Investing in rural people

The Republic of Iraq

Smallholder Agriculture Revitalization Project

Final project design report

Main report and appendices

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Currency equivalents

Currency Unit	=	Iraqi Dinar
US$1.0	=	1176

Weights and measures

1 kilogram	=	1000 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
1 dunum	=	0.25 ha

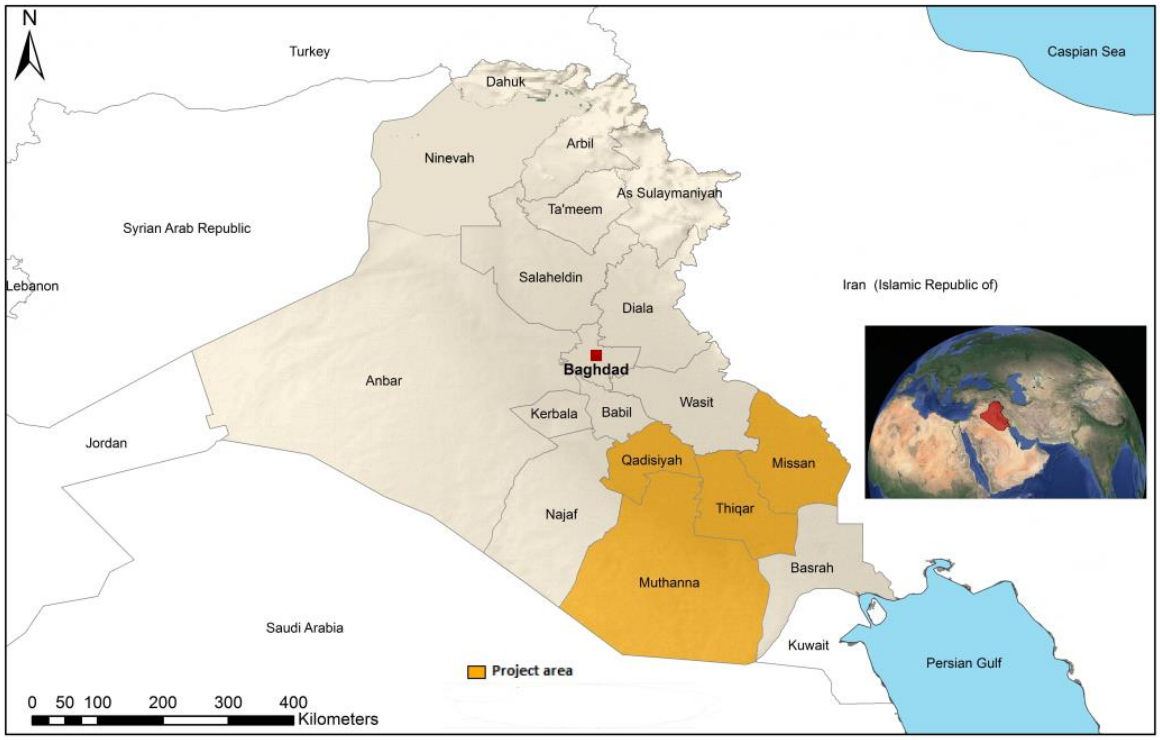
Abbreviations and acronyms

AF	Adaptation Fund
ASAP	Adaptation for Smallholder Agriculture Programme
AWPB	Annual Work Plan and Budget
CCAS	Climate Change Adaptation Specialist
CPM	Country Programme Manager
FAO	Food and Agriculture Organization
FARMS	Facility for Refugees, Migrants, Forced Displacement and Rural Stability
GCM	Global Climate Models
GDP	Gross Domestic Product
GMT	Governorate Management Team
GNI	Gross National Income
GoI	Government of Iraq
ICARDA	International Center for Agricultural Research in the Dry Areas
IDP	Internally Displaced Persons
IFAD	International Fund for Agriculture Development
IMF	International Monetary Fund
IOM	International Office of Migration
IPM	Integrated Pest Management
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MWR	Ministry of Water Resources
PARM	Platform for Agricultural Risk Management
PDS	Public Disbursement System
PMT	Project Management Team
PPP	Purchasing Power Parity
PSC	Project Steering Committee
RIMS	Results & Impact Management System
SARP	Smallholder Agriculture Revitalization Project
SECAP	Social, Environmental and Climate Assessment Procedures
SPN	Social Protection Net
SSTC	South-South and Triangular Cooperation
UNIDO	United Nations Industrial Development Organization
WHO	World Health Organization

Map of the project area

REPUBLIC OF IRAQ

SMALLHOLDER AGRICULTURE REVITALIZATION PROJECT (SARP)



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 o boundaries, or the authorities thereof.

IFAD *Map compiled by IFAD* | 06-01-2017

Executive Summary[1]

i. The Republic of Iraq is an oil-rich upper middle-income country struggling from the impact of a turbulent past and the on-going insurgency in the north of the country and the decrease in the price of oil. These crises have combined with political instability, low levels of government spending and limited investment by the private-sector, leading to increasing levels of poverty and inequitable income distribution. The standard of living has deteriorated and a noticeable share of the population has fallen into poverty or is extremely vulnerable to falling into poverty. Iraq's extreme fragility has affected its capacity to deal with rural development significantly, reducing institutional capacity and service delivery. The government is facing the challenge of maintaining macroeconomic stability, undertaking structural reforms to improve the delivery of public services, reconstructing core physical infrastructure and assisting the large number of people displaced by the conflict.

ii. Agriculture is one of the most important sectors in Iraq after oil and gas. Agricultural workers are estimated to make up 20% of the workforce in the country. However, agriculture is mostly practiced on small farming units and it is a low input–low output system. Low agricultural productivity has been a characteristic of Iraq's agriculture for the last two decades and has made the country dependent on imports to meet its domestic food needs. The agriculture extension services for technology transfer, particularly for small producers, are weak. There are considerable losses reported due to lack of post- harvest facilities. Iraq suffers from a series of environmental and natural resource management issues. The country is prone to impacts of climate change, particularly on the already scare water resources and fragile farming systems. This has resulted in increasing threats of land degradation, desertification, water shortage and increased soil salinity. The agriculture sector has also suffered due to food import policies that have encouraged the import of cheap food which has driven prices down and negatively impacts the farmer.

iii. The rationale for the current project stems from the fragility of Iraq and IFAD's commitment to assist countries with fragile situations. IFAD has significant experience in areas in which the Government of Iraq needs assistance such as agriculture and rural development. Investment in agricultural growth is not only important to growth in national income, but is also vital to growth in employment, food and nutrition security and reduction of poverty in Iraq. The project would assist in increasing the competitiveness of agriculture, preventing post-harvest losses and removing marketing bottlenecks through farmer organizations. The project would also assist in the diversification of the economy with a particular focus on women and youth. The Smallholder Agriculture Revitalization Project would be IFAD's first investment operation in Iraq. There is significant scope in the current investment for the effective utilization of the funds from the Adaptation for Smallholder Agriculture Programme (ASAP), and leverage financing from the Adaptation Fund.

iv. The overall Goal of the project would be to assist rural people overcome poverty and achieve food security through remunerative, sustainable and resilient livelihoods. The **Development Objective** would be to enable poor smallholder farmers to improve crop and livestock productivity, resilience to climate change and diversify incomes. The proposed Project would be implemented in the four southern governorates of Muthanna, Qadisiya, Missan and Thi Qar. The level of poverty in these Governorates is among the highest in the country. It is estimated

[1] Mission composition: The mission was provided guidance by Rami Salman CPM who accompanied the mission throughout. Maliha Hussein (Team Leader), Norman Messer (Senior Technical Specialist-IFAD), Faisal Awawdeh (Livestock Specialist), Khudhair Abbas Jaddoa AL-Salih (Agronomist), Walid Dhouibi (Procurement Specialist), Malek Sahli, Senior Finance Specialist, FMD-IFAD), Mr. Pedro Regato (Environment and Climate Change-SECAP (home-based), Davis Atugonza (Economic and Financial Analyst (home-based). A PDR Validation Workshop with participation of GoI (Ministries of Finance, Planning, Agriculture and Environment) and IFAD was held from 23 – 25 May 2017 in Amman. The Workshop team was led by Rami Salman (CPM) and comprised Vrej Hanna Jijyan (Programme Office), Edward Heinemann, PTA Lead Advisor, Isabelle Stordeur (Programme Associate), Faisal Awawdeh (Livestock Specialist), Jelle Tas (Economist), Erik Zigterman (Water and Irrigation Specialist) and David Rendall (Team Leader).

that the proposed project would target 15,795 of the households and is likely to yield benefits for around 140,000 people given the current household size of 6.9 in rural areas.

v. The target group of the project would be smallholder households engaged with crop and livestock production, poor households who have been forced out of agriculture due to lack of access to adequate water and high levels of salinity in the soils, women-headed households and IDPs interested in undertaking productive activities and youth interested in undertaking enterprises and income generating activities particularly centred around agriculture and the ancillary services critical to support agricultural growth. The project would also target the marshland communities who are engaged with fisheries, livestock and hunting in the wild to eke out a meagre livelihood.

vi. The Smallholder Agriculture Revitalization Project (SARP) would be implemented over a 7 year period and would consist of two main components namely; (i) Climate Resilient Investments; and (ii) Agriculture & Livelihood Diversification. The first component would include two sub-components; (i) modernization/rehabilitation of Irrigation Infrastructure schemes and (ii) Knowledge Management and Institutional strengthening. The component is designed to deal with one of the major constraints in the country that centres around the growing scarcity of irrigation water and to assist the country with strengthening its capacity at the national level for monitoring climate change patterns and providing relevant information to key stakeholders and farmers to enable them to undertake adaptation and risk mitigation measures through an early warning system. The second component would consist of two subcomponents; (i) Crop, Livestock & Off-Farm Development and (ii) Skills Development & Capacity Building. The purpose of this component would be to assist poor households enhance their level of food security and diversify their incomes from agriculture as well as improve their skills and assets to enable them to engage in off-farm income generating activities.

vii. The project is estimated to cost USD 31.77 million including the Government in kind contribution and the beneficiary contribution. The project would be jointly financed by IFAD, the Adaptation for Smallholder Agriculture Programme (ASAP), the Adaptation Fund (AF) and the Government of Iraq and beneficiaries. IFAD would provide a loan of USD 15.734 million and an IFAD grant of USD 500,000. ASAP would provide a grant of USD 2.0 million. IFAD is in discussion with the Government to mobilize USD 9.17 million from the Adaptation Fund to finance the climate change adaptation subcomponent for ensuring climate proofing of the investment, and mainstreaming climate adaptation throughout the project.

viii. The Project would improve food security and nutrition and reduce poverty through increase in farm and off-farm incomes. The rehabilitation and completion of some of the existing and incomplete irrigation schemes is expected to ensure the supply of water for about 33.250 dunums or 8322 hectares in the project area. Nutrition would be enhanced through the diversification of the agricultural crops and the development of livestock as well as access to increased dairy production and protein from animal sources especially poultry and fish production. The project would also introduce high value vegetable production through providing support for establishing green houses, apiculture, fisheries, IPM for dates and other crops, provision of livestock packages for women, assets for men and youth that would help them engage more effectively in agriculture production or providing the support services to the agriculture and rural sector. The project would strengthen farmer organizations, women and youth groups and associations and enable them to undertake productive investments that would enhance their production in the agriculture sector as well as in off-farm income generating activities. The Project would improve agriculture production and profitability and make farmers more resilient to climate change.

ix. The design of a project in Iraq under such a fragile situation brings unique challenges, specifically in terms of the details that could be available at the design stage. Moreover, this project being the first IFAD investment in the country also calls for a more participatory approach in terms of design, and investing the start-up phase in working closely with all partners on detailing implementation arrangements. For that, the first year of the project would be a preparatory year and would begin by recruitment of staff, identifying service providers, preparation of the AWPB, the project implementation manual, monitoring and evaluation arrangements as well as identifying further information that needs to be gathered to inform the infrastructure investments and preparing the feasibility studies.

Logical Framework

Results Hierarchy	Indicators				Means of Verification			Assumptions (A)/ Risks (R)
	Name	**Baseline**	**Mid-Term**	**End Target**	**Source**	**Frequency**	**Responsibility**	
Goal: About 16,000 rural households supported to overcome poverty and achieve food security through remunerative, sustainable and resilient livelihoods.	▪ % of population below the poverty line of $2.2 day/person.	Muthanna (53%), Missan (42%) Thi Qar (41%) and Qadisiya (41%),	Reduce at least by 20% the proportion of men, women and children of all ages living in poverty	Reduce at least by 50% the proportion of men, women and children of all ages living in poverty (SDG 1.2)	Ministry of Planning, World Bank and Baseline and End- surveys	Baseline/bench-mark survey in Y1 and survey at completion	M&E Officer in PMT to collect published information.	Stable security situation in project area.
Development Objective: Poor smallholder farmers enabled to improve crop and livestock productivity, resilience to climate change and diversify incomes.	▪ Increase in income from agriculture.	The baseline income of 44% of the households in the project districts is below the poverty line of about $66 a month or $2.2 a day.	Increase in income by at least 8%.	Increase in income by at least 20% for targeted households.	DoA Statistics	Baseline and EndLine Survey	DoA	Stable security situation in project area.
Outreach (RIMS CI)	▪ Number of persons receiving services promoted/ supported by the project ▪ Corresponding number of households reached and estimated corresponding total number of Hh members			140,000 pers 16,000 hhs				

Results Hierarchy	Indicators				Means of Verification			Assumptions (A)/ Risks (R)
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Outcome 1: Increase poor rural people's productive capacities	▪ Number households reporting an increase in the production of high value crops.		2,500 households	6,300 households	Beneficiary HH Surveys Annual Outcome Survey	Year 3 & 6	Third Party	▪ Water will be released from main canals. ▪ Technologies disseminated would be relevant for smallholders.
Outputs:								
	• Number of hectares of farmland under water related infrastructure constructed/rehabilitated	0	2000 hectares.	8322 hectares	Irrigation design reports of MWR	Quarterly & Annual Reports	M&E Officers at national & Governorate level	
	• Number of rural producers accessing production inputs and technological packages	0	3,700 rural producers (at least 1300 women)	6650 rural producers. (at least 2500 women)	Reports of Training Officer & Service producer	Quarterly & Annual Reports	M&E Officers at national & Governorate level	
Outcome 2: Increase poor rural people's participating in rural enterprises								▪ Macro-economic conditions are supportive for doing business
	• Number of supported rural producer organization members reporting new or improved services provided by their organization		500 households.	1000 hhs or 50% of the 2000 HHs in 400 groups.	Survey of Groups Annual Outcome Survey	Annual	M&E Officers at national & Governorate level	
Outputs:	• Number of rural enterprises accessing business development services		800 enterprises	At least 2000 enterprises	Beneficiary HH Surveys	Year 3 & 6	Third Party	Availability of appropriately experienced and qualified

Results Hierarchy	Indicators				Means of Verification			Assumptions (A)/ Risks (R)
	Name	**Baseline**	**Mid-Term**	**End Target**	**Source**	**Frequency**	**Responsibility**	
	• Number of persons trained in income-generating activities or business management			3000 (1500 women and 1500 men).	Reports of Training Officer and service provider	Quarterly & Annual Reports	M&E Officers at national & Governorate level	non-government service providers.
	• Number of rural producer organizations supported		20 groups with at least 7 for women.	50 groups with at least 20 for women.	Reports of Training Officer & Service provider	Quarterly & Annual Reports	M&E Officers at national & Governorate level	
Outcome 3: Strengthen the environmental sustainability and climate resilience of poor rural people's economic activities	• Percentage of households reporting adoption of environmentally sustainable and climate resilient technologies and practices		TBD	70% of the HHs of 5000 participating adopt the practices	Beneficiary HH Surveys	Year 3 & 6	Third Party	Climatic changes are in line with current predictions
Outputs:	• Number of persons provided with climate information services		3000 persons.	5000 persons.	Agro metre ology Network of MoA	Quarterly & Annual Reports	AMN of MoA	

I. Strategic context and rationale

A. Country and rural development context

1. The Republic of Iraq is estimated to have a population of 36 million people of which 33% are reported to be living in rural areas. The country is an oil-rich upper middle-income country with a per capita gross national income (GNI) of USD 5,550 in 2015 corresponding to a purchasing power parity (PPP) of USD 14,850. Economic growth has averaged 7.1 percent per year over the past five years, and it is projected to grow at 7.2 per cent in 2016 and at around 5 per cent in the next few years. However, conflict, and excessive dependence on oil pose significant challenges to Iraq's socio-economic development. The agriculture sector accounts for 8.6% of Gross Domestic Product (GDP) including the oil sector and 32% without the oil sector. The country has not done well on social indicators of development or its Gender Development Index. Iraq was ranked 141 out of 187 countries in the 2015 Human Development Index. Unemployment rate is 11% nationally (7% of males and 13% of females). Youth (15-24 years) unemployment is high at 18% (27% for females and 17% for males). Inflation was reported to be 1.4% in 20152 and is expected to remain low at 2 percent in 2016, with the government subsidizing electricity, food and fuel.3

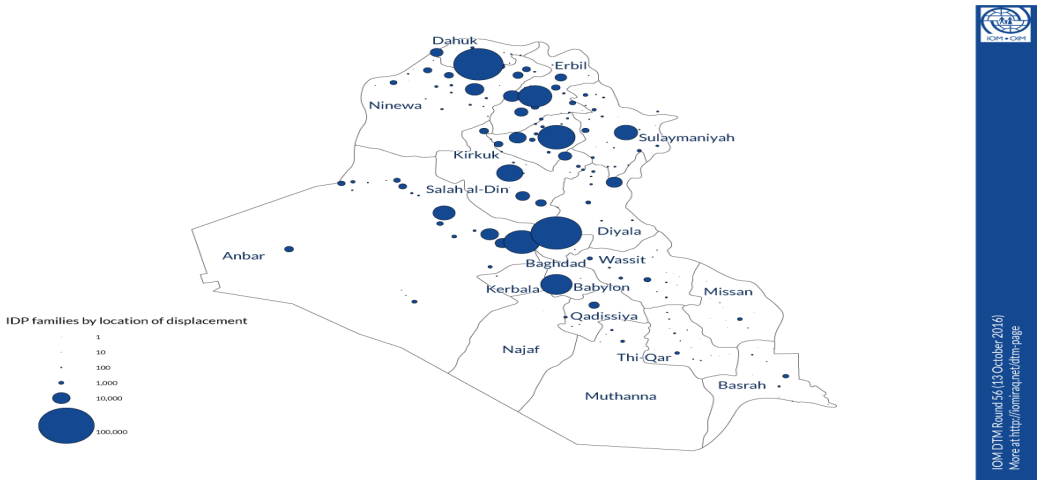
2. Iraq is included in the list of countries with the most fragile situations for 2016. The country is included in the list of countries with the most fragile situations by IFAD, the World Bank and the 'high alert' category in the Fund for Peace Index, which forms the basis for OECD's assessment of fragility. The two key indicators used by IFAD to define fragile solutions in a country namely (i) institutional capacity and (ii) conflict are not only present in the country as a whole but the negative consequences of these factors have permeated to even those regions in the south where there is no active conflict situation. The overall rural sector performance is at a low level. Iraq's extreme fragility has affected its capacity to deal with rural development significantly, reducing institutional capacity and service delivery. Development outcomes are consistently lower in fragile situations, and IFAD's mandate of rural transformation is threatened by this fragility.

