating opportunities available in rural areas and provision of associated support services; Opportunities for home gardens and subsistence 	<ul style="list-style-type: none"> Limited support services from Government; Proposed JICA support for poverty reduction initiatives in CDZ will target rural people, including women, in target villages in the area of the pilot project; UN Strategic Framework will help coordinate support from UN agencies on poverty alleviation and food security in CDZ to help reduce gender inequities; Some sporadic and scattered INGO and local NGO initiatives on income generating opportunities targeted at women; UNDP HDI programme was operational in limited areas but new country programme will have a wider geographical focus and is a potential partner for IFAD, especially in targeting rural women; Limited WFP food aid and food-for-work in a some areas; 	<ul style="list-style-type: none"> IFAD will target assistance to rural poor, and especially women-headed households in project areas in the CDZ by providing access to irrigation services and supporting services, including training; Coordination of IFAD activities with UNCT

Typology	Poverty Level and Causes	Coping Actions	Priority Needs	Support from Other Initiatives	COSOP Response
	<ul style="list-style-type: none"> Lack of access to credit services at an affordable cost; Poor level of education and literacy; High levels of domestic violence; High levels of illness and expenditure on health; Vulnerability to recurrent drought and floods 	<ul style="list-style-type: none"> Borrowing from money lenders Taking children out of school 	<ul style="list-style-type: none"> fisheries for food security; Improved health and education services Support for children Improved personal and livestock security Tackling domestic violence Capacity building and strengthening of CBOs for women's empowerment activities 	<ul style="list-style-type: none"> LIFT active in all areas, including CDZ; 	<ul style="list-style-type: none"> strategic framework, UNDP CP and with TWGFSA activities in the CDZ
Landless and Poor rural households	<ul style="list-style-type: none"> Living on less than \$1.25 per day; Little or no wage employment or non-farm income generating opportunities available locally High ratio of dependents to workers; High level of Indebtedness Lack of access to credit services at an affordable cost; Poor level of education and literacy; High levels of illness and expenditure on health. 	<ul style="list-style-type: none"> Local agricultural wage labour; Seasonal migration for work (urban areas and overseas); Reduction in food intake Dependence on exploitation of natural resources such as forests; Homes gardening and subsistence fisheries for food security; Selling off assets Borrowing from money lenders 	<ul style="list-style-type: none"> Household Food security; Availability of off-farm income generating opportunities in rural areas and provision of associated support services; Opportunities for home gardens and subsistence fisheries for food security; Improved health and education services; Improved access to livestock; Capacity building and strengthening of community based organizations to assist with empowerment activities 	<ul style="list-style-type: none"> Limited support services from Government; Proposed JICA support for poverty reduction initiatives in CDZ will target rural poor, including landless in target villages in the area of the project; UN Strategic Framework will help coordinate support from UN agencies on poverty alleviation and food security targeted at the landless; FAO managed OFID project (since 2005) on oil seeds production in 37 townships in Myanmar may increase access to farm wage labour; Some sporadic and scattered INGO and local NGO initiatives on income generating opportunities; UNDP HDI programme was operational in limited areas but new country programme will have a wider geographical focus and is a potential partner for IFAD, especially in targeting landless and poor households; WFP only able to provide emergency food aid and food-for-work in a limited number of areas; LIFT active in all areas, including CDZ; 	<ul style="list-style-type: none"> IFAD will target assistance to rural poor, including landless in project areas in the CDZ by providing access to income generating opportunities; Coordination of IFAD activities with UNCT strategic framework, UNDP, with TWGFSA activities in CDZ

ENVIRONMENTAL AND SOCIAL REVIEW NOTE

I. Introduction

1. The Environmental and Social Review Note (ESRN) for the Fostering Agricultural Revitalisation in Myanmar (FARM) Project is prepared in accordance with IFAD's Environmental and Social Assessment (ESA) Procedures (2009) on the basis of information gathered by various mission members in the course of an Inception Mission to in May 2013, followed by an Irrigation Feasibility Mission and by a Project Design Mission to Myanmar in August 2013. The Project is not expected to have any significant negative environmental impact and is considered under environmental classification of Category B.