3. Iraq has faced two simultaneous crises since the second half of 2014: the ISIS insurgency and the oil price shock. The double shock has severely dented growth, diverted resources away from productive investment, and increased poverty, vulnerability and unemployment. Private consumption and investment remain subdued due to an unstable security and political situation and a poor business environment. The crises resulted in a sharp deterioration of both fiscal and external accounts and worsening poverty. The fiscal deficit widened to 14.5% in 2015, due significantly to lower oil revenues and higher humanitarian, and security-related expenditure. The large fiscal deficit has been financed through external borrowing, including loans from the IMF and the World Bank. The government implemented fiscal consolidation measures in mid-2015, aimed at improving revenue collection, in particular from oil, and at containing non-oil primary spending. Macroeconomic risks remain elevated due to Iraq's continued exposure to a volatile oil market. The Government is facing the challenge of maintaining macroeconomic stability, undertaking structural reforms to improve the delivery of public services and reconstructing core physical infrastructure in the areas liberated from ISIS.

4. Internally **displaced persons (IDPs):** Iraq today has a total population of 4 million IDPs, second only to Syria and Colombia. This represents a staggering 11 percent of the population. The addition of refugees, mostly Syrians fleeing the conflict at home, brings the total number of displaced persons to 4.3 million. IDPs account for half a million of the total number of people who fell into poverty. Unemployment among IDPs is estimated at 27 percent.[4] According to the IOM tracking website, currently around 70000 IDPs are present in the southern Governorates. Some of these have become what is referred to as 'protracted displacements', and individuals and households falling into this category are a key part of IFAD's target group. **Figure 1** gives a visual illustration of the number of IDPs and returnees by Governorate in Iraq.

[2] http://www.worldbank.org/en/country/iraq/publication/economic-outlook-spring-2016
[3] http://www.worldbank.org/en/country/iraq/overview
[4] World Bank 2017

Figure 1: IDPs and Returnees by Governorate



5. There is a range of initiatives aimed at supporting IDPs in Iraq, but they appear to be far from sufficient to cover even their basic needs. Many are very localised micro-projects implemented by NGOs registered with the Governorates, under the aegis of the Ministry of Social Affairs, discontinued as soon as financing stops, and frequently unsustainable. One of the many challenges of working with IDPs is that they are scattered over many localities within any given district. UNHCR is running a cash distribution scheme which seeks to satisfy requirements related to food, shelter, and medicines. Most of the IDPs are landless, but Governorates are willing and able to provide them with some land for productive activities if financing becomes available.

6. **Rural poverty:** Rural poverty in Iraq is a direct consequence of the failure to invest in rural areas, create opportunities for employment and income generation and enterprise development which has been compounded by rapid population growth, internal conflict and insecurity, increasing water scarcity, climate change and rising salinity. In 2012, rural poverty rate stood at 31%, nearly double that of urban poverty (15%) with 19% of the total population in Iraq living below the national poverty line of less than US$ 2.2 per person per day. The standard of living has deteriorated and a noticeable share of the population has fallen into poverty or is extremely vulnerable to falling into poverty. The Iraqi Government estimated that the direct impact of economic, social and security disruptions were estimated to have doubled poverty rates to 41.2 percent. Out of the 18 Governorates in Iraq, the poverty ratio ranged from 35% to 52% for the 5 poorest governorates.

7. In the rural areas of the 5 poorest governorates, small-scale farmers and livestock producers are the most marginalised households with unemployed young men and women members as the most vulnerable. In the South/Centre of Iraq, female-headed households make up 9.5 percent of the total households. Rural households spend a significantly higher share of their income on food compared to urban households (33.3 percent for rural and 19.6 percent for urban).[5] Poverty in rural Iraq is not so much a function of food insecurity and low incomes as it is a direct consequence of decades of conflict and sectarian violence which has ripped the social fabric of communities and many families apart. The psychological effects thereof have only recently become more apparent. The constant feeling of insecurity is further exacerbating by perceptions of marginalization and disenfranchisement in the country's rural areas.

8. **Livelihoods and nutrition:** As a consequence of the war in Iraq, malnutrition among Iraqi children has doubled and acute malnutrition rates among children under the age of five were reported to be 7.7 per cent in 2005 compared with 4 per cent prior to the fall of Saddam Hussein. More recent estimates of malnutrition in the country report the wasting at 4.7%, underweight at 9.1% and stunting at 21.8%.[6] The food security situation of the country has been further compromised by the civil war. In

[5] IFPRI 2014
[6] WHO. 2007. http://www.emro.who.int/irq/programmes/nutrition.html

2014, Iraq lost 40% of its agricultural production capacity after the Islamic State (IS) took control of the most productive provinces in the north.[7] The International Grain Council (IGC's) most recent quarterly update on world trade in wheat flour shows Iraq importing a projected 2.3 million tonnes in 2016-17, unchanged from 2015-2016. This level makes the country the largest wheat importer in the world.[8] The humanitarian crisis that followed also led to the dramatic increase in food insecurity for 4.4 million people who now require food assistance. The nutrition status of both rural and urban population is increasingly dependent on the heavily subsidized ''food basket" provided by the Iraqi Public Distribution System (PDS) which is an essential policy measure to ensure food security and avoid possible malnutrition. The subsidized food rationing on a national scale, with imported food, has also had a negative impact on the local grain market with consequent depressing effects on producer prices and on agriculture sector investment. However, the decrease in Government revenue has led to sporadic implementation of the food safety programme. PDS wheat flour distribution in 2016 is reportedly providing only 70% of the requirements. The Government has launched a new poverty targeting programme in April 2016 aimed at reforming the social security network and improving its targeting efficiency.

9. **Agriculture context:** Agriculture is one of the most important sectors in Iraq after oil and gas. Agricultural workers are estimated to make up 20% of the workforce in the country. Agriculture is practiced from North to South in eight agro-ecological zones (ACZs). The production systems include an irrigation-based system in the Center and South and a rain-fed-based system predominantly in the North. In the irrigated system, cereals, winter and summer vegetables, corn, rice and fruit trees predominantly date palm are grown. The rain-fed farming system is crop/small ruminant based. In both systems, the productivity is low. The total agricultural area of variable quality and potential, amounts to 11 million hectares (ha) of which only 6 million ha is cultivated. Agriculture is mostly practiced on small farming units and it is a low input–low output system. Crop yields are low by comparative standards, as farmers tend to minimize costs concerned with land preparation, planting, weeding and harvesting. Low agricultural productivity has been a characteristic of Iraq's agriculture for the last two decades and has made the country dependent on imports to meet its domestic food needs. Cheap food imports flood into the country and farmers are unable to compete with them due to their lack of organization and inability to make strategic crop choices.

10. The land holding system in Iraq is a mixture of owner operator, lease holding and sharecropping arrangements. In the rural areas of the four poorest governorates, small-scale farmers and livestock producers are the most marginalised households with unemployed young men and women the most vulnerable. Small-scale farmers with a holding size ranging from 2.5 to 7.5 ha account for 35 percent of total number of farmers (for irrigated lands less than 4 ha). Medium-sized farmers account for 34% with a holding size ranging between 7.6 ha and 12.5 ha. In Muthanna – the largest of the four – smallholders account for 60 percent of the total farming population.

11. Farmers have focused in the past almost entirely on wheat and barley, which were described as "strategic crops". The centralized policy to promote these subsistence cereal crops by providing subsidized inputs and purchasing them at fixed prices made the farmers ignore other more commercially oriented crops. As a result the farmers continue to grow these crops even though the Government has withdrawn some of its earlier policies. Cereal production now accounts for 58% of the cultivated area in the country. Farmers need to shift to high value crops but need assistance in doing so. The agriculture extension services for technology transfer, particularly for small producers are weak. There are considerable losses reported due to lack of post-harvest facilities.

12. **Water resources**: The two dominant rivers in Iraq are the Tigris and Euphrates. The watersheds, including their tributaries, account for almost all of the country's surface water. The fact that these important rivers originate in Turkey and not within the country has been a long-standing source of tension with Iraq's riparian neighbours, and puts Iraq in a difficult position when trying to plan for and manage its water resources. Although ground water is also used for supplemental irrigation, the potential for Iraq's annual active groundwater recharge rate has not been properly estimated. Currently, of the total cultivated area, 2.5 million ha is under rain-fed conditions in the North and 3.5 million ha under irrigation in the Center and the South. Increasing water scarcity and reduced water availability are dominant economic and environmental challenges in Iraq. Current water use for

[7] https://www.aei.org/publication/weaponization-grain-iraq/
[8] http://www.world-grain.com/Departments/Country-Focus/Country-Focus-Home/Iraq-2016.aspx

all purposes far exceeds renewable supplies. The average yearly inflow of the Euphrates declined from 30.44 billion m^3 for the period between 1933-1971 to 12.75 billion m^3 (42%) for the period 2008-11. The inflow of Tigris declined from 49.22 billion m^3 for the period 1933-98 to 33.11 billion m^3 (67%) for the period 1999-2011. The decline in the inflow is due to the Ataturk Dam in Turkey, over exploitation, poor management practices compounded by the impact of climate change. The annual share of renewable fresh water resources per capita in Iraq declined from 4,587 m^3 in 1964 to 998 m^3 in 2014.

13. **Irrigation infrastructure** includes (i) a wide range of hydraulic dams and water reservoirs with a cumulative retention capacity of 70 billion m^3; (ii) 45,000 km of water conveyance systems and 85,000 km of drainage canals; and (iii) 38,000 pumping and control stations for irrigation and drainage. Most of the conveyance canals are in a state of disrepair as a result of poor maintenance and most of the drainage canals are non-functional due to lack of proper maintenance and lack of proper cleaning. Water use efficiency both at the conveyance level and on farm level is low and ranges from 35% to 40%. The quality of water poses another problem as the underground water is brackish and the level of salinity in the water has gradually increased over time. Government investment in the irrigation sector has declined and many of the schemes have been left partially complete or poorly maintained due to lack of Government funds. Water User Associations were established sporadically but there is little tradition for these to assume the responsibility for operation and maintenance of the infrastructure. However, farmers are beginning to realize the importance of investments in improved irrigation efficiency and install modern irrigation technologies.

14. **Environment and Natural resource management**: Iraq suffers from a series of environmental and natural resource management issues. Iraq's environmental conditions have suffered greatly from the impact of poor policies. This has resulted in increasing threats of land degradation, desertification, water shortage, increased soil salinity, reduced soil fertility and a low forest cover of only 4%. There are high levels of salinity in Iraq's Shatt al-Arab waterway, formed by the confluence of the Tigris and Euphrates in the southern province of Basra, which have forced many families to abandon their once relatively fertile farms.[9] It is estimated that in 1960 Iraq had along the Shatt al-Arab some 62 million date palms. In 2007 the figure was believed to have shrunk to around 10 million. While the wars took their toll, much of this decrease is attributed to the salinization of the agricultural lands along the Shatt al-Arab. The level of salinity especially in the Euphrates River is high and is expected to increase with the development of irrigation in the basin and, as a consequence, the diminutions of the water flow particularly in the dry season. With excessive use of irrigation and high evapotranspiration rates the use of adaptive management practices such as drip irrigation, conventional residue management have become critical.

15. **Climate change:** Located in an arid and semi-arid environment, Iraq is prone to impacts of climate change, particularly on its fragile farming systems. In Iraq, climate change is manifested in higher temperatures, lower rainfall with uneven spatial and temporal distribution, higher frequency and severity of droughts and sand storms, and emerging new pests and diseases. According to an IFAD financed analysis,[10] the annual precipitation in Iraq is set to decline significantly. The trend of declining precipitation that emerges from the comparison of the current climate with the future one projected by the Global Climate Models (GCMs) is very much in line with the trend of the past. The changes in mean annual temperature between current climate and those for 2010–2040 across the study area are in the range 1–1.5°C. The combined impact of these changes is expected to contribute to the impoverishment of the rural poor, their migration to urban cities, and reduction of food security at household level. This is already in evidence during field visits by IFAD missions. There is need for appropriate adaptation actions at all levels including policy making, institutional and technical capacity development, implementation of climate-resilient agronomic systems and technologies, prevention and restoration of climate-induced soil and water degradation and awareness raising about the impact of climate change and adoption of adaptation and mitigation measures.

16. **Research and extension**: Most of agriculture research assets, buildings, laboratories and government extension farms have been damaged or in a poor state of maintenance and under resourced. Technicians are insufficient in number and quality. The sanctions imposed on Iraq disrupted for a long time contacts with the outside world except to some extent with ICARDA and

[9] Climate Change, Energy & Natural Resource Management. UNDP Iraq. 2009.

[10] De Pauw, E. et al (2015) Mapping climate change in Iraq and Jordan. ICARDA Working Paper 27.

FAO. There is a lack of a real extension and training strategy with adequate operating budget, involving effective decentralisation, privatisation, gender empowerment, farmer participation, use of modern information technologies, linkages with research and other institutions such as universities, private sector, and support to women and youth.

17. **Farmers' organizations**: According to FAO, organizations at producer level exist but they are weak and ineffective.[11] The authority of traditional farmer associations has been eroded by the unrest of the last two decades, and the various land reforms that fragmented ownership, including tenure reform associated with irrigation development. Unions of farmer associations, of which membership had earlier been compulsory for a large number of farmers[12], are present in all Governorates. In 1983, their strong connection to the Ministry of Agriculture was dissolved. They have nonetheless remained key actors in implementing government programmes such as the Public Distribution System (PDS). There are a however a number of other, smaller farmer associations that exist in the four SARP Governorates including the Poultry Association of Thi Qar, which has acted as a "value chain service provider" for smaller farmers. The union of farmer associations in Nasiriya (Thi Qar) has the potential for date processing. Farmer associations are also interested in investing in and managing cold storage facilities. Women and youth have also been involved in the past in vegetable and dairy production and processing. However, these groups are of varying capacity and need institutional support.

18. **Private sector*:*** Given the absence of security and stability and an uncertain policy environment, the private sector has not made any significant investments in agribusiness. Problems include security, unclear requirements for registering and closing businesses, license requirements, limited communication infrastructure and logistics, difficult access to finance and a non-competitive business environment lacking transparent and clear legal frameworks for rules-based-market competition.

19. **Target groups:** The socio-economic characteristics of IFAD target groups in the Governorates covered under SARP are very heterogeneous and not well documented by quantitative data. Because of this heterogeneity, it is not possible to craft a stylised typology of smallholder farmers in the four southern Governorates. At least not at this stage – one of the outputs of SARP would be to attempt to fill such information gaps. Qualitative data shows that agricultural income levels and sources of income vary considerably by geographic location, with reliable access to a source of water as one of the main determinants of the presence of farming activities. The next determinant of whether or not smallholders engage in crop farming relates to soil salinity, which is a huge problem in the southern part of the country. In several parts of the south, smallholders appear to have abandoned crop farming altogether because of absence of water and/or presence of salinity. Typically, the livestock activities of IFAD target groups consist of sheep and goat rearing and backyard poultry farming. Households owning a cow can be said to be relatively better off, and will use its milk for consumption and processing into cream and cheese for the local market. Date palms are not necessarily a feature of relatively better-off households, and are mostly in bad shape in terms of their current productivity and are prone to pests. Beekeeping is a promising activity but is not very widely practiced. Fisheries is also important for some of the Governorates.

20. **Women:** In the 1980s, Iraqi women enjoyed more basic rights than other women in the region although the structure of society, like in the other countries in the region, is not very egalitarian and the rights of women are suppressed. Years of sanctions and conflict have led to a further deterioration in women's status. Despite steps taken towards gender equality since 1990, Iraqi women today do not have equal educational or employment opportunities. Traditional societal views of women, insecurity and weak performance of state functions are affecting the role of Iraqi women in rebuilding the country. However, there are some positive signs of women's participation in higher levels of the public sector and government. In 2010, the average rate of parliament seats held by women was 27 percent.

21. The ratio of girls to boys in primary school rose from 0.88 in 2006 to 0.94 in 2011; in secondary school, the ratio rose from 0.75 in 2006 to 0.85 in 2011.[13] It was estimated that in 2011, 28.2 percent of women 12 years or older were illiterate, more than double the male rate of 13 percent.[14] Only one

[11] FAO 2012
[12] IFAD Study on Institutional and Policy Gap Analysis in Iraq, 2016
[13] Multiple Indicator Cluster Surveys (MICS) conducted by the UN Children's Fund (UNICEF) and the Government. March 2013.
[14] Iraq Knowledge Network (IKN) survey of 2011.

third of young women - those aged 15 to 24 - living in rural areas are educated. Women's health has seen some gains. The percentage of births attended by skilled personnel has risen significantly in the last decade. And the maternal mortality rate - which at 84 per 100,000 births in 2006 was the highest in the region - appears to have dropped significantly, to 24 per 100,000 in 2011.[15]

22. There is considerable inequality in the labour force. Only 14 percent of women are working or actively seeking work, compared to 73 percent of men. Those who are employed are mostly working in the agricultural sector. The percentage of women in paid employment in the non-agricultural sector has risen from 12.1 percent in 2008 to 14.7 percent in 2011. Women with a diploma have a harder time finding jobs: 68 percent of women with a bachelor's degree are unemployed. The rural unemployment rate is higher for females than males. Due to years of war and political instability, 10 percent of households are headed by women, most of them widowed, but many of them divorced, separated or caring for sick spouses. They represent one of the most vulnerable segments of the population and are generally more exposed to poverty and food insecurity as a result of lower overall income levels.[16] The agriculture sector has a particularly high share of women, whose participation in the sector has increased from 30 to 50 percent between 1980 and 2010.[17] Nearly half of the workers in public administration are women, although few of them are in senior or decision-making positions.[18] Within rural areas, the literacy divide between men and women is wider. There are an estimated 1.6 million widows, an increased number of female-headed households, and large numbers of orphans.

23. Women in Iraq have been significantly affected by insecurity. In addition to imposing restrictions on movement that reduce access to education, health, and jobs, a feature of post-conflict settings with high unemployment and poor overall security such as Iraq is often a high incidence of violence, particularly various kinds of gender-based violence.[19] In the more traditional rural communities, women are mostly confined to their residential homestead, and feel uncomfortable and are often unwilling to engage in any income-generating activity away from their homes. This acts as a powerful limiting factor and constraint to opportunities for off-farm activities for women, which are much influenced by traditional gender roles. As a rule of thumb, however, in the more remote rural villages, husbands will consent to their wives earning money away from home, as long as this takes place within commuting distance.

24. Although no law prevents them from owning land, custom and Islamic norms entail that very few women are officially owners of agricultural land. Women do have use rights which are reasonably secure, and have no problem using the land near their houses, for example for growing vegetables, or for poultry farming and the rearing of goats or sheep. As per law 35/1983, they can rent agricultural land – but only few women seem to be willing or able to do so formally.

25. Youth**:** Iraq is facing a 'youth bulge' and individuals between 15–24 years old. represent 19.6% of Iraq's population. The number of young people entering their reproductive years and the labour force has increased significantly between 2011 and 2015, creating both an opportunity and a challenge to Iraq's society and economy. This segment of the population has been deeply affected by the on-going war and conflict that they have witnessed for much of their lives. The various conflicts have significantly limited young people's educational and employment opportunities in Iraq and deeply impacted their vision of their future. The enrolment ratio in intermediate education is barely 40 percent; for secondary education it is less than 30 percent. The illiteracy rate is high, and the unemployment rate for both sexes combined is estimated at about 30 percent. Adolescent girls are worse off than boys in every respect. There is a high probability that girls will be married before their 18th birthday without their consent. In terms of participation, only 40 percent of youth perceive the value of taking part in social and political life. A survey[20] indicated that only 56.9% felt optimistic about the future, they have little trust in the current system of governance and almost 17% expressed a strong desire to emigrate.[21] Despite several measures taken by the Government recently to deal with youth, significant challenges remain.

[15] World Health Organization.
[16] UN Fact Sheet. March 2013.
[17] World Bank, 2016)
[18] UNDP Iraq 2012
[19] UNDP Iraq, 2012
[20] National Youth Survey by the United Nations Population Fund (UNFPA) and the Government of Iraq. 2009
[21] http://uniraq.org/index.php?option=com_k2&view=item&id=1140:iraqi-youth-key-statistics-and-resources&Itemid=606&lang=en

Policy, Governance and Institutional Issues

26. The Government has formulated a 2013-2017 National Development Plan (NDP) designed to enable the Iraqi economy to take off and start to free itself from a revenue-generating economy dependent on a single resource, oil, to expanding its base to depend on other activities, whether production, service, or distributional. The plan defined the roles of the public and private sectors and civil society in achieving its developmental, economic, human resource, and environmental goals. The vision embodied in the 2013-2017 Plan represents aims to build a diversified and prosperous economy with industry, energy, agriculture and tourism as the main drivers and pillars of development, where the public and the private sector along with civil society are partners in development, and where centralized and decentralized roles complement each other in managing development. The Federal budget will correspond with the plan's goals as part of comprehensive and balanced policies to realize the following goals: achieving fiscal and monetary stability; developing the primary and secondary spatial poles in order to close the gap between urban areas and the countryside as well as between governorates; guaranteeing equal opportunities on the basis of gender so as to boost economic participation rates; fostering knowledge and skills to keep pace with the demands of the knowledge economy and the job market; guaranteeing integrated health care for both the sick and the healthy; raising the level of quality social care to cover the needs of vulnerable groups in order to enhance social development opportunities; and achieving environmental sustainability and thereby laying the groundwork for the green economy.[22]

27. **Policy and Institutional issues relevant to the agriculture sector:** The capacity of the MoA and MoWR and other government institutions to provide services to the agriculture sector has significantly deteriorated over the past 20 years. Budget cuts have reduced the level of services, resulting in the departure of skilled human resources in agriculture support services such as research, extension, animal health, artificial insemination, plant quarantine and disease control. The recovery of these services is very slow, and there is a need to enhance capacities of government and smallholder organisations, as well as identify policy gaps that need to be addressed to help increase competitiveness of the sector and enhance its contribution to rural development and poverty alleviation.

28. **Decentralization*:*** Historically, responsibility for basic service delivery was lodged almost exclusively in central government ministries, but that arrangement is changing. The Constitution of 2005 provided for decentralizing powers and functions to the Governorates. The first major step toward a decentralized state was taken with the election of governorate councils in 2005. Successive elections, each more openly organized and with high voter turnout, were held in 2009 and 2013. The popular election of governorate officials has created the expectation among citizens that governorates are the primary authorities responsible for improving service delivery. Popular and open elections of governorate officials have given governorates a political presence and popular legitimacy. The government of Iraq has enacted several legal, policy, and institutional reform initiatives, the intent of which is to shift political and administrative powers and responsibilities from the Central Government to the Governorates. Decentralization is designed to improve service delivery and provide greater ownership to Governorates for charting their own development path. The Ministry of Agriculture is one of the institutions which has been decentralized.

29. **National Programmes:** There are currently several emerging national programmes being carried out by the Ministry of Agriculture that are piloting new practices and aiming at productivity enhancement and efficient use of natural resources and adaptation to climate change. These programmes are relevant to IFAD engagement and pose an opportunity to promote smallholder agriculture development. These include: (i) the national programme for the use of on-farm modern irrigation systems; (ii) the national programme for the improvement of wheat production; (iii) the national programme for the development of drought and salinity tolerant crops; (vi) the program for the establishment of an agricultural meteorology network; (vii) the programme for the genetic improvement of local animal breeds; and (viii) the conservation agriculture project. In addition to introducing new agriculture practices, the national programmes listed above are in the process of promoting two relevant supportive instruments - namely the use of land suitability maps for the selection of crops according to respective agro-ecological zones; and the establishment of an effective network of an early warning system for monitoring and mitigation of climate change risks.

[22] National Development Plan. 2013-2017. Republic of Iraq. Ministry of Planning. January 2013.

30. **Social security transfers:** Iraq's Social Protection Net (SPN) is a cash transfer program that aims to target poor and vulnerable populations. The SPN distributes monthly grants to beneficiaries based on household size. In 2012, the SPN covered 4 percent of the population but with minimum targeting effectiveness as 71 percent of the beneficiaries were non-poor, while 89 percent of the poor did not receive SPN assistance that year. The program is inefficient and fragmented, providing cash transfers based on categorical targeting (including households with orphans, married students, widows, divorced women, and others), leading to significant leaks (GoI 2012). WFP has started to provide food aid to eligible households who should have received PDS ration cards after 2014 but have not received them as the system is overstretched.

B. Rationale

31. The rationale for the current project stems from the ***fragility of Iraq and IFAD's commitment to assist countries with fragile situations.*** The fragility in the country stems from deep-rooted inequality, exclusion, poverty, poor management of natural resources and the absence of institutions. The Fund's current strategy regarding fragility expressly recognizes that fragility also plays a key role in rural development and food security as it can reduce institutional capacity, disrupt rural livelihoods, and increase volatility in food prices. Research conducted for the IFAD Rural Development Report 2016 indicates that countries suffering chronic fragility can become prematurely urbanized, as people leave rural areas affected by limited availability of basic services or rule of law to seek security and jobs in the cities. When this occurs without any significant underlying structural or rural transformation, it can result in high levels of food insecurity and in unsustainable patterns of urbanization leading to unemployment and unrest. This is precisely what is happening in Iraq and the country needs urgent assistance.

32. IFAD has significant experience in areas in which the Government of Iraq needs assistance such as agriculture and rural development. The country is experiencing growing poverty, degradation of the natural resource base, rising water scarcity, increasing salinity and climate change. Low agricultural productivity has made Iraq dependent on imports to meet its domestic food needs and making it a major importer of agricultural products. In Iraq today the yield gaps remain very significant due, in part, to the effects of prolonged wars, civil strife, sanctions, droughts, and deteriorated infrastructure and its inability to be competitive.[23] The farmers in the governorates to be targeted by the current investment need support in responding to market demand, shifting to high value vegetable and horticulture crops, particularly dates, invest in a range of livestock production and grow more saline tolerant wheat, barley and fodder in marginal lands. The agriculture sector has the potential to provide employment to a growing number of people with proper investments in the sector and reduce the dependence on foreign imports of food. ***Investment in agricultural growth is not only important to growth in national income, but is also vital to growth in employment, food and nutrition security and reduction of poverty in Iraq***. The Iraqi National Development Plan (NDP) for 2013-2017, identified agriculture as one of the key sectors to advance non-oil growth, raising incomes, and improving income distribution and gender equality.

33. The current project can assist to enhance the relevance of the emerging on-going national agriculture programmes and replicate and expand its experience in reducing the gap between the current and potential yields of crops and livestock, the dissemination of available production technology packages piloted by regional projects co-financed by IFAD and other partners. The very specific comparative advantage of IFAD relative to this project lies in two broad areas. The first is its proven result-oriented approaches, its focus on targeting and the empowerment of smallholder farmers through the strengthening of their grass-root institutions and social capital, the development of farmer's capacities and skills, as well as gender mainstreaming in all activities. The second area is the broad implementation approach that IFAD would seek to promote. In support of the decentralization policy of Government, the project would build capacity at the governorate level and support the governorates to set their development agenda. The project would also promote collaborative ways of working: between different government agencies, and between government and non-government service providers. It would also encourage more participatory ways of working, which

[23] Towards Sustainable Agricultural Development in Iraq. The Transition from Relief, Rehabilitation and Reconstruction to Development. FAO> 2003.

involve rural communities themselves in planning and decision making at local level. In support of the latter agenda, the project would also invest in building the capacity and organization of the rural communities themselves, to enable them to participate more effectively in local planning processes. Even modest success in these related dimensions of 'institutional culture' would represent a major shift in the context of Iraq.

34. The project approach is based upon a number of elements, all considered critical in the context of current rural Iraq. These include the following.

35. **Increasing water availability and investing in irrigation infrastructure:** Although there has been a sharp reduction in the share of water of the Southern Governorates due to decreasing supplies in the Euphrates and Tigris, in some areas availability of water is not an issue. However, there has been little investment in irrigation infrastructure, as a result of which many of the farming households have had to abandon agriculture and rely on daily wage labour or depend upon the Government food security programme. The issue is critical in a number of the Governorates such as Muthana, where some of the villages visited by the mission indicated that they could not cultivate their land anymore due to scarcity of water. The households in these villages were suffering acute food shortages and women and children were particularly under nourished. Discussions with the Directorate of Water Resources in Muthana and Missan identified several schemes with the potential to be supported by the proposed project – either by completing the works or by rehabilitating/ modernizing the schemes, including those in Janub al Rumaitha, Suwahiya , Sumawa Abu Shwamilani, etc.

36. **Building resilience to climate change**: The adverse effects of climate change are projected to reduce agricultural production and make the problem of water shortage in Iraq worse. Thus, as a priority, measures need to be taken for better adaptation and mitigation. These include: (a) increasing irrigation efficiency through better water management practices and usage of efficient irrigation technologies such as drip and sprinkler irrigation, which also necessitates re-engineering of the irrigation systems to include pressurized systems at field level; (b) introducing already tested crop and fodder varieties with low water requirements and resistance to drought, high temperatures, pests, and soil salinity; (c) using integrated methods for agricultural pest management and reducing reliance on pesticides and herbicides in agricultural systems; and (d) establishing an effective monitoring system for weather changes including early warning systems to ensure that famers receive this information in a timely and actionable manner. The project framework offers the opportunity to draw on funds from the Adaptation for Smallholder Agriculture Programme (ASAP) to reduce the adverse effects of climate change facing the smallholders of the Southern Governorates in Iraq. Within the framework provided by the project, there is scope to also leverage financing from the Adaptation Fund provided under the UNFCCC and its Kyoto Protocol (KP) to reduce the adverse effects of climate change facing the smallholders of the Southern Governorates in Iraq. The project can assist the Government use these grant resources efficiently within the proposed project.

37. ***Increasing the competitiveness of agriculture, preventing post-harvest losses and removing marketing bottlenecks through farmer organizations***. Small holders dominate agriculture production in Iraq with limited ability to organize, realise economies of scale or reduce their transaction costs or deal with post-harvest and marketing issues. There is a high degree of variability in prices of agricultural commodities and limited market information. Farmers are not able to compete with cheap food imports. There is a lack of post-harvest and marketing facilities and low levels of agricultural industrialization. Local markets are underdeveloped, and the marketing infrastructure (transport, cold storage, grading, processing and packing facilities) is poor. Although there is only limited data on the magnitude of food losses in the country, it is generally estimated that about 15% of cereals and legumes and 33% of perishable horticultural crops are lost, as a result of inability to manage the crops after harvest.[24] Farmers individually do not have the resources to invest in the marketing infrastructure and the private sector has not yet fully emerged to capitalise on the opportunities available. While a cooperative framework exists for the establishment of agriculture cooperatives and farmer associations, there has been limited attention paid to their development. The cooperatives established several decades ago currently exist only on paper with limited incentives and support available to encourage their formation and growth. The proposed project would support

[24] Kader, A. L et al. Role of Agro-industry in Reducing Food Losses in the Middle East and North Africa Region February 2012.

selected groups by building their capacity and demonstrating the benefits of collective group action for improved input supply, post-harvest and marketing functions. For women, groups are able to assist them manage their risks better, and manage their multifarious roles. This is an area in which IFAD has significant experience from the region, which it could utilise in the country.

38. ***Diversification of the economy***: Iraq has lacked capital, technology, and skills for more than two decades due to prolonged sanctions and war. These vital inputs are needed in many sectors of the economy as the country embarks on the mammoth task to rebuild itself. The Iraqi government is keen on diversifying the economy away from oil and has steadily opened the market to attract external investment and joint ventures in many sectors such as industry, manufacturing, agriculture, food processing, transportation, financial services and tourism. In order to capitalize on this opportunity for the unemployed rural youth, the project would provide opportunities for development of skills to increase their marketability and assist many of them to establish their own enterprises and income generating activities with support from the project in acquiring productive assets. The project would in particular focus on women and youth who have been given limited attention in the past.

39. **Vocational training:** The traditional system of apprenticeships is one of the few ways for youth to acquire a new skill. But opportunities are limited due to the limited economic activity in the region. Off-farm income generating activities of interest to youth are numerous and are those found in micro-enterprise development projects, namely concerning trades such as those of mobile phone repairer, electrician, plumber, carpenter, etc. Rural vocational training centres are being rebuilt and new ones built all over the country. The Ministry of Social Affairs is responsible for vocational training centers in all Governorates. Some NGOs have their own centers. UNIDO has a network of enterprise development centers in southern Iraq in which youth can also be trained in relatively more sophisticated trades such as business development services provider. NGO service providers have experience in organising vocational training sessions and have experience in doing so which can be capitalised upon by the project. The project would draw on this expertise and establish partnerships for implementing these activities.

40. **Scaling-up:** Much of what is being proposed under the project – and particularly the implementation approach in combination with the thematic areas of focus – is new in the context of Iraq. The project will deliberately adopt a gradual, learning-by-doing approach. The implementation strategy, and potentially even the activities too, will evolve during the project life-time, in response to the lessons learned. As the project moves forward, the expectation is that the approach will be refined and become more effective, capacity will be developed, new ways of working will become entrenched, and Government ownership will grow. All of these elements will provide a platform for future scaling-up, both in subsequent projects, supported by IFAD and, potentially, other development partners, and in national strategies and programmes.

41. A number of specific innovations offer promising opportunities to engage with, build on and scale-up within and beyond IFAD's first investment project in Iraq. One of the first innovations would be multi-stakeholder collaboration that bridges the lines between the farming communities and groups, public sector, the NGO community and private sector businesses. A second innovation that could be scaled up is SARP's work with youth and UNIDO through its network of enterprise development centers in southern Iraq. A third and last pre-identified innovation for scaling-up consists of the "conversion" of mature farmer organisations with infrastructure and assets in good condition to "value chain service providers". The project can, by focusing on women and youth, illustrate how such efforts could be made an integral and effective part of Government programmes. Most importantly, the project can demonstrate that through financing assets rather than subsidizing only food packages, the Government can assist in creating a sustainable source of income generation and poverty alleviation. The success of these measures can be mainstreamed in the Government's own safety net programmes and provide a viable model for poverty alleviation.

II. Project description

A. Project area and target group

42. The project would be implemented in the four southern governorates of Muthanna, Qadisiya, Missan and Thi Qar. The level of poverty in these Governorates is among the highest in the country and ranges between 41% and 51%. It is estimated that these Governorates have 72,480 farming households of which more than 90% are smallholders. . It is estimated that the proposed project would target about 16,000 of the households over its seven-year duration. This is likely to yield benefits for around 140,000 people given the current household size of 6.9 in rural areas.

Table 1: Estimated Households and Land Area in Target Governorates

	Household	Arable Land Area Ha	Irrigated (Ha)
Al-Muthannā	18639	363,363	136,119
Al-Qādisiyah	18,798	458,440	207,912
Thī Qār	18,570	447,662	88,863
Maysān	16,473	636,818	150,875
	72,480	**1,906,284**	**583,769**

43. The four project governorates share roughly similar socio-economic characteristics. The climate is generally dry desert climate. In summer, temperatures easily surpass 40°C, while rainfall is very limited and restricted to the winter months and is reported to average around 110 mm annually. These governorates were neglected for long, and despite some of them producing oil, there is lack of investment in these areas. The UN sanctions, which were imposed after the Iraqi invasion of Kuwait in 1990 and lasted until after the 2003 invasion, were detrimental for Iraq's economy but had a particularly devastating impact on these areas. Infrastructure suffered due to the war and the limited investment in the area. The agriculture sector has suffered from adverse side effects of the Public Food Distribution programme, which was set in place after the 1990 invasion of Kuwait to provide Iraq's population with subsidized food rations. The programme pushed down the prices of staple crops like wheat and rice, making them unprofitable for farmers.

44. The southern part of Thi Qar and Miysan governorates are also home to the Mesopotamian Marshlands or al-Ahwar located in the southern part of the country. The area is a rare wetland within a desert landscape. It hosts a freshwater eco-system and provides a habitat for wildlife,. The Ma'dan or Marsh Arabs inhabited the marshlands of Southern Iraq for centuries, living in reed houses and practicing traditional methods of agriculture, fishing and water buffalo breeding. Women are in the forefront in the marshlands, and actively participate in dairy and fish marketing. Until the 1970s, the marshlands used to cover an area of up to 20,000 square kilometers around the confluence of the Tigris and Euphrates rivers. The marshlands were partially drained in the 1970s and 1980s to clear land for oil exploration. After 1991 the government constructed a series of dams and canals that drained the marshes resulting in the disappearance of 90% of the marshland and increasing the level of salt in both the soil and the water in the area. Owing to initiatives by the inhabitants with the reopening of waterways, and, to good rainy seasons, the unique marshland environment is slowly being brought back to life. The site was recently declared a UNESCO World Heritage site. The partial restoration of the Mesopotamian marshes has been heralded as one of the few success stories to emerge in Iraq.

45. The Muthana Governorate's landscape is dominated by desert plains, with only a narrow ribbon of irrigated farmland along the Euphrates River in the north. The population is concentrated along the Euphrates River in the north of the governorate, while the southern desert districts are only sparsely populated. Muthanna is an important center for the production of cement and other construction materials. In 2005 an oil refinery was opened in Muthanna, which processes crude oil from the Kifl oil field. The salt waters of Lake Sawa provide salt, which is used as a raw material in various industries. The lake's touristic infrastructure has dilapidated over the years, but the area still holds the potential to be developed into a touristic hotspot. The governorate is divided into four districts: Al-Samawa, Al-Khidhir, Al-Rumaitha and Al- Salman

46. The governorate of Qadissiya has Euphrates and one of its major tributaries, the Shamiya River, running through the governorate. The abundance of water and rich soils make the governorate one of the most fertile areas of the country. Rice, wheat and barley are the main crops cultivated in Qadissiya, while hibiscus and melon are also grown on a smaller scale. A number of factories producing tires, dairy and cotton textiles are located in Qadissiya. Qadissiya's economy is hampered by a number of factors. A large number of jobs provided by the agricultural sector are informal and unwaged. Other economic sectors like industry remain underdeveloped. The informality and underdevelopment of Qadissiya's labour market is one of the explanations for the high number of unemployment and child labour in the governorate. The governorate is divided in the following districts: Diwaniya, Afaq, Al-Shamiya and al Al-Hamza.

47. The governorate of Thi-Qar is the poorest governorate of Iraq and one of the most underdeveloped. The level of poverty varies between the various districts, and is most acute in the marshland areas. The economy has remained relatively rural compared to other regions in Iraq; however the agricultural sector fails to provide jobs and income for the governorate's population, while the local agricultural based economy of the marshlands, based on traditional fishing and farming, has been devastated by their draining. During the past decade, the public sector and construction have been major job providers, but low wages have been an issue for public service workers. Tribal identity and structure remain strong in Thi-Qar. A patchwork of tribes, many of them descendants of the Muntafiq tribal confederation that governed the area in Ottoman times, is living across the governorate. The governorate of Thi-Qar is divided into five districts: Al-Chibaysih, Nassiriyah, Al-Rifa'i, Al-Shatra and Suq Al-Shuyukh.