II. Description of Programme and Components

2. The Project's goal is to improve the economic status of poor rural women and men in the project areas. Its objective is to increase the incomes of smallholder and landless households. The overall goal will be achieved by: (i) participatory planning and investments in Land Development; (ii) capacity building on agronomic practices, marketing and agribusinesses; (iii) improved access to finance. The FARM Project will target the command areas of six irrigation schemes (Paunglaung, Chaungmange, Madan, Yezin, Ngalaik, Sinthay) in Nay Pyi Taw Union Territory covering five townships (Otrathiri, Zeyathiri, Tatkon, Lewe, Pyinmana). The aggregate command areas amount to some 87 000 acres. In addition, the project covers up to 25 000 acres of rainfed land located in the five townships.

3. The Programme activities will be organized under three Components including: 1. Agricultural Infrastructure; 2 Agricultural and Business services (ABS), and 3. Project Management.

4. **Component 1 Agricultural Infrastructure:** This Component will invest in land development on 12 000 acres within three irrigation schemes (Paunglaung, Chaungmange, Madan) prioritised on the basis of sufficient availability of water during the dry season. Land development investments will include land consolidation, land titling, land levelling, tertiary canals (up to field edge), drainage networks, and farm roads. They may also include extension of branch canal (minors) if required.

5. Land development will be based on a participatory approach implemented by a qualified NGO in consultation with relevant MoAI departments. The process includes: awareness campaigns at block level (averaging about 500 acres); participatory land consolidation processes; strengthening water users' groups for improved water management at block and tertiary levels; participatory design of land development investments; and, community participation in supervision of construction.

6. **Component 2 Agricultural and Business Services (ABS):** This Component consists of two sub-components, namely 2.1 Investing for Knowledge and 2.2 Financing Growth.

7. Under subcomponent 2.1, the Project will establish about 55 Knowledge Centers serving irrigated and rainfed (lowlands and uplands) areas. Each center will cover up to 2 000 acres (700-850 households). Their objectives are to empower communities, build local institutions, and improve skills and capacities. These multi-purpose facilities will be used for training, knowledge exchange, technology transfer, rural finance, input supply, value chain integration, market information and output collection. The knowledge sharing activities apply a participatory methodology centered around water users' groups. Knowledge centers will serve as focal points for building the capacities of their members in agriculture knowledge and technology.

8. Under subcomponent 2.2, the Project will establish two investment funds targeting landless people and selected value chain stakeholders respectively. The Income Generating Activities (IGA) Fund will provide competitive grants to establish micro-businesses and off farm activities for landless people. It will also provide IGA management training, market studies and linkages, access to financial services and identification of vocational training institutes. The Agribusiness Fund will provide

competitive matching grants for creation/expansion of agribusinesses within project-supported commodities. This Fund will operate on the basis of public requests for proposals, with the final selection competitively based on poverty reduction criteria for the target groups (backwards linkages with farmers, jobs created for the landless, emphasis on women and youth).

9. **Project Management:** Day to day oversight of the management and implementation of the Programme will rest with a Project Management Office (PCU) in Nay Pyi Taw headed by a Project Director seconded from MoAI. Core staff including the Project Manager will be recruited on competitive basis (from both private and public sectors).

III. Major Site Characteristics

10. The Republic of the Union of Myanmar has a population of about 58.2 million⁴⁸ comprising of about 140 different ethnic groups. The total surface area is 678,500 km², with a maximum North-South extension of about 2,000km, and about 900km from East to West. The large variability of landscapes and climatic conditions are home to a wide range of habitats and diversity of flora and fauna. The territory is divided in 4 agro ecological zones: (i) Mountains and hills occupying the north, west and east of the country, known as hilly region; (ii) Central area of rice plains and low hills and terraces, known as Central Dry Zone (CDZ); (iii) Delta plains formed the alluvium of the Ayeyarwady and silting rivers; (iv) Coastal strips comprising narrow alluvial plains.

11. Myanmar is one of the most vulnerable countries to the impact of climate change⁴⁹. Studies on the climate records report a clear upward trend for temperature, while assessment on rainfall and monsoon trends are, to date not conclusive⁵⁰. On the other hand, the most adverse projected impacts in the likely increased occurrence of extreme events, pose direct threats to the food security and to the life of the people along the coast and in the Delta plains (which are exposed to the risk of flooding and disruptive cyclones) and in the CDZ, where the main risks envisaged are related to drought and scarcity of irrigation water.