48. The governorate of Thi Qar hosts a number of IDPs. The majority of these IDPs fled the violence resulting from the militant takeover of large parts of north-western Iraq in the summer of 2014. Rented housing and the host community (friends, relatives and non-related families) are the main form of accommodation for the IDPs.

49. The governorate of Missan is located in south-eastern Iraq on the border with Iran. The Tigris River runs through the governorate and feeds the marshlands which once covered two thirds of this governorate. The marshlands of Miysan form part of the ancestral homeland of Marsh Arabs. Tribal bonds and identity remain strong in the governorate. The economy of Missan has long been based around agriculture, thought the productivity of the agricultural sector has suffered greatly from the destruction of the marshlands. The governorate is an important industrial center, hosting a range of factories that are mainly producing construction materials like gravel and cement. The crumbling infrastructure and a lack of investment however are hindering industrial development. The Halfaya oilfield is also located in Miysan and oil production started in 2012. The governorate of Miysan is divided into six districts: Ali Al-Gharbi, Al-Mejar Al-Kabir, Al-Maimouna, Al- Kahla, Amarah and Qal'at Saleh.

The Target Group and Targeting Strategy

50. The target group of the project would be smallholder households engaged with crop and livestock production, poor households who have been forced out of agriculture due to lack of access to adequate water and high levels of salinity in the soils, women-headed households interested in undertaking productive activities and youth interested in undertaking enterprises and income generating activities particularly centred around agriculture and the ancillary services critical to support agricultural growth. The project would also target the marshland communities who are engaged with fisheries, livestock and hunting in the wild to eke out a meagre livelihood.

51. Within each of the four project governorates, project activities would target those areas where the project has the potential to offer interventions to improve the livelihoods of the households through its package of interventions, areas where the poor are concentrated and from where demand is strong for project activities. However, within each governorate, the project would not spread its activities too thinly over a vast area. Thus an initial assessment based on the following would be made; (i) poverty profile; (ii) potential for agriculture development and off-farm enterprises; (iii) demand for project interventions and (iv) need for irrigation investments; and (v) contiguity. With the support of SARP, the Governorates in collaboration with the Directorate of Agriculture would make this assessment and identify the potential target districts and within them the administrative units in which the project would target individuals and groups and associations.

52. From the selected districts individual beneficiaries would be selected based on an eligibility criteria that would include the following; (i) smallholders with less than 50 dunums and or less than 5 large animals and 10 small ruminants; (ii) demonstration of demand to undertake the selected activity and (iii) willing to abide by the terms and conditions of partnerships identified by the project. Groups, Unions and Associations of men and women would also qualify to participate provided they include a minimum of 5 participants which include the project target group of smallholders, poor households, women and youth from these households or women headed households. The service providers recruited to interact with the target beneficiaries would ensure that the selected individuals and groups have a strong commitment to undertake the proposed activity and are willing to undertake the requisite training and abide by the terms of partnership.

53. Within the framework of the project's overall poverty targeting strategy, the project would focus particularly on ensuring the full participation of women and youth:

- **Women**: The project has developed a very proactive strategy for the participation of women in project activities especially recognizing that women have received a significant setback in Iraq due to years of conflict which has led to the deterioration of women's rights and confined many of them within the homestead in rural areas. The Project would have specific gender dis-aggregated targets and budget allocations, service providers with women staff to ensure outreach to women and integrate gender aspects in all reports. Each of the components would have an approach to encourage the inclusion of women and specific targets have been identified for them (Appendix 2). The identification of assets, skills training and enterprise development would be designed to address opportunities of relevance for women.
- **Youth:** The project would put in place special arrangements to target youth. This would be undertaken primarily by linking with Youth associations and Unions. Given the high unemployment rate among youth, opportunities for vocational and enterprise training, apprentice ship and job placement would be identified with the private sector especially in ancillary services that are critical for the agriculture sector. Those from among the young men and women who demonstrate their willingness and commitment to participate in innovative enterprise development would be provided technical assistance and access to assets. Exchange visits and learning tours would be identified for them where appropriate. The service providers would be given specific targets for participation of youth in different project activities.

54. The project area is home to a number of population groups with special status, be this for historical, political, religious or socio-cultural reasons. The most prominent of these are the Ma'dān populating the Mesopotamian Marshlands. Their precise number is unknown and estimates vary widely between "a few thousand" and 125,000-150,000 people.[25] Having had to abandon rice cultivation, they nowadays derive their livelihoods from fishing and handicrafts, whilst a sub-group has continued to rear water buffalos. There are several NGOs such as, 'Nature of Iraq', "Daughter of the Marshes" which are specialised in working in the marshlands and have been exploring economic opportunities with different people inhabiting this fragile and unique ecosystem and world heritage site. Poverty is severe in the marshlands; population groups in the Hammar Marshes, for example, suffer from a lack of clean drinking water, sanitation, health care and education facilities. A number of other minority groups are also present in the project area, which would be targeted as per their poverty status and income-generating potential.

55. The typology of the typical target households would vary marginally between one governorate and another but would include (i) poor irrigated date and vegetable irrigation farmers with small ruminant as an important contributor to income (Thi Qar and Muthanna governorates); (ii) Poor farmers producing cereal crops in irrigated areas which suffer from soil salinity conditions with small ruminant as an important contributor to income (Qadisiya governorate); (iii) Poor date palm producers with livestock as a secondary activity (Miysan governorate); (iv) the farmers of the marshlands; (v) Poor rural households, especially women headed households, engaged in various on farm and off farm income generating activities: and (vi) the youth who would be assisted with skills developed and enterprise development.

[25] Kubba 2011

56. Small livestock is arguably the single most promising activity for many rural households to invest in, followed by vegetable gardening and fruit orchards as well as dates. On the whole, low input agriculture offers a range of interesting options for IFAD target groups. Plastic houses have proven to be successful, if sufficient training on how to use and maintain them, is provided. Beekeeping is another activity that would be pursued as honey has an assured internal market. Apiculture is not new to southern Iraq, and has been promoted several times before. The key success factor seems to lie mostly in thorough training during which the potential beekeepers are made well aware of the implications of what maintaining their beehives entails.

B. Development objective and impact indicators

57. The overall Goal of the project would be to assist rural people overcome poverty and achieve food security through remunerative, sustainable and resilient livelihoods. The **Development Objective** would be to enable poor smallholder farmers to improve crop and livestock productivity, resilience to climate change and diversify incomes. The **project would** assist 20,000 rural households improve their livelihoods, incomes and food security through investments in productive infrastructure, adoption of improved crop practices and varieties better adapted to the conditions in the project area, improved livestock management practices, asset creation, and skill development. The specific impacts expected from the project include increasing people's economic status, improving production, improving market access and enhancing resilience to climate change.

C. Outcomes/Components

Outcomes

58. The project outcomes would include the following; (i) number of people experiencing economic mobility and changes in economic status including income, consumption, wealth, food diversity or nutrition; (ii) the number of persons reporting adoption of new & improved inputs, technologies or practices and (iii) the number of persons reporting an increase in production.

59. The project's intermediate outputs are expected to include the following; (i) improvement in irrigation & drainage infrastructure; (ii) enhancement in agriculture productivity and diversification through asset creation women farmers, women headed households and women entrepreneurs interested in off-farm activities; (iii) adoption of environmentally sustainable and climate resilient technologies and practices; (iv) increase in crop and livestock productivity; (v) increase in off-farm enterprise development and vocational skills; (vi) increase in new jobs created and employment generated; (vii) Increase in rural enterprises reporting an increase in profits; (viii) Increase in rural producer organizations engaged in formal contracts with public or private entities; (ix) rural producer organization members reporting new or improved services provided by their organization; (x) increase in capacity for processing and marketing of agriculture produce especially dates, seed potatoes and high value vegetable crops. Gender equity, integration of youth and environmental sustainability would be pursued as key cross-cutting themes in the project design.

Components

60. The Smallholder Agriculture Revitalization Project (SARP) would be implemented over a 7 year period and would consist of two main components namely; (i) Climate Resilient Investments, and; (ii) Agriculture & Livelihood Diversification.

Component 1: Climate Resilient Investments

61. Climate **Change** poses a growing threat to the agriculture sector especially because of its impact on the length of the growing season, reduction in precipitation and increasing water scarcity. This component would respond to this threat by supporting irrigated agricultural production, within the

context of the growing scarcity of irrigation water, and by strengthening capacity at the national level to monitor climate change patterns and provide relevant information to key stakeholders and farmers through an early warning system, so that they can adapt and take risk mitigation measures. It will comprise two related sub-components; (i) Rehabilitation/ completion of irrigation Infrastructure and (ii) Knowledge Management and Institutional strengthening for climate resilient agriculture.

62. **Sub-Component 1.1: Modernisation/rehabilitation of irrigation Infrastructure:** The main emphasis of the subcomponent will be on micro and small irrigation networks, the component would rehabilitate and complete existing networks. There is potential in many of these Governorates to invest in irrigation infrastructure that was left incomplete by the Government due to its financing constraints and the political instability in the country over the last two decades. As a result the profitability of the supported small farms/agri-businesses will increase and the sub component will also contribute to the improvement of the income of the rural poor who will get access to the jobs created by the expansion of these agribusinesses, particularly as wage labour for the production of cash crops.

63. The irrigation networks to be financed under the sub component will be typically small irrigation schemes that cover a compact geographical area and which will be fully rehabilitated/modernized. The project will support investments in those irrigation channels that will remove the bottlenecks hampering the regular access to water and the establishment of village based profitable agri-business.

64. The Directorate of Water Resources at the Governorate level would identify the networks to be rehabilitated. It is estimated that given the resources available for this sub-component around 33,250 dunums or 8130 hectares can be irrigated with the selected networks. These networks would be identified by the Governorates in close coordination with the Directorate of Agriculture and Directorate of Water Resources in each Governorate. A preliminary list of networks has already been developed and would be finalised prior to project appraisal by the Governorates. Selection criteria for prioritising irrigation schemes for rehabilitation were developed during the final design workshop and included in the Water and Irrigation Resource paper that will be incorporated in the Project Implementation Manual (PIM). Training of key stakeholder staff and farmers in modern water and irrigation management techniques is provided for.

65. Training of key stakeholder staff and farmers in modern water and irrigation management techniques is provided. During the first year of project implementation technical design including hydrological assessment will be conducted for the selected schemes. The projected shift to high value and more labour intensive crops will be one of the key aspects to be evaluated in the prioritization of investment proposals as it will not only provide the basis for the assessment of the IRR but also of the potential for employment generation. There is an established system in the country for the operation and maintenance of these networks and would be the responsibility of the MWR. The lessons learned from IFAD's interventions in countries, similar to Iraq, which have been practicing agriculture for a very long time, is that imposing a standard set of institutional arrangement for water management practices will not deliver the expected results. It's rather more effective to put the focus on considering and upgrading of local water management arrangements, which are in place.

66. Sub-**Component 1.2: Knowledge Management and Institutional strengthening for climate-resilient investments;** The Ministry of Environment is interested for developing a climate change adaptation strategy for dealing with the agriculture sector. The project would assist the Ministry in this endeavour. In the context of such a strategy, the Ministry of Agriculture has established an Agro Meteorological Monitoring Network with over 100 Agro-Met stations installed across the country from which it receives regular information on weather patterns; 40 remote monitoring stations with communication via EUMETSAT Satellite; and two receive sites that collect data in the central locations of Baghdad and Erbil. The system measures wind speed and direction, solar radiation and sunshine hours, barometric pressure, etc. Some of the parameters also include dew point, precipitation, soil temperature, soil moisture, leaf wetness and evapotranspiration.

67. The project would upgrade the receive system and install an additional six remote monitoring stations needed for providing greater resolution in the data. There is a team of young technical specialists working on receiving and analyzing the data. The team has received initial training regarding the operation, maintenance, troubleshooting and installation of the system. The staff needs additional training and the project would arrange technical training for the staff to strengthen their

programmatic and analytical capacity. In developing the early warning system, the project would assist the Agro Meteorological Monitoring Network to work closely with farmers to understand how they assess and identify changes in weather patterns, growing seasons, planting and harvesting dates and other information useful for them. A technical specialist would be recruited under the project to develop a plan for the dissemination of the early warning system to farmers. SARP would provide support to this component through the use of the Adaptation Fund. The system will facilitate early warning access to farmers to critical information about climate related risks (e.g. predicted shortage of water for crop production; predicted livestock disease risk) through media information and communication technologies (MICT) and SMS message services to support decision-making in the planning and management of the crop production, livestock production, sanitary and veterinary, etc. This will be coupled with a capacity building program to prepare institutions and beneficiaries in the implementation and use of the system.

Component 2: Agriculture & Livelihood Diversification

68. The purpose of this component would be to assist poor households enhance their level of food security and diversify their incomes from agriculture as well as improve their skills and assets to enable them to engage in off-farm income generating activities. The component would consist of two subcomponents; (i) Crop, Livestock & Off-Farm Development and (ii) Skills Development & Capacity Building.

69. **Sub-Component 2.1: Crop, Livestock & Off-Farm Development:** For crop production, the project interventions would focus on enhancing the productivity of high value crops and vegetables and other horticulture crops such as date production. The project would provide smallholder farmers, women and farmer associations and cooperatives, grants that would be used establish crop , livestock and off-farm enterprises. The selection of individuals, groups or associations would depend upon the capacity, risk appetite, level of investment and feasibility. The PIM would elaborate the selection criterion at each level in more detail. The packages could include assistance in installing improved irrigation systems, small greenhouses for high value vegetable production, apiculture, fisheries and livestock packages for women from poor households, etc., identified on a demand driven basis by the smallholder men and women farmers and their groups or associations. The off-farm activities could include a wide range of enterprises based on local demand but typically are expected to include for women establishment of small retail stores, bakeries, food catering and processing businesses, beauty salons, handicrafts, stitching, etc. For men, it could include kits that would assist them in gaining apprenticeships as carpenters, plumbers, electrician or mobile outlets or repair, etc. The groups would include at least 5 men or women to undertake collection production and marketing activities and could consist of Unions, Cooperatives or informal associations or groups. The beneficiaries would be given an asset and other needed inputs under this sub-component. The value of the asset and inputs would, on average, be around USD 1500 per person or USD 10,000 for groups or associations. The upper limit could be relaxed if justified by a higher number of beneficiaries. Beyond this limit the beneficiaries would have to contribute their own funds in cash or kind. It is expected that the project would benefit around 7400 households to get a productive asset that would increase their incomes on a sustainable basis.

70. The grant packages will be mostly for capital investment and for purchasing of goods and equipment. Nevertheless, in order to ensure sustainability and in line with the methodology of graduation from poverty, the grant package might include expenses allocated for working capital (up to 25%). Small farmers, youth and women will be supported on off as well as on farm activities. The project envisages to allocate funds to conduct rapid market assessment for the grant packages that will be distributed to farmers. Also, the first year of project implementation will be used to conduct market assessment for some high value products, such as date palm and dairy products.

71. **Sub-Component 2.2: Skills Development & Capacity Building**: To build the technical and business capacities of beneficiaries under Sub-Component 2.1, the project would provide several types of trainings; (i) technical and business training associated with the provision of the asset; (ii) training in climate resilient approaches and technologies and (iii) vocational training for young men and women; and (iv) management training for community groups and farmer organizations and (v) Public Sector institutional Strengthening. It is expected that the project would train around 4900 individuals in the project area of which at least 1500 would be women. At the same time, it would offer

institutional capacity building for Government extension staff involved in the implementation of Sub-Component 2.1, including learning and exposure visits. To maximize the impact of limited budget resources, the sub-component will not provide generic capacity building but use NGOs and other service providers which will be trained on how to conduct training needs assessments to focus on specific skill gaps.

72. ***Technical & Business Training related to Assets***: The first type of training would be provided to all those who have been selected to receive an asset for on-farm or off-farm activities. This would include training in technical, managerial and business aspects and would precede all provision of assets. Community groups and associations would also be given training in management and business plan development for the operation and maintenance of collectively owned assets such as post-harvest facilities, food and dairy processing, apiculture, plastic houses, fisheries, etc. In all cases, each beneficiary would be assisted in closely examining the economic and technical feasibility of their enterprises and the monitoring of the expenditure and revenue streams. There are several NGOs in the project areas which have the capacity to provide these trainings and hand holding support on an individual and collective basis. UNIDO has been providing support in one of the project governorates in Thi Qar through its Enterprise Development and Investment Promotion Programme since 2008. UNIDO has maintained its presence in South Iraq and has indicated its willingness to provide support to the project.

73. ***Training in climate resilient approaches and technologies:*** The second type of trainings the project would provide would be for the promotion and adoption of climate resilient approaches and technologies that would enhance crop and livestock production. The project would promote crop rotations away from monoculture to a shift to high value fruit and vegetable crops. The training would also include improved irrigation practices and on-farm water management to deal with the growing water scarcity in the area. The project would also provide trainings for the introduction of saline resistant wheat, rice and fodder crop varieties which have been developed in Iraq but have not been widely disseminated. The training would also focus on the date palm, which is the most common and widely cultivated plant in the arid regions of the Middle East and is an important crop for smallholders in Iraq. Pests such as Dubas Bug, Borers, and Fungal diseases directly affect the product but others such Red Palm Weevil (RPW) Rhynchophorus ferrugineus which have invaded the country, pose a real threat to the date palm wealth in Iraq. The project would collaborate with the Food and Agriculture Organization to use their experience of Training of Trainers for the surveillance, monitoring and control of the disease through using Integrated Pest Management. The interventions would also include support to livestock extension and health services including training of small ruminant holders in animal nutrition, animal health, integration of livestock into farming systems and the use of crop residues in improved livestock feed.

74. ***Vocational Training for ancillary services to support on-farm activities:*** The third type of training would support the young men and women in these governorates who have very limited opportunities for productive employment within the agriculture sector or are under-employed or unemployed but motivated to pursue vocational training or practical training to establish their own income-generating activities (IGAs) or enterprises. The types of IGAs would be based on local opportunities and demand and could include operation of farm machinery services, rural handicrafts and small-scale rural services such as training as para-vets, operators of agriculture machinery, operation of drip irrigation systems, generators, hatcheries, or carpentry, electricians and plumbing. The Government's vocational centres could also be used in providing support for the training. UNIDO and other NGOs have developed tailored training programmes for the youth in a wide range of vocations. The Iraq Programme is the second largest UNIDO country programme. UNIDO has also recently launched a project on increasing the competitiveness of existing small and medium enterprises by integrating the traditional UNIDO approaches in local and foreign investment promotion with the use of an innovative e-learning platform. Where relevant the project would make use of this experience available locally.

75. ***Strengthening Community Organizations:*** The project would support the range of small-farmer unions, associations and cooperatives that exist in the project area. Some of them like the Beekeepers Association, Poultry Union and Youth Association have gradually grown in the area but have been provided very little support or capacity building. The Poultry Union has in particular been assisting small poultry producers with undertaking poultry production. The services that they have provided has enabled their members to capitalise on economies of scale and reduce transaction costs

and become much more competitive. Women's groups have also organized into small groups in a few cases but have had few opportunities to organize and grow. The management and members of these groups would be provided tailor made support under the project. Some small local NGOs which have been working closely in providing safety nets to the poor, as well as a range of training and social sector services would be strengthened to support local communities on a sustainable basis.