12. The Project area is located in the Nay Pyi Taw Union Territory, at the Southern border of Myanmar's CDZ, in a broad floodplain in the upper catchment of the Sittang river. The climate is characterized by three seasons: Summer, Monsoon and Winter. Summer is from March to mid-May; the Monsoon rain falls from mid-May to the end of October; and the Winter season starts in November and ends at the end of February. Annual rainfall is 1 305 mm, of which more than 90% concentrated during the Monsoon season. Only one tributary of the Sittang (the Paunglaung) is permanent, albeit with wide seasonal flow variations. The soils in the floodplain are dominantly clays with pockets of higher sand content in the domain of the clay loams.

13. The ID developed six medium scale (between 6,000 and 25,000 acres) open canal gravity schemes in the Project area (Ngalaik, Yezin, Sinthay, Paunglaung, Chaungmange, Madan) which are either fully operational or about to be completed over the next 2 years. Each scheme has its own storage dam. The works carried out by the DoI comprise of the reservoirs, head works, primary and secondary canals. Rice is the main crop irrigated in these schemes. Supplementary irrigation is provided to the first rice crop during the Monsoon season followed in winter by pulses, mainly black gram and/or oilseeds, sesame or groundnut. The lack of precipitation makes irrigation essential in summer, summer paddy being the main crop followed by oilseeds or grains. The typical highly fragmented pattern of small bunded basins (0.25-0.30 acres) with irregular shape and at slightly different levels characterizing rice production under rain fed conditions, is still the most widespread in the irrigated rice growing areas.

⁴⁸ World Bank 2012

⁴⁹ Berlin-based climate watchdog, Germanwatch, ranks Myanmar as the second worst country affected by extreme weather events caused by climate change from 1990 to 2008

⁵⁰ Michigan State University "Myanmar Bio-Physical Characterization" in "Strategic Agricultural Sector and Food Security Diagnostic for Myanmar", March 2013

14. To understand the poverty situation in the project target areas, IFAD commissioned a national NGO, to conduct a socio-economic baseline study (SEBS) of the target areas in July-August 2013⁵¹. The study reported that 18% of respondents are considered better off, 21% are moderately better, 24% are poor and 37% are very poor. According to the SEBS report, landholding in the area is in the average of 4.81 acres per HH which is close to the 2009-2010 Integrated Household Living Conditions Assessment (IHLCA) report of 4.4 acres for the non-poor category. However, 61% of those surveyed by SEBS have 2.86 acres and below landholdings (poor- average of 2.86 acres, very poor average of 0.19 acres). These landholdings are either irrigated or non-irrigated lands, located either in the lowland or upland areas. It is estimated that around 2% of the total population in the five townships in the Project area are ethnic groups from Kachin, Kayah, Kayin, Chin, Rakhine, Shan and Mon. These ethnic minorities usually reside in the upland areas. There was not much information on the status of these ethnic minorities, and to some extent their number is under reported.

IV. Issues in Natural Resource Management

15. Forest resources in Myanmar have been harvested heavily for timber in the period between 1990 and 2005 when an estimated 18% of total forest cover has been lost⁵². Additional causes of degradation of forest resources are attributed to: (i) excessive firewood harvesting and (ii) illegal mining. Deforestation in the catchment areas of main rivers and irrigation reservoirs had negative impacts such as: (i) reduced base-flow in connection with less soil water holding capacity, and (ii) increased sedimentation rates in the reservoirs due to accelerated soil erosion. Erosion protection works (consisting mostly of reforestation and physical wooden barriers to slow down runoff) have been increasingly financed after the emergency of these problems in the Ile Lake⁵³. Additional investments are currently being extended to the CDZ with increased budget allocations to the Soil Conservation Branch of the recently established (2011) Ministry of Environmental Conservation and Forestry (MoECF). Lack of systemic assessment of sedimentation rates in the dams in the Project area is, however, a potential issue which has been mitigated by prioritizing of investments in the schemes in which a reduction of active storage is most unlikely (based on the available information which includes spot measurements and hydrological design calculations).

16. The overall efficiency (compounding both field edge and on farm distribution) of the irrigation schemes in the project area is estimated in the range of 35-55%, the lower values applying to distribution systems with prevalence of unlined canals. This range is in line with the performance of open canal systems in similar environments⁵⁴. Storage of irrigation water in the dams, for subsequent use during the dry season, is the only option to achieve high crop intensities (up to 300%) without pumping in the Project area. The irrigation systems are, however, primarily designed to provide supplementary irrigation for a rice crop during the Monsoon season. The storage capacity of the dams and the recharge regime are therefore limiting factors in determining the area irrigable during the dry season, which is only a fraction (35% to 55%) of the total systems' command. While the practice of providing irrigation water during summer to the upper sections of the canal systems practiced by the ID is reasonable and widely accepted, the nearly exclusive focus of the ID on the provision of irrigation water for rice is a constraint to efficient use of limited water resources. The introduction of alternative less water intensive crops provides obvious opportunities for expansion of the area irrigated during summer and for improved irrigation water productivity (more crop per drop).

17. All farmers apply exclusively surface irrigation. Irrigation water is discharged from the plots nearest to the canal outlets to the lower plots in a plot-to-plot water distribution and drainage system. Under this system the flow is controlled by the upstream users by temporarily lowering and raising the earth bunds. Upstream users have a clear comparative advantage in terms of: (i) securing the

⁵¹ The SEBS sampled 10 villages (380 respondents for the hh survey) across six irrigation schemes. The study used household surveys, focus group discussions, key informant interviews and other participatory rapid appraisal tools, e.g. resource mapping, wealth ranking, stakeholder analysis.

⁵² FAO-UNEP-UNDP United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD)

⁵³ UNDP - Inle Lake Conservation and Rehabilitation Project (Jan 2012-Dec 2013)

⁵⁴ "Modern water control and management practices in irrigation: impact on performance" Burt and Styles, FAO Water report n.19.

required amounts of water; (ii) fine-tuning the cropping calendar with the availability of water in the canals; and (iii) achieving the maximum crop intensities. Practically rice is the only crop that can be cultivated by the downstream users under these flow and drainage conditions, preventing possibilities to respond to market demands and making the farmers' incomes subject to externalities such as the fluctuations in the rice price. Moreover, the high and continuous water requirement of summer rice (860mm of Net Irrigation Requirement) makes rice growers highly vulnerable to any reduction of flow from the dams. The plot-to-plot system does also result in sub-optimal use of agricultural inputs (pesticides and fertilizers) regardless of the level of inputs used.

18. Responsibilities for O&M of irrigation systems are currently shared between the ID/WRUD (primary and secondary canals) and the farmers (tertiary canals). Under this arrangement, there is an obvious need to synergize farmer-agency relationships, emphasizing on their complementary roles in system management and mutual accountability⁵⁵. Farmers participation in the design of tertiary irrigation facilities on their lands and exposure of ID to participatory approaches will provide a sound basis for strengthening such collaboration.

19. Prior to the enactment of the Farmland Law in 2012, there was no formal right on the use of land (all owned by the Government according to the Constitution). Customary land use rights, were and still are, widely traded in an informal land market. As of 2012 those seeking farmland use rights must obtain a Land Use Certificate (LUC) from the SLRD. Farmland with a LUC is transferable through sale, lease, inheritance and donation, with the condition that transfers must be registered with the SLRD. Farmland rights may also be "pawned" as security for a loan to be used to finance agricultural production. Unless the user obtains express permission for other uses, land held under farmland use right must be used for permitted purposes (i.e., for agricultural purposes and for "priority" crops, which the law does not define explicitly).

20. Landlessness is a major issue in the Myanmar and in the Project area. According to the SEBS report, the rate of landless in the Project area is estimated to 42% of the rural households. Access to land is closely related to poverty: a quarter of the households under poor category and over 90% of the very poor don't have access to farm land.

V. Potential Social and Environmental Impacts and Risks

21. With general reference to investments in Land Development, the main potential environmental issues will be those associated with the management and disposal of construction material off-cuts and debris and excavation materials during the execution of the works; the ID supervising engineers will be responsible for ensuring adherence to good site management practices to effectively mitigate this risk. The temporary reduction of topsoil fertility in connection with the execution of earthworks is another issue to be taken into due consideration during the design of the levelling works. The contracted International TA will ensure that good design principles are applied to minimize this risk.

22. The improved control on the irrigation water flow in the irrigated basins achieved through investments in Land Development is geared to result in a number of environmental benefits including: (i) potential increases in field level irrigation efficiencies; (ii) better control on the use of nutrients and pesticides; and (iii) reduced greenhouse (methane) emissions⁵⁶ in connection with the practice of alternating submergence and drying of the rice basins.