76. ***Public Sector institutional Strengthening***: The project would provide opportunities for the staff from the Directorate of Agriculture in the project governorates and other relevant staff to avail of special training opportunities and learning and exposure visits especially within the region. The National Programme Coordinator would develop the training programme for the public sector agencies in coordination with the officers of the Directorate from the governorate. It is expected that 300 people from different agencies could avail of specific trainings in addition to the learning and exposure visits. South-South and Triangular Cooperation (SSTC) would be explored as a tool to understanding how countries in the region with similar socio-economic profile have resolved some of the challenges in agriculture and rural development. These areas could include understanding how different countries have dealt with some of the following issues important for Iraq; (i) climate change issues and developed early warning systems (Nepal and Bangladesh); (ii) implemented integrated pest management approaches especially for the elimination of the Red weevil in date palm (Iran and Kuwait); (iii) development of the cooperative movement (Morocco). Visits would be organized to these countries which would be followed by the key resource visiting the project areas.

77. SARP will be IFAD's first engagement in Iraq, and in this regard, the policy approach will be cautious, and will be based largely on exploring new (in the context of Iraq) implementation approaches under the project, learning lessons from them, and assisting Government to take them on board in their policies and practices. Nevertheless, the project, through the funding from the Adaptation Fund, will seek to mainstream Climate Change adaptation strategies in the project and try to create cross-sectoral cooperation between relevant ministries.

D. Lessons learned and adherence to IFAD policies

78. **Lessons Learnt:** IFAD support to Iraq has so far been limited to grant financed regional agriculture research projects implemented by ICARDA. While few donors have worked in the agriculture sector in Iraq and most have concentrated on humanitarian interests or large infrastructure projects, there is relevant experience that can be gleaned from the experience of IFAD investment projects in NEN countries and from those of a few donors who have worked on some aspects of agriculture. Some of the important lessons that emerge from this analysis which are critical given the fragility of the country and the neglect of the agriculture sector include the following;

- *The implications of fragility*: Responding to the lessons that IFAD has learned through its experience in fragile states, the corporate-level evaluation on fragility and the IFAD strategy for engagement in countries with fragile situations, the current project has been kept intentionally simple and flexible to accommodate the weak institutional structures in the country and the conflict in the North, which has its reverberations across the country. The strong focus of the project on rehabilitating livelihoods and building capacities and local institutions stems from the fragility of the country.
- *Policy and institutional framework*: In advance of the project design process, IFAD conducted a brief review of the policy and institutional framework in the country. The project design responds to the institutional weaknesses found; avoids engaging directly in the cereals sector, in which policy distortions are extreme; and seeks to establish a basis for an eventual policy dialogue in the irrigation sector, where much needs to be done to establish an enabling policy environment.
- *Proven technologies and approaches*. A series of national agriculture development programmes in Iraq have tested and demonstrated the effectiveness of a wider range of climate change adaptation approaches and advanced technology packages. Among the promising validated approaches and packages are supplemental irrigation for a number of crops for increased water use efficiency, while increasing productivity; integrated pest management and organic fertilization practices for date palm; diversification of rainfed integrated crop-livestock production systems, to spread the risk and increase revenues; and for small ruminants, the application of holistic packages to improve sheep flocks' reproductive performance, increase fertility and twinning rates, increase milk production and reduce mortality.

- *Diversification* goes beyond agricultural production systems, and points also to the importance of including the non-farm rural sector as key for employment generation and poverty alleviation. While the agriculture sector is key in rural areas, many of the districts in the south of the country have over the years significantly lost their potential for agriculture production due to reduction in water supply and increasing levels of soil salinity. These households have limited options within the agriculture sector and need to identify livelihood opportunities outside the agriculture sector.
- *Recognising the strengths and weaknesses of collective action in developing countries*: Assessing the capacity of farmer institutions is key for project activities that require collective or group action. However, recognizing that the cooperative movement has not been a strong movement in this part of the world will help in realistically identifying the limits of group action, avoid elite capture and at the same derive some of the benefits of group action such as reducing transactions cost, aggregating produce for collective marketing and bargaining and achieving economics of scale. The project will demonstrate that a participatory approach and collective actions work better than a top-down one and this is expected to lead to enhance the demand for decentralisation on the part of both rural citizens and Governorate staff.
- *In the crop sector emphasis has to be on both production and post-harvest and marketing activities:* Too many projects have by focusing only on enhancing production and ignoring the capacity of the farmer to undertake post-harvest and marketing activities have as a result failed to appreciably enhance incomes of farmers. Farmers everywhere typically have a lagged response to production decisions as they are generally responding to the previous years market condition in making cropping decisions. In this regard it is better to begin from the market backwards in guiding farmers on how to assess market demand.
- *Recognizing the risk mitigation strategies of small farmers and designing to encourage their participation:* Small-scale farmers are willing to adopt improved production technologies, but they need to see results first. Given small scale farmers are risk averse, incentives to pay for the first year the cost of incremental inputs and services of the new technologies, are essential to help taking risk.
- Capacity building and training in the adoption of new technologies and assets is key for the effective use of any investments and needs to be accompanied by a comprehensive course of training and skill development. There are many examples of different agencies providing assets to the rural communities and introducing new technologies without proper training in the use of those technologies.
- Dedicated resources, well specified targets and staff are key for the participation of any marginalised target group such as women, women headed household, youth and other marginal groups.

79. **Adherence to IFAD Policies**: IFAD's fifth Strategic Framework covers the period 2016-2025. It serves as an overarching policy guideline to provide direction to IFAD's work, and as a key instrument for consolidating IFAD's development effectiveness. The current project is well aligned to meeting its overall goal and is well aligned with its five principles of engagement to consistently aim to target and benefit the largest number of poor rural people possible, empower them socially and economically, and promote gender equality. IFAD will place a premium on innovation, learning and scaling up of successes and, in the process, leverage effective and efficient partnerships where comparative advantages are exploited for greater impact. SARP is also well aligned to achieving IFAD's strategic objectives in its key areas of thematic focus.

80. Following commitments made under the Consultations on the Ninth and Tenth Replenishments of IFAD's Resources, and the corporate-level evaluation on fragility, the project explicit incorporates a number of the key elements of IFAD strategy for engagement in countries with fragile situations. The design benefitted from the guidance tools such as those targeting, gender, small farmer organizations, community development, climate change and the private sector. IFAD's poverty targeting and gender sensitive design and implementation guidelines updated in January 2013 were also completed for the Project and are provided in Appendix 2. Women and youth are given a central role in the project design and dedicated staff, specific targets and separate budget line items have been allocated for them.

81. Smallholder Farmers' Organizations (FOs) are considered strategic partners for IFAD, not simply as project beneficiaries but as institutions that deliver services to their members, speak on their behalf and are becoming key actors in social and policy dialogue at the local, national and international levels. The project retains this focus on farmer's organizations and community driven development in its approach in the implementation of the project. Given the local social development context, separate women's groups and associations would be formed which would work with women.

82. The current design is in full accord with IFAD's Private Sector Development and Partnership Strategy, which places strong emphasis on further developing and strengthening the linkages of smallholder farmers with the private sector. The project would follow an approach that works backwards from the market to ensure that there is a demand for the products of the smallholder and that market links are established with private firms prior to initiation of any activities.

83. **Environmental and social category** The project is considered to be **Category B**. Overall, the project incorporates ASAP and AF funding to upscale and expand best practices developed by NARS, ICARDA, and FAO, through several regional agriculture research for development (R4D) projects, in terms of improving water availability and efficient use through the rehabilitating of irrigation and drainage infrastructure, and applying environmentally-sound agronomic systems and technologies. The project will promote participatory and capacity development tools with a gender focus both at the national level (institutional development and policy improvement) and at the local level.

84. **Climate risk category** IFAD's climate change strategy recognizes that the speed and intensity of climate change are outpacing the ability of poor rural people and societies to cope. That poor rural people are in the front line of climate change impacts, and that the ecosystems and biodiversity on which they rely are increasingly degraded, are both particularly true in the southern Governorates of Iraq. The project incorporates IFAD's assessment that climate-related risks, and potential opportunities, can be addressed more systematically within its projects and policy advice.

85. On the basis of a detailed climate change vulnerability assessment, undertaken in collaboration with WFP the project's climate risk classification is Moderate. The project will support the implementation of priority adaptation measures identified by the Government of Iraq and will use ASAP and AF funding to: (i) support institutional and technical development of the MoA for the expansion and effective functioning of the meteorological monitoring network and the setting up of early warning systems, and to the MoE for the development of a a climate change adaptation strategy for the agriculture sector; (ii) increase water use efficiency in irrigated agriculture through water infrastructure rehabilitation and the promotion of micro-pressurized efficient irrigation technologies; (iii) Promote the use of integrated methods for agricultural pest management with special focus on the date palm disease, and reduce reliance on pesticides and herbicides in agricultural systems; (iv) promote crop varieties which are low water demanding, and resistant to drought, high temperatures, pests, and soil salinity, as well as livestock breeds climate-adapted, disease-resistant and highly productive; (v) and support income diversification opportunities (e.g. beekeeping, post-harvesting storage equipment to reduce the perishability of the produce, small green house, processing and marketing of agriculture produce especially dates, seed potatoes and high value vegetable crops to reduce the risk of climate shocks due to the dependence on just one economic activity, with especial focus on women and youth. Social,

86. **SECAP Consideration in the Project Design** The project has fully integrated the Social Environmental and Climate Assessment (SECAP) recommendations into design. In fact, SARP fully integrates in the project design the enhancement of environmental and social resilience in the target areas, with special focus to gender equity and integration of youth. The project components addressed the most important adaptation measures for the agriculture sector proposed in the emerging national programs of the MoA, namely in terms of: (i) water use efficiency through investments in improved irrigation infrastructures and efficient irrigation technologies, (ii) the transferring of know-how to project beneficiaries on climate-resilient agronomic systems and technologies and the upscaling of successfully tested by NARS and other regional partners, the support to income diversification opportunities with a climate-risk reduction approach, and (iii) the support to institutional and technical development of governmental organizations at national and local level to mainstream CC adaptation in policy development, and establish effective early warning systems.

III. Project implementation

A. Approach

87. ***Guiding principles for engaging in the most fragile situations:*** The starting point for the project design and implementation approach are the guiding principles for engaging in the most fragile situations: (a) risk management and resilience; (b) focus on root causes (within IFAD's mandate and comparative advantage); (c) gender mainstreaming and targeting; (d) institution-building to promote trust and social cohesion; (e) flexible and responsive resources, instruments and approaches; (f) strategic and complementary partnerships; and (g) results measurement and learning. Programme activities would enhance the resilience of target communities and enable them to manage risk and would be resilient to the effects of conflict and other shocks. In addressing some of the underlying roots causes of the fragile situation, the project would foster inclusive community-based organizations and in partnership with public sector institutions at the governorate level capitalise on the decentralised structures to encourage effective and responsive local government service delivery. The project would engage with communities on long-term development programmes to achieve long-term development outcomes. It is expected that the funding to the governorates through the project would serve to highlight their credibility with the people and build a relationship of trust so critical for dealing with the root cause of the conflict and strife in the country.

88. **Preparatory Phase**: Given both the lack of information and quantitative data upon which to base the project design, and the lack of project management experience in Iraq, a sequential approach would be adopted both to further refine the project design and ensure that implementation arrangements are in place prior to the start of the project activities on the ground. For this purpose, much of the first year of the project would be used to undertake preparatory activities, prepare implementation manual, recruit and second project staff, establish the various steering and advisory committees, recruit and brief service providers, guide staff on IFAD procedures and processes, prepare work plans, etc. The project would have four stages:

- Stage 1: Preparatory and Diagnostic Phase: This would entail recruitment and training of project staff, holding participatory dialogues with local communities to assess constraints, needs and market opportunities, prepare feasibility studies and technical designs and coordination with UN agencies based in Basra to identify opportunities for collaboration and synergy;
- Stage 2: Institutional Development: The investments in infrastructure, management capacity and feasibility studies and skills would be used as an entry point around which individuals and institutions would be strengthened and management and entrepreneurial capacity of local people would be built;
- Stage 3: Production and Livelihood Intensification: This stage would begin with providing assets to individual households and groups and guiding them through the process to initiate sustainable livelihoods and links with markets;
- Stage 4: Sustainability and Exit: This phase would be expected to be reached when the individuals, institutions and rural enterprises need less and less support from the project and start becoming sustainable through profits that accrue.

89. The context in Iraq warrants a ***differentiated and flexible operational approach*** to project management, project roll out and supervision because of its classification as one of the most fragile countries. Implementation and supervision procedures would be fine-tuned as required and would keep in mind the evolving security conditions in consultation with FSU/ UNDSS. The project has kept the design simple and has specified procedures that recognize the challenges of working in the current context. Recognizing the limited capacity of local public and private sector institutions, the project implementation arrangements count on the combined capacity of both public, private and community institutions to assist in project implementation. The supervision arrangements also take the local context into account and propose arrangements which would ensure that the teams assigned to undertake supervision can travel to the field given the heightened travel restrictions in some of the areas. However, the quality of fiduciary management or social, environmental and climate safeguards would not be compromised and would strictly comply with IFAD and Government guidelines. The

project also makes a sharp distinction between development assistance and humanitarian assistance and would only intervene in development interventions and would refer all cases qualifying for safety net programmes to the Directorate of Social Welfare or to the International Office of Migration (IOM) which is working on a community stabilization programme and supports host communities as well.

90. ***Achieving, measuring and learning from results:*** The project recognizes that given the hardships suffered by the local communities, it would be critical to design investments that are simple, easy to implement and show quick results and demonstrable impact. This is key for the credibility of IFAD and local governments that in some cases have been recently decentralized and to justify incurring the higher levels of risk and higher cost of implementation. The need to learn from IFAD's engagement would be crucial not just for the organization, but for Governorates which could replicate the experience over time. Given limited capacity, the project would explore options to develop monitoring and evaluation (M&E) processes and impact assessment methodologies that are simple and cost-effective, yet capable of capturing coherent data on results. The outcome and impact level assessment would also include indicators on institutional development and women's empowerment, given the centrality of these issues to fragility.

91. **Participatory and Demand Driven Approach**: The implementation approach of the project would be demand driven and would follow a process in which individual and group beneficiaries would participate in selecting their activities. A diagnostic process would be adopted and implemented by the service providers hired especially to assess individual and group investment opportunities and develop plans based on their potential, aspirations and capacities. The project would tailor project activities and services to the needs of the target beneficiaries and ensure their capacity to operate and manage the services for long-term sustainability. The project would ensure close partnership with each of the beneficiaries and rural community institutions to clearly identify the roles and responsibilities of each, the terms of partnership agreed by both parties, implementing arrangements, roles and responsibilities of each and if required agree on MOUs with Unions, Associations, groups and individuals to clarify expectations and agree on targets and monitoring and reporting responsibilities. Through awareness raising and demonstrating the benefits of participatory approaches, the project will increase local demand for effective and responsive local government service delivery. In order to succeed, it will enhance existing downward accountability and citizen feedback mechanisms and thus contribute to a higher level agenda of improving governance whilst improving prospects of sustainability.

92. ***Strategic and complementary partnerships***: The project design recognizes that partnerships help IFAD to manage risks and enable it to stay engaged in more challenging contexts because they provide the means to address root causes of fragility that lie outside IFAD's areas of comparative advantage. The IFAD Partnership Strategy would guide IFAD's use of partnerships in fragile situations. Partnerships with the Rome-based agencies (RBAs), would be prioritized, as would partnerships with other development partners with strong implementing capacity, such as trusted civil society organizations. The project design includes partnership with UNIDO to provide support in management of micro-enterprises, with FAO in disseminating the IPM technologies for date palm and SSTC, as well as synergy with UNICEF which is providing complementary social sector services to the people of the marshlands. The project would also coordinate with IOM to identify and locate IDPs should additional funding become available to assist them. The project also envisages using the local farmer Unions, Poultry Unions and the private sector involved with vegetable marketing, dairy processing and packing and processing of dates. Partnerships with humanitarian agencies specially IOM, WHO, UNICEF, WFP, etc., and civil society are included as a key strategy for bridging the humanitarian-development gap.

B. Organizational framework

93. **National Level:** The Ministry of Agriculture would be the lead agency responsible for the implementation of the project. The Ministry of Agriculture will implementation of the AF funded activities through direct and regular coordination with the Ministry of Health and Environment. The project would have a ***Project Steering Committee*** (PSC) at the National Level which would be led by the Deputy-Ministry of Agriculture and have as its members the Director General of Ministry of Environment and the Director General Ministry of Water Resources, Director-General of Planning and the Director-General of Planning of the Ministry of Agriculture. The PSC would also include technical resource people to be nominated by the Ministry of Agriculture. The PSC would meet at least once a

year to approve the programme and provide guidance on key aspects. The National Project Coordinator would be the Secretary of the PSC.

94. A ***Project Management Team*** (PMT) would be established in Baghdad and be responsible for overseeing implementation of the project. The PMT would be led by a National Project Coordinator . He/she would report to the PSC and would be assisted by a Financial Officer, a Procurement Officer, a Monitoring and Evaluation Specialist who would coordinate the reports from the Governorates to present quarterly statistical reports and annual progress reports on the project. The PMT would also include a Climate Change Adaptation Specialist (CCAS) who would be responsible for implementing the AF funded activities in coordination with the Ministry of Environment and would assist in developing an early warning system based on discussing with farmers what would be relevant information to provide them. The PMT will prepare a draft Project Implementation Manual (PIM) acceptable to IFAD and submit it for approval to the PSC.

95. **Governorate level:** The Director of the Directorate of Agriculture would assume the overall responsibility for the project, at the governorate level. The structure would include an ***Advisory Committee*** that would advise the Department of Agriculture in each Governorate on key technical, social and institutional aspects of the project during implementation. The Governorate level Advisory Committees will comprise: (max 11 people with at least 4 women):. The Governorate Director of Agriculture as chair, the Governorate Director of Water Resources, the Department of Environment, The Governorate Council representative (a woman), Business Representatives of 3 key Value chains (including women), NGO representatives (2) including women and a Representative of an Agriculture University. The Department of Agriculture could co-opt key resource persons as and when required to provide guidance and advice.

96. A ***Governorate Coordination Team*** (GCT) would implement and coordinate project activities. The GMT would have a dedicated Governorate Coordinator who would report to the PMT and would be responsible for day- to-day implementation in each governorate. The staff of the GCT would include a Training and Community Organizer and a Monitoring & Evaluation Officer. The Directorate of Water Resources would implement the irrigation investments. The team would be supported by a competitively recruited service provider who would be selected from local NGOs or private sector firms that would be responsible for identifying the target group and supporting them in the implementation of the various project activities in coordination with the Department of Agriculture Extension. Short Term Technical Assistance would be used for any specific assistance during project implementation. However, the service provider and technical assistance would be supported by IFAD financing. The project would also provide vehicles, office equipment, operation and maintenance and support all field activities.

Planning

97. The design process to date has had little hard quantitative data upon which to base the project, In addition, this is IFAD's first investment in Iraq and the Government, and the implementing partners are not familiar with project implementation modalities. Furthermore, the country is suffering from extreme fragility and conflict and requires a flexible approach to project implementation and supervision arrangements. For all these reasons, the first year of the project would be a preparatory year, aimed at building the capacity of the different implementing partners for project management and procurement, and so establishing the basis for subsequent project implementation.