23. The procedures for the identification and design of investments in Land Development provide early opportunities for any environmental concern to be taken into consideration and eventually addressed with support from qualified international TA. The ID Engineers will be responsible for: (i) overall compliance with the requirements of the environmental legislation; and (ii) ensuring that all necessary environmental mitigation measures built into infrastructure designs are implemented.

⁵⁵ Review of access to, and management of, water resources in the CDZ, commissioned by the Livelihoods and Food Security Trust Fund (LIFT) to the International Water Resources Institute (January – June, 2013)

⁵⁶ IPCC 4th Assessment Report: Climate Change 2007, WG 3 - "Mitigation of Climate Change" 8 -Agriculture

24. The main social risk associated with investments in Land Development is that the local elites capture the benefits of the increased productivity and market value of land due to FARM interventions. Potential issues that may need to be tackled are: (i) only the “better off” farmers drive the consensus at the village tract level about the layout, the sharing of land losses and realignment of plot boundaries; and (ii) the sale or expropriation of lands to be developed is accelerated prior to the implementation of Land Development works, minimizing the benefits to the intended targeted smallholders. The measures included in the All design to reduce these risks consist of: (i) awareness creation and empowerment of the targeted communities in decision making; and (ii) the requirement to operate only in areas where a LUC giving the farmers formal use rights has been issued.

25. The activities carried out through KCs that will be established under the ABS Component will have a distinctively positive effect on the social and natural environment. Incremental gains in primary production will be attained through capital investments (e.g. pumps and drip irrigation) and improved on-farm practices, including improved use of inputs and water management. The possible environmental issues linked to increased use of farm inputs (pesticides and fertilizers in particular) will be mitigated by trainings specific to each crop, including technical aspects on optimal use and regulation of drip emitters in connection with fertigation, soil leaching requirements and Integrated Pest Management (IPM). Throughout FARM implementation, the local capacity will be strengthened by targeted farmers’ trainings covering all aspects of production, management and marketing of produce. The establishment of contract farming arrangements to facilitate smallholders’ access to markets, inputs and finance will be also supported.

26. With specific reference to potential financing of individual tube wells under matching grants, negative environmental impacts are not envisaged as water abstraction rates will be established through a pump test. The prevalent hydrological/hydro-geological conditions with relatively shallow and largely underutilized alluvial aquifers underlying the river beds in the Project area are, however, highly favourable for such small scale developments. In case of concentrated water abstraction at specific locations, the hydro-geological section of the WRUD will carry out the necessary investigations.

27. Project activities geared to promote ASEAN GAP certification will extend clear environmental and social benefits throughout the value chains directly targeted, but also to the whole country’s agricultural and processing sector: specific benefits in the primary production areas will be: (i) improved labour standards; (ii) lower use of chemicals and fertilizers; (iii) indirect support for the development of organic farming.

VI. Environmental Category

28. Myanmar has signed more than 30 international treaties related to the environment. It is unclear, however, how the contents of some of these treaties have been incorporated into domestic law. Among the key conventions ratified are the UN Framework Convention on Climate Change, the Kyoto Protocol, the Convention to Combat Desertification, and the Convention of Biological Diversity. Other relevant UN conventions and regional protocols include, the Vienna Convention for Ozone Layer Protection, its Montreal Protocol and the London and Copenhagen Amendments, the Ramsar Convention for the conservation of wetlands, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention to combat Persistent Organic Pollutions (POPs), the Cartagena Protocol on Bio-safety, the Convention on Protection of World Cultural and Natural Heritage, the ASEAN Agreement on the Conservation of Nature and Natural Resources and the ASEAN Agreement on Trans-boundary Haze Pollution.

18. The recent establishment of the MoECF demonstrates the GoM’s commitment to improving the planning and management of natural resources and the environment. The 2012 Environment Conservation Law provides the legal basis for implementing a range of enhanced environmental management measures. Corresponding regulations to enact legislation, including regulations and technical guidelines on environmental safeguards and pollution abatement are currently being developed. A key step in this process is the drafting of the regulations and setting of thresholds

establishing the requirements for the Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) prior to investments. The thresholds are being set based on comparative analysis of the corresponding legislation enacted on LAO PDR (2012), Cambodia(1999), Vietnam (2011), Thailand (2012) and Malaysia (1987); a public consultation process will be included both for the IEE and for the EIA.