98. The start of the process would be the recruitment of staff and identification of service providers. There would then be the conducting of a Start-up Workshop, aimed at sensitizing and training the MoA, the Project Management Team and the Governorate Management Teams and other potential implementing partners, such as the service providers, to the project objectives and scope. All participating partners would be oriented to the process of planning and annual work plan preparation as well as the monitoring and evaluation system of IFAD. The staff of the project would also be provided an opportunity to learn about IFAD's systems of procurement, financial management, AWPBs and monitoring and evaluation. The first six months would be spent in establishing the project implementation arrangements and competitively hiring the service providers for implementation and project supervision. During this initial period, the staff would also be prepared in the preparation of the PIM, the next AWPB and the M&E system, finalizing the selection criteria (for irrigation schemes, for grants, etc.), and selecting project districts within the selected governorates and understanding and making the arrangements for the baseline survey and putting in place a monitoring and evaluation

system (further details based on the findings and agreements reached at the FDR Workshop held in Amman May 23 – 25, 2017 are presented in Appendix 5).

99. The AWPBs and corresponding procurement plans would be the project's principal planning instruments. The AWPB would be used as a tool for specifying implementation priorities, identifying the financial and procurement requirements and establishing a work plan for the staff. The AWPB would constitute the basis for release of funds and for financial management. The National Project Coordinator in the PMT would assume the overall responsibility for the preparation of the AWP/B. He/She would coordinate with the Governorate Coordinators for the purpose. The AWPB would be prepared at a time which would enable its inclusion in the Government of Iraq's budget each year and would be submitted six months prior to the start of the next Financial Year in June each year. The AWP/B would be submitted to IFAD for its no-objection prior to its inclusion in the Government budget. Appendix 6 gives some more details of the planning, monitoring and evaluation aspects of the project.

Monitoring and evaluation

100. The Project's Logical Framework provides indicators for Project implementation along with their corresponding means of verification. The M&E system is expected to generate quantitative and qualitative information on the project's performance in a form that would compare physical progress against the planned targets and allow assessment of performance and undertake any remedial action if required. The project uses IFAD's revised RIMS framework to enhance the measurement of IFAD's results at the outcome level. The monitoring and evaluation indicators have been disaggregated by gender. The project team would fine-tune the progress and performance and impact indicators of the project at the Start-Up Workshop with support from IFAD, if required. The Project Management Team would define targets and indicators for subsequent years annually as part of the internal planning processes and build on the experience gained as the project evolves. The development of the SARP M&E system will draw on key lessons from relevant fragile country situations in order to ensure that the system is suitable and practical in this challenging project environment.

101. The overall responsibility for the M&E activities would be assumed by the National Project Coordinator who would be assisted by the Monitoring and Evaluation Officer at the national level and the M&E officers at the Governorate level in preparing all progress and monitoring reports. Given the limited capacity for monitoring and evaluation overall in the country especially among the NGOs and some of the local partners who are expected to partner with the project, the project would select strong monitoring and evaluation staff and provide them proper guidance on IFAD's RIMS and provide guidance on the statistical and narrative report formats.

102. A Third party would be contracted to undertake a ***Baseline Survey*** that would be conducted during the first year of the Project. IFAD would provide the PMT guidelines in developing the terms of reference and the household questionnaire for the baseline survey. Assistance would be sought from IFAD's newly established Strategic Planning and Impact Assessment Division if required. **Beneficiary feedback surveys** would be conducted in year 3 and year 6 through a Third Party to track some intermediate outcomes. A ***Mid-Term Review*** would be carried out towards the end of the Project's third year. The review would cover: (i) physical and financial progress as measured against AWPBs; (ii) progress in the implementation and emerging outputs and intermediate outcomes of the irrigation infrastructure schemes; (ii) assessment of the efficacy of the institutional development and capacity building activities; (iii) progress in crop and livestock productivity through provision of assets, training and market linkages; (vi) progress in establishing off farm income generating activities providing ancillary services for agriculture growth (vii) implementing of climate change resilient activities; (vii) the participation of women and the emerging outcomes reported by them. Moreover, and based on the updated RIMS guideline the project will conduct Annual Outcome Surveys after the Mid-Term Review.

103. **Final Evaluation:** An independent Final Evaluation would take place three months prior to the Project completion date, and would assess overall project outreach, outcomes and impact. The final evaluation would also review the sustainability of results and the potential for scaling-up. The final evaluation would provide recommendations based on lesson learnt that would be taken into consideration while designing similar projects in the future in similar contexts. The Final Impact

Assessment would be undertaken by a neutral agency with no previous involvement in project implementation. The Terms of Reference for this evaluation would be prepared by IFAD.

104. During project implementation, weak institutional capacities and low level of coordination might be a constraint for collecting consistent data on a regular basis at the Governorate/District levels. In this regard, the project and the M&E Specialist will play an important role in building the capacity of government staff and facilitating the coordination among different Governorates on data collection and analysis.

Learning and knowledge management

105. Given that this is the first IFAD loan financed project in the country, the compilation and dissemination of project information, experiences and results on an on-going basis for the country and for IFAD headquarters are important. The project would package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, and web). This knowledge-sharing process would be supported by a well-focused series of workshops and joint learning events and visits.

106. The overall responsibility for Knowledge Management and communication would be shared by IFAD and the PMT in Iraq. The PMT would coordinate with the Governorate Coordinators and the M&E Officers in identifying specific case studies of interests which illustrate how the project activities have had an impact on rural livelihoods. The PMT would be assisted by the project Service Providers in the preparation of special case studies and Learning Notes, which would play an important role in informing the project implementation approach and, eventually, broader policy dialogue. These would be shared more widely by IFAD through its various tools for sharing the knowledge gleaned from IFAD-supported projects and programmes such as through the use of what is termed as “Learning Routes" with the objectives of valuing local knowledge and facilitating the development of platforms in which experiences are shared and as a complementary model for knowledge transfer among development partners

C. Financial management, procurement and governance

107. **Overall risk assessment**. The country risk is rated as High. Transparency International’s (TI) Corruption Perception Index ranked Iraq 166th out of 176 countries in 2016 with a score of 17/100. The analysis of the trend of TI rating, for the period 2012-2015, had shown recurrent structural and institutional issues related to the country’s public systems and governance capacities. The most recent PEFA dated from June 2008, highlighted large areas of weakness related to public financial management systems including budgeting process, central bank organisation and centralisation and sustainability of internal and external controls of public expenditures. The lack of recent data related to the country public financial management systems and governance could be considered as indicator of the high inherent risk.

108. **Financial management**: GoI will second competent staff to the PMT ensuring that relevant competencies are identified and that full-time availability is guaranteed and subject to IFAD no-objection. The SARP financial management team would be part of the PMT, which would be fully embedded and located within the MoA, and vested with financial and administrative autonomy. The financial officer would be seconded from MoA staff

109. The borrower/recipient would open three (3) USD denominated Designated Accounts (DAs) for the IFAD loan, for the ASAP grant and for the Adaptation Fund grant at Central Bank in order to receive IFAD loan and grant resources. The authorized allocation would be equal to approximately 3 months of project expenditure, from both IFAD loan and grant resources. Flow of funds*:* A chart of the flow of funds arrangements is shown in Appendix 7 (Attachment 1).

110. The Central Bank under the MoF maintains the accounts of general budget public institutions and executes the replenishments of Project’s bank accounts opened at MoA. For that purpose, GoI has developed a web-based Public Expenditures and Accounting Information System as Integrated Public Financial Management-IPFM system includes budget, procurement and contract management, monitoring and evaluation modules, etc. However, the system will not enable the PMT to directly

generate financial reports, withdrawal applications and statements of expenditure as per IFAD reporting requirements, which would lead to the use of an Excel based financial reporting mechanism.

111. Within the first six months, the project would meet these conditions in order to submit first disbursement request. The project would (i) acquire and configure a financial, accounting and operational software to support all the transactions, budget and cash forecasts analysis, operational and financial dashboards; and (ii) prepare a draft Project Implementation Manual (at minimum the fiduciary part), acceptable to IFAD, including financial, accounting, procurement and administrative arrangements for project activities. AWPBs showing all activities planned during the given year, disaggregated by quarter and by financier, should reach IFAD 6 months before the beginning of each fiscal year. The AWPB would be prepared to ensure its inclusion in the budget for the next FY of the GoI.

112. **Counterpart funding**. The GoI contribution to project costs would be in the form of tax exemption, and in kind contributions (essentially office space and utilities, and salaries for seconded staff). The project end-beneficiaries would participate in the project costs in the form of in kind contributions. However, beneficiary contributions would be small and in kind given the extreme levels of poverty and fragility in the project area.

113. **Audit.** The annual external audit of the project would be carried out by the Federal Board of Supreme Audit, the country's SAI, in accordance with the International Standards of Auditing and the IFAD Guidelines for Project Audits and based on terms of reference subject to IFAD no objection. The final audit report and management letter would be required to be submitted to IFAD by the Borrower at the latest six months after the end of each fiscal year. In addition, the internal audit unit of MoA would include the review of the transactions of IFAD project at the central level audit as legal mandatory requirements. The internal Auditor Role in the organisation is correctly structured (independent and reporting directly to the Ministerial Cabinet). The internal audit unit expressed its commitment to deliver IFAD a quarterly report on their review.

114. **Procurement:** The Government of Iraq has recently undertaken several measures to improve its procurement system. However despite these measures the system is still assessed to be somewhat cumbersome and inefficient. In accordance with IFAD's procurement guidelines approved by the IFAD Executive Board in September 2010 and the provisions of the General Conditions, procurement of goods, works and services conducted by the PMT and financed by IFAD and ASAP would be carried out in accordance with the provisions of the borrower's procurement regulations, to the extent consistent with the provisions of IFAD procurement guidelines. For each contract to be financed by IFAD proceeds, the types of procurement methods, estimated cost, prior review requirements and time-frame would be agreed between the Project and IFAD respectively in the Procurement Plan. It is worth mentioning that at the institutional level, the project will contribute to build capacity for decentralized project management as Government of Iraq may eventually decide to decentralize responsibilities for procurement. Appendix 8 provides more details on the procurement procedures. An 18 month procurement plan would be prepared during the subsequent stages of project design.

115. **Governance:** The primary responsibility for detecting fraud and corruption lies with the Borrower. IFAD applies a zero tolerance policy towards fraudulent, corrupt, collusive or coercive actions in projects financed through its loans and grants. The dissemination of IFAD's anti-corruption policy amongst project staff and stakeholders, as well as the adoption of IFAD procurement guidelines for SARP procurement is expected to reinforce the use of good practices.

D. Supervision

116. The project would be directly supervised by IFAD. The approach to supervision would be one of implementation support and assistance as this is IFAD's first investment in the country. Given that there are very strict security measures in place, and that the movement of UN personnel is severely restricted in the field, the project would contract a local firm to undertake supervision of project activities in the field. However, a core team from headquarters would undertake a mission on at least an annual basis to assess overall management arrangements and performance including financial and procurement aspects and monitoring and evaluation. The local firm providing field supervision would undertake a two to three weeks mission in the field prior to the visit of the team from headquarters. The field supervision mission would comprise technical specialists as required. Based

on field team's findings, the CPM and his team would make an overall assessment of the progress, visit selected governorates and determine the areas requiring implementation support. The participation of Government representatives from the MoA in Baghdad would be encouraged in the supervision process. An implementation support mission would be fielded after every six months in the initial period and thereafter a supervision mission would be planned every year.

E. Risk identification and mitigation

117. Given the fragile situation within which the project would be implemented, it would be important to be flexible in the manner in which the implementation arrangements of the project are structured through the use of service providers given the limited capacity of the government. There would also be flexibility in the manner in which the project is supervised and implementation support is provided. There is likely to be much greater coordination and assistance provided by IFAD in helping the PMT with its M&E system, the design of the baseline and mid-term impact surveys, developing the PIM and putting in place the procurement systems. The MTR of the project would be undertaken at the end of the Third year rather than later to enable any adjustments required.

118. Some of the key project risks, rating and mitigation measures have been identified and reproduced in the table below.

Table 2: Risk Matrix

Risk	Rating	Mitigation Measures
The On-going battle in the north of the country has contributed to instability and insecurity in the country.	High	The project would focus in the governorates in the south of the country where there is no on-going conflict.
As result of the security threat in the country, the movement of any staff member within the purview of the UN system is extremely restricted.	Medium	Use local contractors and service providers, close contact with local authorities. Use the support of established partners (FAO, ICARDA,UN agencies based in Basra) and private sector or civil society as service providers
Delays in loan effectiveness, staffing and timely project start up and disbursement	High	Use IFAD grant to facilitate start-up, and use year one as a preparatory year to orient and training key staff in IFAD procedures and processes.
The Government capacity is extremely limited and Government budgets for operational purposes are inadequate	Medium	The project will be implemented through service providers and Government capacity will be built during the initial years and a flexible approach would be adopted during implementation and supervision..
Iraq procurement rules and practices are not harmonized across institutions and changing rapidly.	High	IFAD procurement rules would be applied strictly in the country.
Availability of appropriately experienced and qualified non-government service providers.	Medium to High	Use of private sector firms which have been used by previously by other UN agencies and other donors to undertake the implementation in the field in partnership with government and NGOs.

IV. Project costs, financing, benefits and sustainability

119. The project is estimated to cost USD 31.77 million including the Government in kind contribution and the beneficiary contribution. External financing will contribute USD 27.38 million. Component 1: Climate resilient investments is expected to cost USD 12. 1 million. Component 2:

Food security and livelihood diversification, would cost USD 13.6 million and Project Management and Coordination would cost USD 4.6 million. Price and physical contingencies have been estimated as per usual IFAD benchmarks.

A. Project financing

120. The project will be funded by IFAD loan, IFAD grant, the Adaptation for Smallholder Agriculture Programme (ASAP), the Adaptation Fund (AF) the Government of Iraq and beneficiaries. IFAD has confirmed a loan of USD 15.73 million and a grant of USD 500,000 covering 49.5% and 1.5% of the total project costs. ASAP will also extend a grant of USD 2 million towards SARP financing, covering 6.3% of the project costs. Furthermore, extra funds of USD 9.17 million or about 28.9% of the total project cost (net of IFAD management fees) are to be mobilized from the Adaptation Fund. The government will finance salaries, any taxes and provide other in kind contributions like office space. Beneficiaries will also make in-kind contribution in form of casual labour, some minor inputs and equipment. This will be mainly under sub-component 2.1. At design, beneficiary contribution is roughly estimated to be USD 1.9 million. All in kind contribution will be determined appropriately during implementation and tracked.

Table 3: Project Financing

Components by Financiers (US$ '000)	The Government		IFAD Loan		IFAD Grant		ASAP		AF		Beneficiaries		Total		For. Exch.	Local (Excl. Taxes)
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%		
A. Climate Resilient Investments																
1. Irrigation Infrastructure schemes	0	-	5,301	43.9	-	-	1,334	11.1	5,433	45.0	-	-	12,068	38.0	-	12,068
2. Knowledge Management and Institutional strengthening	101	11.8	-	-	-	-	-	-	760	88.2	-	-	861	2.7	212	649
Subtotal	101	0.8	5,301	41.0	-	-	1,334	10.3	6,193	47.9	-	-	12,929	40.7	212	12,717
B. Agriculture & Livelihood Diversification																
1. Crop, Livestock & Off-Farm Development	0	-	7,092	60.4	481	4.1	160	1.4	2,083	17.7	1,922	16.4	11,737	36.9	3,235	8,502
2. Skills Development & Capacity Building	-	-	1,879	79.8	-	-	-	-	476	20.2	-	-	2,355	7.4	-	2,355
Subtotal	0	-	8,971	63.7	481	3.4	160	1.1	2,559	18.2	1,922	13.6	14,092	44.4	3,235	10,857
C. Project management and coordination	2,364	49.7	1,462	30.8	-	-	507	10.7	418	8.8	-	-	4,751	15.0	369	4,382
Total PROJECT COSTS	2,465	7.8	15,734	49.5	481	1.5	2,000	6.3	9,170	28.9	1,922	6.0	31,772	100.0	3,815	27,957

B. Summary benefits and economic analysis

121. **Project Benefits**. SARP will generate financial and social benefits by promoting investments and activities aimed at introducing good agricultural practices, high value crops and rural enterprises like dairy farming, milk storage and marketing and milk hawking and rural trading. Financial benefits will be in the form of increased financial returns (net incomes) of the households targeted by the Project.

122. Social benefits will include a reduction in poverty rates in the areas targeted by the Project. This will be the effect of the increased financial returns for HHs consequent to Project intervention. Other social benefits include improved HH nutrition through diversification of crop production or increased incomes which could be used to improve diets. Drip-irrigation brings the possibility for farmers to diversify in vegetable crops in the dry season, having a positive effect on the HH diet composition.

123. High value crops would be grown in two season instead of one each year. With capacity building on irrigation efficiency, high producing varieties, post-harvest techniques and soil fertility an increase of 50% in production volumes is expected. As such the project area is expected to reach the average production levels for similar crops in Iraq. The project proposes to introduce crop varieties and use of production technologies that are drought and soil salinity tolerant. In extreme saline areas, the project would introduce fodder varieties that have demonstrated their tolerance to high levels of soil salinity.

124. The project would also introduce high value vegetable production through provision of Horticulture packages, which could support investments in plastic tunnels, expansion of drip irrigation, provision of livestock packages, assets for HHs, women and youth that would help them engage more effectively in agriculture production or providing the support services to the agriculture and rural sector. The project supports with small grants off-farm income generating activities by establishing rural enterprises specifically for women and youth, for example milk trading and processing.

125. The project would strengthen the institutional capacity of the Government to monitor and report on climate change by improving remote monitoring metrological stations and provide farmers an early warning system that could help them to take appropriate mitigation and adaptation measures to deal with changes in temperature and precipitation levels.

126. **Direct Project Beneficiaries**. The Project would target approximately 33,250 dunum or 8,322 hectares to benefit from improved irrigation infrastructure, with a 4 out of 5 year water availability. Assuming an average farm size of 5 dunum per HH, about 6,650 households would benefit from the project irrigation investments. An additional 9,145 households would benefit from the grant packages programme, giving a total of 15,795 beneficiary households. Given an average household size of 6.9 people, the total number of people benefiting from the project would amount to around 109,000. The total number of SARP beneficiary households expected over the years is broken down in table 4.

Table 4: Direct Project Beneficiaries

Section	Estimated number of benefitting HHs
Grant packages	
Small grant packages Production	3145
Small grant packages Youth and Women	3000
Large grant packages Farmer Organisations	3000
Irrigation modernisation	
For estimated 33250 dunum	6650
Total number of HH	15795

127. **Net Present Value (NPV) and Economic Internal Rate of Return (EIRR).** The economic analysis includes benefits related to (i) modernization and completion of irrigation infrastructure; (ii) crop and livestock production; (iii) off-farm income generating activities; (iv) benefits accruing from better adaptation to climate change; (v) increase in water use efficiency; (vi) higher yields through better seeds and production techniques; and (vii) reduction of post-harvest losses, etc. The net present value of the project over a twenty-year period is calculated to be 120,012 (US 000) and the economic internal rate of return is estimated to be 28.4% at a discount rate of 5%.

128. **Sensitivity analysis:** A sensitivity analysis was conducted to assess the changes in NPV and EIRR due to variations in the future benefit stream of costs or delay in project implementation. The Project remains profitable and robust under a wide range of project scenarios but remains sensitive particular in downward variations of output prices

C. Sustainability

129. An underlying principle of the design of each component is a clear strategy for sustainability and exit in all components. Many of the lessons learnt from previous IFAD investments in the region have guided the design in making the investments sustainable. Some key underlying aspects which would add significantly to making the investments sustainable include (i) the strengthening of rural institutions, human skills and capacity building for improved agriculture productivity, enterprise development and employment; (ii) the clear distinction in the Project approach about public, community and private goods and services and how these would be managed; (iii) a clear plan for ownership, operation and management and training for of all investments implemented under the project; (iv) ensuring that project investments are socially, technically and environmentally sustainable through incorporating these elements into the selection criterion of all schemes and (v) a clear exit strategy for each sub-component from the outset.

130. All investments in irrigation infrastructure schemes would be undertaken based on a clear plan for their operation and management by the Ministry of Water Resources. All investments expected to be managed by the farmers unions or associations or women and youth groups, would be implemented after ensuring technical, economic and social feasibility. Any scheme which is beyond the capacity of these groups to operate or which does not yield sufficient benefits to persuade the communities to maintain it, would not qualify for support. All investments in post-harvest facilities

would be those which can be managed by the groups such as collection centres, sorting, grading and packing houses or basic processing and storage facilities. The project would in each case assist the farmer organizations and other groups develop a plan that shows the management requirements and the types of user fees to be levied to run the operation on a sustainable basis. In order to start off with a minimum amount for such expenses, a share of the 10 per cent in-kind contributions from beneficiaries will be converted into monetary terms and deposited into a dedicated O&M account to be opened in the name of the concerned union, association or group. Those operations which are complex and beyond the capacity of community organizations to undertake would be left to entrepreneurial individuals or the private sector.

131. Using modern irrigation techniques could result in significant reduction of water or a significant increase in number of irrigation schemes using the same amount of water (Table 5) Investment in modern irrigation techniques over 50 % of the landholdings for the 8312,5 ha under SARP would result in a total water use reduction of 37 million m^3 per winter season and 35 million m^3 per summer season meaning a total of about 72 m^3 million per year. In the case of SARP this would mean about 830 ha could be put extra in production.

Table 5: Summary of water reduction due to introduction of modern irrigation techniques

Reduction of water use	% modern techniques	Condition	No of schemes	Reduction per scheme in m3	Total reduction under SARP in m3
Using modern techniques in winter	50		5	7.271.775	36.358.875
Using modern techniques in summer	50	10 % INCREASE IN AREA	5	6.980.904	34.904.520
Using modern techniques in summer	50	SAME WATER USE	5	0	0
Increase in number of produced hectares			No of schemes	Increase per scheme under SARP in ha	Total increase in ha under SARP
Using modern techniques in summer	50	10 % INCREASE IN AREA	5	166	831
Using modern techniques in summer	50	SAME WATER USE	5	427	2.136

132. The sustainability of the farmer unions and women and youth groups would be enhanced through a programme of training and by ensuring that the activities they undertake can be sustained beyond the support provided by the project. The project's investment in making these groups small, participatory, transparent and accountable to its members and training its leadership would add to their longevity. The project with the help of the service provider and technical assistance would assist in determining the feasibility of the different activities to ensure their sustainability. While the project would provide the initial capital support to establish some of the facilities, the concept of a user fee would be introduced from the start and project support would be gradually withdrawn.

133. The design of the various vocational and extension training programmes would be tailored in a manner which would be relevant for the women, youth and smallholders for employment generation, self-employment and enhancing agriculture production. The relevance of the training would ensure the use of the skills and adoption of the crop and livestock production practices imparted. The project would also ensure that the delivery mechanisms used to impart different types of trainings are appropriate for the target group. Thus the timing and location of the training would be carefully planned especially for women to ensure their participation. The training content for the youth would be discussed with them and the potential for employment and self-employment opportunities available would be assessed. The project's emphasis on building local capacity for services, which the community would be willing to pay for, would be made prior to training youth in these vocational skills and trades.

Appendix 1: Country and rural context background

1. **Agriculture context:** Agriculture is one of the most important sectors in Iraq after oil and gas. The contribution of agriculture sector in the national GDP has been declining over the last 15 years and currently stands at around 10 percent. Twenty three percent of the economically active populations are working in agriculture. Crop production is the major source of income for the majority (75 percent) of farmers in Iraq, while the rest depend on livestock or mixed crop and livestock enterprises. Grains, primarily wheat and barley, are Iraq's main crops in the north and central rain-fed areas. Crop yields are low by any comparative standards as farmers tend to minimize costs concerned with land preparation, planting, weeding and harvesting. In central and southern Iraq, where agriculture depends mainly on irrigation from the Tigris and Euphrates rivers, mixed farming systems are predominant. Dates are a major cash and food crop with fruit trees inter-planted in date palm orchards. Vegetables, mainly tomatoes and potatoes, are important irrigated crops. Livestock raising is extensively practiced and inland fisheries and backyard poultry raising are valuable as a source of protein and income for the rural population.

2. Agriculture is mostly practiced on small farming units and it is a low input–low output system. Farmers have focused in the past almost entirely on wheat and barley which were described as "strategic crops". The centralized policy to promote these subsistence cereal crops by providing subsidized inputs and purchasing them at fixed prices made the farmers ignore other more commercially oriented crops. As a result when the Government withdrew from this policy, the farmers continue to grow these crops. Cereal production now accounts for 58% of the cultivated area in the country. Farmers need to shift to high value crops but need assistance in doing so. The agriculture extension services for technology transfer, particularly, for small producers, is weak. There are considerable losses reported due to lack of post-harvest facilities. Low agricultural productivity has been a characteristic of Iraq's agriculture for the last two decades and has made the country dependent on imports to meet its domestic food needs. Cheap food imports flood into the country and farmers are unable to compete with them due to their lack of organization and inability to make strategic crop choices. Iraq imports more than 80 percent of its domestic foods, mainly wheat, wheat flour, oils, sugars and dairy products.

3. **Livestock Sector:** Livestock sector contribute about 45% of the agriculture GDP, about 36.% of agriculture labour of which 52% are women Livestock is the major source of income for about 25% of farmers in Iraq. The livestock sector in Iraq consists predominantly of small ruminants which consists of about 75% of total livestock. However, the number of animals declined sharply due to mismanagement and sale outside the country. About 90% of sheep and goats are raised under traditional system, where the animal grazes on natural vegetation, crops supplemented with roughage and crop residue. Awassi is the dominant breed for sheep which has high genetic potential for milk and meat production, while the black (native) breed is the dominant one in the country. Livestock productivity is low and can be at least doubled.

4. The agriculture sector's low productivity and growth rates are attributable to a variety of issues and to past policies when the government maintained artificially low food prices through price and production controls and marketing restrictions. In addition, years of insufficient maintenance and funding have degraded agricultural services and physical infrastructure, particularly the irrigation network. During the recent conflicts, extensive looting damaged a range of government and private agricultural production and service facilities in central and southern Iraq, including research facilities, animal health and artificial insemination centres, poultry production industries, and plant quarantine units at the borders. Because of the relative isolation of Iraq in recent decades, agribusiness and food and agricultural enterprises have not been able to benefit from international markets, modern production techniques and global trading standards. There are no incentives to invest in agricultural processing industries or value chains because of the complicated and out dated administrative and regulatory system, the considerable shortcomings of the public agencies that are in charge of the advisory and technical services, erratic price policies, inefficient marketing networks, very little market information and complicated and time consuming export/import procedures.

5. **Institutional/Capacity Assessment of Farmer Associations (FAs):** According to FAO, organizations at producer level exist but they are weak and ineffective. Years of conflict and social disruption have disintegrated the social fabric of the Iraqi rural society and the traditional customs of social rural life. The rehabilitation and development of the Iraqi agriculture is a medium/long term aim which can only be achieved through a coherent, coordinated effort based on two main pillars: policy improvements and investment projects including inter alia, rehabilitation of support services and capacity building (FAO 2012). The USAID-funded Agriculture Reconstruction and Development program for Iraq, ARDI, built the skills of 19 NGOs active in agriculture development; 293 agricultural cooperative members through 15 newly formed cooperative associations; 4,300 beekeepers and honey producers establishing new associations and restarting others; 233 independent pesticide dealers into a national association; and provided 526 extension specialists with participatory service delivery training (of the SARP target Governorates only Muthanna was covered). The USAID-Inma Agribusiness Program introduced farmer field schools in Iraq in November 2010, providing training in adult education, facilitation, plant-animal life cycles, group study and farmer group development (IFAD 2016). It would however appear that the bulk of these initiatives have proved to be unsustainable, either because their direct support or their accompanying measures have not been intensive and regular enough, or because support was withdrawn prematurely and/or unexpectedly.

6. Institutional and organisational development as a vehicle for more pro-poor, sustainable services in agriculture will need to focus more on capacity building at the grass-roots level. As a vehicle for collective empowerment, possibilities for local institutional development appear somewhat limited at this point in time. There have been almost no efforts at community-driven development for public and collective goods and services and collective and private goods and services through structures such as, for example, community development committees and sub-committees dealing with agricultural issues. Community-driven or at least community-focused approaches would arguably have been a strategic choice to repair the damaged social tissue and depleted social capital throughout the country, be it in urban or rural contexts.

7. Water User Associations have been promoted by FAO in the southern Provinces and their creation and strengthening is still being supported by JICA all over Iraq including in the Governorates to be covered by SARP. A 2012 law transfers the control and responsibility of irrigation water in tertiary canals to them with a view to foster co-management and participatory governance in natural resource management. They are however widely regarded as weak and ineffective, with the most often explanation provided being the one related to a lack of incentives due to the fact that water and water conveyance are free of charge to farmers, thus providing little incentive for efficient allocation and use of water resources upstream in the irrigation schemes as well as on-farm.

8. Unions of farmer associations are present in all Governorates. In Thi Qar, for example, union counts some 5 000 members and covers all districts. The roots of the unions go back several decades to a law from 1959 and the period of land reform which made it compulsory for those having obtained plots in this way to become members. This was changed in 1983 when membership became optional and the previously strong connection to the Ministry of Agriculture was dissolved (see also IFAD 2016). The unions, now liaising with the Directorates of Agriculture at Governorate level, have remained key actors in implementing government programmes in the agricultural sector. First and foremost among these comes the Public Distribution System (PDS), which highly subsidises foodstuffs, especially wheat and barley[26].

SWOT analysis of unions of farmer associations	
Strengths – • Outreach to a great number of member farmers • Experience in collective action, coordination, etc. • Generally good relations with Directorates of Agriculture	Weaknesses – • Leadership relatively old • Excessive focus on subsidised crops • Have still not completely cut the “umbilical cord” with the Ministry of Agriculture
Opportunities –	Threats –

[26] In many parts of southern Iraq, producers have however not yet been paid, a situation that has been ongoing for two to three years.

• Could become more service-oriented and play an important role for members • Could lead the way in diversifying away from wheat and barley • Can provide lead farmers as trainers of trainers	• Not enough overlap between union members and IFAD target groups • Élite capture • Politicisation

Notwithstanding their weakness and that of their enabling environment, there are a number of farmer associations exist in the four SARP Governorates that are worth highlighting[27]. One of the largest ones is the Poultry Association of Thi Qar, established in 2016 (290 active members). The association has an executive committee of five persons and its active members – those with ongoing with capital investments – are engaged in semi-industrial projects (6 000 to 25 000 birds).

[27] They are registered under Law 56/2002 which states that ten farmers or more can establish an association with a democratic governance and decision-making structure.

Appendix 2: Poverty, targeting and gender

A. Poverty and Target Groups

In 2012, the rural poverty rate stood at 31 percent, nearly double the urban poverty rate of 15 percent, with 19 percent of the total population in Iraq living below the national poverty line of less than 2.2 US$ per person per day. Whilst unemployment as measured against the total population of Iraq is about 10 percent, this level rises substantially in the case of a number of specific subsets (women, youths, IDPs, etc.). About 54 percent of the labour force is rural and the rural population is more adversely affected by Illiteracy (25 percent) than the urban population (14 percent). Rural poverty in Iraq is a direct consequence of the rapid (3 percent) population growth, internal conflict and insecurity, climate change, increasing water scarcity and rapid desertification. The poverty ratio in the 18 Governorates in Iraq ranged from 35 percent to 52 percent for the five poorest governorates, from 11 percent and 26 percent for nine governorates and from 2 percent to 10 percent for the remaining four governorates.

Poverty in rural Iraq is not so much a function of food insecurity and low incomes as it is a direct consequence of decades of conflict and sectarian violence which has ripped the social fabric of communities and many families apart. The psychological effects thereof have only recently become more apparent and the subject of further investigation, leading to a range of social initiatives. These aim at helping to relieve the severe distress of so many Iraqis, especially of women whose lives have been devastated, and of traumatised adolescents and children. The often-unconscious and enduring impact of war is makes itself felt on mental health and physical wellbeing. The constant feeling of insecurity is further exacerbating perceptions of marginalisation and disenfranchisement in the country's rural areas.

In the rural areas of the four poorest governorates, small-scale farmers and livestock producers are the most marginalised households with unemployed young men and women the most vulnerable. Small-scale farmers with a holding size ranging from 2.5 to 7.5 ha account for 35 percent of total number of farmers with cereal crops accounting for 58 percent of their cultivated area. Wheat has been and still is a heavily subsidised crop and is therefore the preferred choice and main crop of many farmers including in the four Governorates making up SARP's proposed project area. In Muthanna – the largest of the four – smallholders account for 60 percent of the total farming population. In this Governorate, wheat and barley together account for 37 500 h[28] with only 2 000 h under other crops such as rice, potato, and okra (Dept. of Planning, Min. of Agric., 2017).

The Ministry of Agriculture defines a smallholder farmer as someone with 12.5 h or less of rainfed land or 4 h or less of irrigated land. The land holding system in Iraq is a mixture of owner operator, lease holding and sharecropping arrangements. There is an official cap on maximum land size allowed in the northern rainfed areas of 75 ha. In 2001, 67 percent of the land belonged to the state and was rented or distributed by the Ministry of Agriculture to private operators whilst about 32 percent was privately owned. State-owned land is divided into land that has never been occupied and land exploited by individual owners or cooperatives with an official land registration title. Lease holding size varies from 7.5 to 17.5 ha depending on the availability of agricultural reform land and population density (IFAD 2016).

The average rural household size is 6.9 persons. In the South/Centre of Iraq, female-headed households make up 9.5 percent of the total. Just over quarter (27.6 percent) of all households have four or fewer residents, while 15.9 percent have 10 or more. Four out of five heads of households in the bottom 40 percent have a primary education or less, and two-fifths are employed in agriculture,

[28] In Iraq, land size is measured in dunum; 4 dunum = 1 hectare.

construction, commerce, and transport (predominantly private sector jobs) (World Bank 2017). The sex ratio is balanced at the younger age group, however, there is a severe male deficit in the age groups 40-54 years, especially in the age group 50-54. Women marry younger than men, but at the age 35 and above the proportion of married men is similar to that of women (GoI 2008).

Overall, Iraqi households receive more than half of their income from labor, 39 percent from capital, 3.5 percent from land, 6.1 percent from social transfers, and less than 1 percent from remittances. Rural households receive a higher share of their income from labor, agricultural capital, and land, whereas urban households' income from non-agricultural capital is higher. Female-headed households are generally not very different in terms of income sources. In terms of household expenditures, rural households spend a significantly higher share of their income on food than urban households (33.3 percent for rural and 19.6 percent for urban) (IFPRI 2014). In the southern Governorates, a typical household will spend between 5 000 dinar and 10 000 dinar per day on food (including grains, pulses and vegetables and grains, pulses, vegetables and meat or fish, respectively)[29].

The socio-economic characteristics of IFAD target groups in the Governorates covered under SARP are very heterogeneous and not well documented by quantitative data. Because of this heterogeneity, it is not possible to craft a stylised typology of smallholder farmers in the four southern Governorates. At least not at this stage – one of the outputs of SARP will be to attempt to fill our information gaps to the point where this will become possible. Qualitative data shows that income levels and sources of agricultural income vary considerably by geographic location, with reliable access to a source of water as one of the main determinants of the presence of farming activities.

Generally, wherever a source of water (rivers, open canals, inland water bodies, brackish water, different types of wells, etc.) is available, smallholder farmers tend to grow mostly wheat or barley, and a few summer vegetables (greenhouses, or plastic houses as they are commonly called in Iraq, are mostly too costly for poor smallholders). The next determinant of whether or not smallholders engage in crop farming relates to soil salinity, which is a huge problem in the southern part of the country. In several parts of Muthanna Governorate, smallholders appear to have abandoned crop farming altogether[30], because of the salinity of their land, and turned to livestock and the processing of livestock products as their main source of sustenance and income.

Typically, the livestock activities of IFAD target groups consist of sheep and goat rearing and backyard poultry farming. Households owning a cow can be said to be relatively better off, and will use its milk for consumption and processing into cream and cheese for the local market. Date palms are not necessarily a feature of relatively better-off households, and are mostly in bad shape in terms of their current productivity and prone to pests. Beekeeping is a promising activity but is not very widely practised.

At least for part of the year, a great number of smallholder farmers needs to engage in selling their labour on a daily wage basis, with the construction sector often being the most attractive one. The going rate for agricultural daily wages varies; in Muthanna, it is the equivalent of USD 15. The main sector causing strong demand and competing with agriculture is the construction sector – although this phenomenon is stronger in urban and per-urban areas.

Internally Displaced People

Iraq today has a population of 4 million IDPs, second only to Syria and Colombia. This represents a staggering 11 percent of the population. The addition of refugees, mostly Syrians fleeing the conflict at

[29] Household interview at Al-Bohuwaigen village, Al-Warka Dstrict, Governorate of Muthanna.
[30] In one community visited they did so 10 years ago, in another as far back as 14 years ago.

home, brings the total number of displaced persons to 4.3 million. More than three-quarters of the displaced population has fled from only two governorates – Anbar and Ninawa. IDPs account for half a million of the total number of people who fell into poverty as a consequence of the "twin crises" (falling oil prices plus the Daesh insurgency). Unemployment among IDPs is estimated at 27 percent. (World Bank 2017).

According to the IOM tracking website, currently 69712 IDPs are present in the southern Governorates. Some of these have become what is referred to as 'protracted displacements', and individuals and households falling into this category are without doubt part of IFAD's target group. IOM are currently working with about 150 staff who are collecting and updating information on a daily basis. Their community stabilisation programme has implemented some, limited, agricultural activities such as plastic houses. Their database on communities will be a resource for SARP to draw upon. In addition, the project could "refer" humanitarian cases met during implementation, and who are not receiving any government support, to IOM.

The Ministry of Migration and Displacement is present in all Governorates and has figures on numbers of IDPs – these figures are collected by registering IDPs with them, and may be out of date as there is no process of unregistering them once they decide to return back or move elsewhere. Some IDPs do not want to return to where they have originally come from. Most of them are landless, but Governorates are willing and able to provide them with some land for productive activities if financing becomes available. A certain number of IDPs no papers testifying to their nationality of Iraq or any given country in the sub-region. A somewhat separate category of IDPs consists of migrant workers who had settled in the northern part of Iraq but have lost all their assets due to conflict and had to return to their communities of origin. There, they often find it difficult to integrate themselves back into these communities.

There are a range of initiatives aimed at supporting IDPs in Iraq, but they appear to be far from sufficient to cover even their basic needs. Many are very localised micro-projects implemented by NGOs registered with the Governorates, under the aegis of the Ministry of Social Affairs, discontinued as soon as financing stops, and frequently unsustainable. One of the many challenges of working with IDPs is that they are scattered over many localities within any given district. UNHCR is running a cash distribution scheme which seeks to satisfy requirements related to food, shelter, and medicines.