29. The interventions supported through the FARM will be typically small scale and concerned with rehabilitation/enhancement of existing facilities, not requiring a formal EIA; few, if any, negative environmental impacts are expected to result from the implementation of the FARM activities. Rather, many of the anticipated activities (e.g. land levelling, introduction of less water demanding crops) will contribute positively towards a number of environmental services, resulting in quantifiable environmental benefits. Improved livelihoods and health for the rural poor will be also indirectly supported by increasing their incomes.

30. In line with IFAD Environmental and Social Assessment Procedures and following the design mission field work and report preparation, the Fostering Agricultural Revitalisation In Myanmar (FARM) Project is considered to be classified as Category B.

VII. Further Information Required

31. No further information is required to complete the Environmental and Social Review exercise on the Project.

VIII. Recommended Features of Project Design and Implementation

32. The Project is built around vulnerability reduction and addresses issues related to climate change and its impacts on the rural economy. These include climate-resilient agricultural technologies and development of resilient irrigation infrastructure allowing more flexible cropping patterns and agricultural operations. A number of key features are, however, to be considered during Programme Implementation to enhance Natural Resource Management and mitigate any potential social and environmental concerns. The MoAI as the key implementation partner will ensure alignment with environmental regulations as progressively enacted and, with the required TA, will be able to introduce eco-friendly technologies and approaches in Project activities.

33. During the project implementation, the ID will need to monitor the sediment load in the irrigation dams in the Project area by reassessing the dead storage volume at the end of the dry season in light of evolving dam bottom geometry. If any issues are envisaged, the Project should seek coordination with the Ministry of Environmental Conservation and Forestry (MoECF) to take action with investments in reforestation or wooden barriers to slow down the runoff.

34. The International TA supporting the ID designers in charge of Land Development should ensure compliance with good engineering practices and in-built environmental enhancement features. In particular, the TA and the ID designers will be required to ensure that the design of the levelling works is done in such a way that the risk of initial loss of fertility topsoil is minimized. Level areas (consisting of a variable number of plots) will be determined based on a precision topographic survey and soil sampling. The application of laser supported levelling techniques will ensure that the projected benefits in terms of water distribution and drainage are not hampered by inaccurate execution.

35. While Project supported capacity building activities on irrigation water management will be centred around the groups of farmers owning land along a tertiary canal, each constituting a Water User Group (WUG), the Project will benefit from sharing experiences with other ongoing initiatives about the possible institutional and operational developments of federations of WUGs into Water Users Associations. This will be achieved through periodic coordination meetings with other international institutions (e.g. JICA and LIFT) concerned with irrigation water management as well as through the participation of the FARM management to relevant focus groups/task forces established by the GoM.

36. KCs will conduct their own farming demonstrations, and organise multiple adaptive trials on progressive farmers' fields covering new crops and new technologies. Close interaction with research, in particular the MoAI Research Department will be critical to organize demonstrations including drought tolerant crops. Relevant research findings from varietal work on a number of crops include: (i) rice tolerance to different level of water level, soil and water salinity and pest resistance; (ii) black gram resistance to blight; (iii) heat resistant tomato varieties; (iv) chick peas resistance to root diseases, pod borer, tolerance to terminal drought and heat stresses. Development of early maturing varieties is also important as chickpea is grown in post-rainy season on residual soil moisture without irrigation, and hence exposed to terminal drought and heat stresses. Varieties resistant to pest and disease are using less pesticide and perform better in terms of water productivity (more yield per unit water).

37. The application of environmental friendly technologies and renewable energy should be promoted both at village level and at the scale of processors, with potential positive demonstration effects. The Project will nonetheless apply only consolidated, easy to install and maintain technologies, particularly at the village level. These include: (i) photovoltaic panels for power generation at the FARM KCs and for individual drip irrigation systems; and (ii) installation of small hydro turbines in the irrigation main canals. The possibility to adopt appropriate technologies for project supported processing facilities will be explored during implementation e.g. rice husk broiler/generator for generating heat for drying the tomatoes or to power the refrigerating facilities in chilli processing.

38. In consideration of the scale and type of agribusinesses that will be supported through injections of grant financing by the Agribusiness Fund, no major concerns are raised about handling of chemicals, by-products by the enterprises that will be expanded by the Project. However, the relevant environmental and food safety regulations will apply and these aspects as well as the companies' policies about Social Responsibility, Environment and Gender will be specifically addressed and evaluated at the early stages of screening of potential investments. Compliance with applicable standards for Project supported enterprises (e.g. HACCP for tomato paste and chilli or ASEAN GAP for the rice processing machinery layout) should be a mandatory requirement to obtain financing from the Agribusiness Fund.

39. All the social and environmental benefits that are directly connected with crop diversification will be undermined if instructions on cropping and land classification are not gradually eliminated in Project-supported irrigation areas. Likewise, for the benefits connected with the delivery of services by KCs to be effective, the appointed extension staff should not be transferred to positions outside the project area for the duration of the project implementation period. Assurances are to be sought during eventual IFAD-Government negotiations on the Financing Agreement to mitigate potential risks.

40. There is limited experience with the use of upgraded technologies and systems both for canal lining and for piped water transmission in Myanmar. Project supported capacity building aimed at strengthening the ID's capacity in modern irrigation technologies (PE lining, HDPE piping) which have a potential for future development and upgrading of gravity schemes will be highly beneficial. If adopted, such technologies will potentially lead to major environmental benefits in terms of reduced conveyance losses both in the Project area (also in light of its untapped groundwater potential) and at the Union level. This objective will be sustained through training courses for technical staff at the ID Irrigation Technology Centre (ITC), and relevant study tours for ID managers (e.g. IFAD supported operations in Asia).

IX. Monitoring aspects

41. Monitoring of relevant environmental and poverty indicators will be part of the overall Project Monitoring and Evaluation (M&E) system. Besides relying on feedback from the field collected by the PCU M&E Officer, relevant social and environmental monitoring data will be collected as part of the reporting requirements of the service providers (NGOs) contracted by the Project to carry out field activities.

42. With specific reference to investments in Land Development, periodic follow up following completion of the physical works will be carried out on a sample of blocks (at least 25% of total, or 3 000 acres) across the three priority schemes. The follow up will include an evaluation of the effectiveness of Land Development in accelerating the adoption of practices and crops leading to increased resilience. Monitoring the uptake of drip irrigation and fertigation by individual farmers will constitute a key element for assessing the environmental benefits arising from Project supported co-financing of individual farmers' investments under the ABS component. The analysis of the portfolio of investments under both the Income Generating Activities (IGA) Fund and the Agribusiness Fund will be basis for extrapolating the information collected from the field about on the environmental and social benefits of different types of investments supported.

43. The uptake of ASEAN GAP and HACCP certification in agro processing enterprises in the Project area will be monitored through the records of accredited certifying agencies and compared with Union-level data; environmental benefits arising from the introduction of the improved agricultural practices will be assessed through focused group discussions carried out in project areas.

44. Besides the relevant Result and Impact Management System (RIMS) indicators, some additional indicators that may be used to assess, on a yearly basis, the progress and the Project social and environmental impacts are listed hereunder. It shall be noted that 2 indicators (a, b) are derived from the result framework of the IFAD Adaptation for Smallholder Agriculture Programme (ASAP). The assessments may take the form of short surveys, focus group or structured interviews, complemented by data maintained by the MoAI.

- (a) Land managed under climate resilient practices (ha);
- (b) Value of rural infrastructure made climate-resilient (USD);
- (c) Area cultivated with new non-rice crops (ha/households);
- (d) Rice area using alternating submergence/non flooded varieties (ha);
- (e) Number of households who obtained co-financing or credit through PFIs (by purpose e.g. drip irrigation or other equipment);
- (f) Farmers trained (by subject e.g. drip irrigation, improved farming and harvesting practices);
- (g) Number of certified (ASEAN GAP and HACCP) farmers and processors (in Project area and countrywide);
- (h) Number of producers engaged in contract farming in Project area (by commodity);
- (i) Increased smallholder and landless income (MMK/HH);
- (j) Progress in the poverty status (households raised above poverty line).

X. Components requiring ESIA

45. None of the FARM Components requires a specific Environmental and Social Impact Assessment (ESIA).

XI. Record of Consultations

46. A number of meetings and consultations have been carried out in the rural communities with local authorities, primary producers, smallholders at the two project development stages and are listed hereunder. The design mission's main findings were discussed in a wrap up meeting in Nay Pyi Taw on 16 August 2013.