Social security transfers. Iraq's Social Protection Net (SPN) is a cash transfer program that aims to target poor and vulnerable populations. The SPN distributes monthly grants to beneficiaries based on household size. In 2012, the SPN covered 4 percent of the population but with minimum targeting effectiveness as 71 percent of the beneficiaries were non-poor, while 89 percent of the poor did not receive SPN assistance that year. The program is inefficient and fragmented, providing cash transfers based on categorical targeting (including households with orphans, married students, widows, divorced women, and others), leading to significant leaks (GoI 2012).

To remedy the problems associated with the SPN, a new poverty targeting initiative was launched in April 2016 to introduce proxy means testing (PMT). The initiative is administered by the Social Protection Commission, which was created in 2014 (World Bank 2017). Both the Commission and PMT are for the time being in their very early stages, and IFAD should try to remain abreast of developments as they may have direct implications for our country programme. SARP will need to ensure that the income-generating activities to be promoted will be more profitable than the approximately USD 40 per month per person the SPN transfers to rural families (a household of eight family members receives the equivalent of USD 320 per month, an amount that is above most average monthly earnings in the private sector, including in agriculture).

WFP have started to provide food aid to eligible households who should have received PDS ration cards after 2014 but have not received them as the system is overstretched. This would seem to constitute an opportunity to diversify the food rations away from mainly wheat and barley.

Special population groups

The project area is home to a number of population groups with special status, be this for historical, political, religious or socio-cultural reasons. The most prominent of these are the the Ma‘dān populating the Mesopotamian Marshlands (al-Ahwar) around the confluence of the Tigris and Euphrates rivers – their precise number is unknown and estimates vary widely between “a few thousand” and 125,000-150,000 people (see, e.g., Kubba 2011). Having had to abandon rice cultivation, they nowadays derive their livelihoods from fishing and handicrafts, whilst a sub-group has continued to rear water buffalos. One of SARP’s potential partner NGOs, ‘Nature of Iraq’, is specialised in working in the marshlands and has been exploring economic opportunities with the different tribes people inhabiting this fragile and unique ecosystem and world heritage site. Poverty is severe in the marshlands; population groups in the Hammar Marshes, for example, suffer from a lack of clean drinking water, sanitation, health care and education facilities. Urbanisation and the changing lifestyle it brings about are affecting even the marshlands, as illustrated by the difficulties of repopulating the more centrally located marshland settlements (away from roads and infrastructure linking to nearby towns and markets). Perhaps for this reason, women there appear relatively more emancipated than women in other rural areas.

A number of other minority groups are also present in the project area, which will be targeted as per their poverty status and income-generating potential.

Women

The rural unemployment rate is higher for females than males. Only 15-18 percent of women are employed and they take up only 7 percent of employment in non-agricultural sectors. The percentage of women in paid employment in the non-agricultural sector has risen from 12.1 percent in 2008 to 14.7 percent in 2011. The agriculture sector has a particularly high share of women, whose participation in the sector has increased from 30 to 50 percent between 1980 and 2010 (World Bank, 2016). Women in Iraq are represented in the higher levels of the public sector and government. In 2010, the average rate of parliament seats held by women was 27 percent; there is a quota of 25 per cent women on Provincial Councils. Nearly half of workers in the public administration are women, although few of them are in senior or decision-making positions (UNDP Iraq 2012). Within rural areas, the literacy divide between men and women is wider. There are an estimated 1.6 million widows, an increased number of female-headed households, and large numbers of orphans.

Women in Iraq have been significantly affected by insecurity. Violence against women and girls, particularly sexual violence, has been a widely used tactic of terror in the armed conflict. The conflict has increased the level of threat, both real and perceived, to women and girls, and families are increasingly seeing marriage as a way to protect women and girls and to increase household resources. Already high rates of forced and child marriage are increasing, and the once banned practice of temporary marriages for dowry is in resurgence. As of 2016, UNICEF monitoring data show that around 975,000 girls in Iraq were married before the age of 15, twice as many as in 1990 (World Bank 2017). In addition to imposing restrictions on movement that reduce access to education, health, and jobs, a feature of post-conflict settings with high unemployment and poor overall security such as Iraq is often a high incidence of violence, particularly various kinds of gender-based violence (UNDP Iraq, 2012).

Women's marital status (percentage) (GoI 2008 – the most recent data available)	
Single	35.9
Currently married	59.9
Widowed	2.4
Divorced/ Separated	1.9

In the more traditional rural communities, women are mostly confined to their residential homestead, and feel uncomfortable and are often unwilling to engage in any income-generating activity away from their homes. This acts as a powerful limiting factor and constraint to opportunities for off-farm activities for women, which are much influenced by traditional gender roles. Whereas in urban and peri-urban settings these are evolving, even in unexpected ways and sometimes very rapidly, this is much less so in rural areas. There, internet connectivity appears to bear a lot of influence on opening mindsets for women and girls to champion new initiatives. As a rule of thumb, however, in the more remote rural villages, husbands will consent to their wives earning money away from home, as long as this takes place within commuting distance.

Although no law prevents them from owning land, custom and Islamic norms entail that very few women are officially owners of agricultural land. In rural areas, they tend to inherit one portion together with all others entitled to so but this will usually be a minute plot (in theory, one eighth). They may be owners of residential land, and widows whose husbands have died in conflict, can claim such land from the government. Women do have use rights which are reasonably secure, and have no problem using the land near their houses, for example for growing vegetables, or for poultry farming and the rearing of goats or sheep. As per law 35/1983, they can rent agricultural land – but only few women seem to be willing or able to do so.

Youth

There is no official definition of the age of who should be considered a ‘youth’ in Iraq – many sources indicate a range between 15 and 24 years. The National Youth Survey, however, held in 2009, targeted youth aged 10-30 years. The results of this survey will inform the development of a draft Iraqi national youth strategy, which has been under preparation for some time.

Iraq’s population is one of the youngest in the world, with nearly 50 percent of its population being younger than 19 years old and approximately one-third between 15 and 29 years old. Youth unemployment is high at 34.6 percent, 57.7 percent for females and 30.8 percent for males (World Bank 2017). Over 3.4 million Iraqi youths are out of school, and fully 72 percent of women and 18 percent of men between the ages of 15 and 29 were neither in education nor in employment or training. Among youths aged between 15 and 29 years old, 33.4 percent are illiterate or semi-illiterate (UNDP 2014). More than 40 percent of those aged between 15 and 24 years old do not enjoy a sense of security in their daily lives.30 Increasingly, in many areas affected by recent conflict, geographic boundaries tend to coincide with sectarian identities, limiting contact between ethnic and religious groups and further reinforcing sectarian divisions (ICG 2016). A 2009 survey found that only 6 percent of youths believed that they had the opportunity to voice their opinions and be heard in political institutions (GoI 2009).

Options for livelihood improvements

Small livestock is arguably the single most promising activity, followed by vegetable gardening and fruit orchards as well as dates. On the whole, low input agriculture offers a range of interesting options for IFAD target groups. Plastic houses have proven to be successful, if sufficient training on how o use and maintain them, is provided. Beekeeping is another activity that should be pursued; it is not new to southern Iraq and has been promoted several times before. The key success factor seems to lie

mostly in thorough training during which the potential beekeepers are made well aware of the implications of what maintaining their beehives entails - many view this activity as 'too complex'. Honey does have an assured internal market as it is widely used by urban and rural households in Iraq.

Women. In the more traditional rural communities, even off-farm income generating opportunities are extremely limited for women, with sewing one of the very few possibilities for SARP to invest in. Some "cottage industry"-type activities also offer some promise, most notably the processing of dairy products (which will also improve household nutrition) such as cream and cheese; both of these products enjoy strong and stable local market demand. For women especially, the rearing of goats and sheep, and poultry farming, offer very good opportunities for improving household food security, for diminishing household expenditure on meat and eggs, and for income generation. Female-headed households, divorcees and widows are known to the local authorities and in all southern governorates there exist NGOs specifically dedicated to working with them; SARP will work with these same NGOs to target them under the project.

Youth. The Ministry of Agriculture has been compiling ideas for enticing young unemployed and underemployed Iraqis into agriculture. On this list feature items such as the maintenance of agricultural machinery, nurseries for high value plants, and feed blocks for livestock. There may also be a possibility of collaborating with the National Council for Seeds to start private seed out-grower operations in high potential agricultural areas. Teaching functional adult literacy/numeracy is another profession which appears to be in short supply, particularly women who could teach other women at home.

The landless. This category of individuals and households would seem to consist mostly but not exclusively of IDPs and returnees. Official figures on landlessness are unavailable. Bee-keeping and off-farm income-generating activities are obvious activities to be proposed for this category, depending on their entrepreneurial acumen and willingness to start something new to them. Several processing activities can also be supported, especially for women. Governorates may also be willing and able to provide landless people with small plots of land, at least on a temporary basis, for small-scale agricultural activities.

Vocational training. Off-farm income generating activities of interest to youth are numerous and are those found in micro-enterprise development projects, namely concerning trades such as those of mobile phone repairer, carpenter, mason, welder, mechanic, small engine repairer, equipment operator, plumber, pipefitter, electrician, electrical lineman, sheet metal worker, hairdresser, beautician, photographer, petty trader, etc.

Rural vocational training centres are being rebuilt and build new (such as a large one recently inaugurated in Erbil, see http://ettc-iraq.net/index.php/en/) all over the country. The Ministry of Social Affairs disposes of vocational training centers in all Governorates. Some NGOs (e.g., Amar Foundation, see https://www.amarfoundation.org/) have their own centers which are normally in use irregularly when funding and projects are available. The best candidate for SARP to partner with (under sub-components 2.3.2, 'capacity building & skills for women', and 2.3.3, 'vocational training for young men') is UNIDO, who have a network of enterprise development centers in southern Iraq. In collaboration with UNIDO, it may be possible to also train a few youths in relatively more sophisticated trades such as business development services provider, agri-business counselor, business match-maker/market information provider, etc. NGO service providers will be able to organise vocational training sessions and have experience in doing so, on a case-by-case basis with funding from different projects. The cost of training courses varies. Outside of these externally-funded initiatives, the offer of vocational training courses is very limited, at least in rural areas, where traditional apprenticeships are still the only way of acquiring a new skill. There is no government regulation or

norms affecting such apprenticeships, the terms of which are negotiated between master craftsmen and the (families of the) apprentices.

B. Targeting Strategy

Lessons learned

No recent lessons appear to be available that would be of direct relevance to IFAD's mandate. It is necessary to look at rural development experiences prior to 2003 to find such lessons, which makes them vastly outdated. There are nonetheless a number of recent good practice examples that should inspire the targeting strategy under SARP. In as far as recent experiences to draw on are concerned, we must turn mostly to the humanitarian sector and to emergency responses, which, however, offers only limited insights. In those specific contexts, geographic and direct targeting are arguably relatively more straightforward than they are in projects with longer term objectives such as SARP. Few of these projects, if any, have set aside time for analysing the real life constraints of Iraqi small farmers and assessed their training needs in any detail before starting implementation. A case in point are the many plastic houses distributed free of charge and without concern for the marketability of the vegetables grown in them. The broader enabling environment for pro-poor agricultural development has hardly been analysed at all, at least not in the local contexts in which project activities unfold.

One of the lessons emerging from the vast numbers of training programmes that mostly humanitarian organisations have been rolling out in Iraq since 2003 is that generic training for youths seems to have reached a point of diminishing returns. Younger generations are eager to be able discover and express their creativity and talents, to be uncovered by more individualistic facilitation and more specialised training sessions.

Targeting under most government-implemented projects and programmes in agriculture has so far been done through the public extension service, which, however, seems geared towards serving the local élite and has limited outreach in general, and to IFAD target groups in particular. Technical advice should "trickle down" from élite farmers and lead farmers, but there appears limited evidence of this effect materialising, not least because of the human resource and resource limitations (mobility, fuel, materials, etc.) of the Directorates of Agriculture. In Muthanna Governorate, for example, the ratio is one of 34 extension agents for 18 000 farmers, with only five female extension agents. The ratio of male to female extension agents is much better in Thi Qar Governorate, where 15 male and 15 female extension workers are present covering the agricultural units. Also, since 2005 there are two public extension systems, one under central authority responding to Baghdad, and the other one under provincial authorities responding to the Governorates.

The Ministry of Agriculture of Iraq could benefit from exposure visits and learning exchanges to other countries in the sub-region and elsewhere. Its approaches to extension and other services are public sector-centric, old-fashioned, and top-down instead of being pluralistic, dynamic and client-oriented. A case in point is their continued over-reliance on demonstration plots, supported by decentralised agricultural units, rather than more hands-on methods such as FFS.

When comparing SARP design and implementation to other projects and programmes in the sub-region and elsewhere, it should be borne in mind that Iraq has almost no experience of participatory approaches in any sector - agriculture and rural development are no exception. This is why a higher than usual amount of process orientation and process documentation will be necessary, and be part of the ToRs of the service provider NGOs.

SARP targeting strategy

At national level, geographic targeting has been defined on the basis of poverty rates at Governorate level, with the highest scoring ones being Missan, Muthanna, Qadisiyah and Thi Qar, They form a contiguous proposed project area in the southern part of Iraq to the north of Basrah; Muthanna alone is almost as large as the other three Governorates combined. Within these Governorates, the project will not target communities as such, but enrol eligible individuals and groups through a demand-driven process. In the four Governorates that make up the project area, SARP's targeting strategy will involve the following steps:

Step One: Land use maps overlaid with poverty maps will serve to fine-tune the project's geographic focus; the land use maps[1] are prepared by several units of the Directorates of Agriculture, and the poverty maps by the Departments of Planning of these Directorates. This will be done by these technical line agencies with support from SARP project staff during the start-up phase of the project.

Step Two a: Direct targeting will serve to target individuals and their households; this will done by NGOs using their database and experience of working in their respective Governorates. In addition, at the intra-community level, there will be a certain degree of self-targeting of beneficiaries, on the one hand because the planning process will be demand-driven, and on the other, because the scale and scope as well as the nature of the bulk of income-generating activities being promoted, will not be of interest to wealthier individuals and households.

Step Two b: Overlaying these maps with a map of farmer associations and women's groups will serve to target groups and community-based organisations; the farmer associations and women's group maps will be prepared by SARP project staff during the start-up phase of the project in collaboration with the Departments of Planning.

Step one and two b above serve to cluster activities in order to achieve a critical mass of interventions in any given locality for enhanced impact and decreased transaction costs in project implementation.

Some of the clusters will be located in areas of high agricultural potential areas (agro-ecological potential, reliable availability of good quality water, non-saline soils or soils with limited salinity, decent state of infrastructure including farm to market roads, etc.). Since SARP will take longer to achieve tangible results working with individuals needing intense and wide-ranging accompanying measures, targeting the active rural poor in these areas will allow the project to be able to show some successes relatively soon and thus gain more traction.

The demand-driven nature of the project will ensure that from the identified groups and individuals/households those interested will come forward; they will then be further screened against the eligibility criteria as well as co-financing arrangements below.

A final strategic element in implementing the strategy will be the need for flexibility, which, given Iraq's constantly shifting politico-economic landscape, will be of paramount importance.

For the sake of simplicity, co-financing arrangements will be 10 percent (in kind or cash, as specified) across all activities. Training will be free of charge. This will be reviewed by supervision and implementation support missions, and assessed more thoroughly during mid-term review. Eligibility criteria will be determined during the start-up phase of the project by the service provider NGOs in collaboration with the Directorates of Agriculture. They will be validated with a sample of communities in each Governorate, and included in the Project Implementation Manual.

Gender targeting strategy. The project has developed a very proactive strategy for the participation of women in project activities especially recognizing that women have received a significant setback in Iraq due to years of conflict and the rise in the power of religious parties which has led to the deterioration of women's rights and confined many of them within the homestead in rural areas. The Project would have specific gender dis-aggregated targets and budget allocations, service providers with women staff to ensure outreach to women and integrate gender aspects in all reports. Each of the components would have an approach to encourage the inclusion of women and specific targets have been identified for them. The identification of assets, skills training and enterprise development would be designed to address opportunities of relevance for women.

Youth targeting strategy. The project would put in place special arrangements to target youth. This would be undertaken primarily by linking with youth associations and unions. Given the high unemployment rate among youth, opportunities for vocational and enterprise training, apprentice ship and job placement would be identified with the private sector especially in ancillary services that are critical for the agriculture sector. Those from among the young men and women who demonstrate their willingness and commitment to participate in innovative enterprise development would be provided technical assistance and access to assets. Exchange visits and learning tours would be identified for them where appropriate. The service providers would be given specific targets for participation of youth in different project activities.

Additional notes on targeting. Targeting of women and youth will also be done through the Committee for Women and the Committee for Youth of the respective Provincial Councils in the Governorates. Women's representation as elected Councillors on the Provincial Councils is increasing. In Muthanna, for example, seven out of 26 Councillors are women and the chairlady of the committees for women, youth, and NGOs, is a very active and knowledgeable lady, a true resource person for the women of the Governorate.

It will not be possible for the project to work with the very poorest individuals and households. These tend to be unable to carry out any moderate physical activity and suffer from severe psychological distress. They are not at this point in time in a position to see any activity through over even a span of only several weeks because their perspectives are day-to-day and focused on bare survival. As is the case in other countries, IFAD would seek to target the "active poor", namely, those with a minimum degree of motivation and vision of their own future. Such qualitative assessments cannot be carried out by referring exclusively to statistics and figures, but will be the one of the main tasks of the NGOs that will be recruited under the project. These NGOs will need to prove their track record in the field, their empirical knowledge of rural development activities, as well as, most importantly, their relatively intimate knowledge of the local population of farmers. They will be trained during the start-up phase of the project to enable them to carry out the duties expected from them as described in results-based contracts that SARP will sign with them.

On the other hand, it will be desirable to work with a few newly selected lead farmers as trainers of trainers, for example, on vegetable production in plastic houses. This training would be cascaded to increase outreach and would be supervised by the NGOs in collaboration with agricultural extension officers.

Innovation. The NGOs recruited under SARP will be provided with performance incentives for any innovations they have been able to identify and pilot successfully. The specifics, including an acceptable and consensual working definition of what may be regarded as innovative in the rural context of southern Iraq, will be worked out during the start-up phase of the project.

C. Targeting Risk Mitigation

There are a number of risks associated with the targeting strategy; the table below outlines these as well as proposed mitigating strategies.

Table 4: Risks and Mitigation Strategies

Risk	Mitigation Strategy
Subsidies and free input culture are a disincentive to diversify into high value crops and off-farm activities being promoted	Awareness raising campaign coupled with demonstrations by successful farmers and farm models showing positive cost-benefit analyses
Demand is mostly for the same well-known activities and either leads to over-supply or lack of impact	Community facilitation will focus on teasing out project ideas for both proven and new activities
Influential individuals skew targeting in their favour; iimplementation benefits better-off farm households providing their land to sharecroppers whose benefits are disproportionately small	NGOs will be in the driver's seat of implementing the project targeting strategy; community and technical line agency endorsement of targeted individuals, households and groups will be sought
Productivity increases through mechanisation increase rural un- and underemployment	Technology and equipment will be small-scale and only decrease labour in the case of labour-saving technologies for women
Difficulty in identifying and recruiting NGO service providers and in their capacity to implement the SARP approach to rural development	The start-up phase of the project may be up to 12 months during which these issues will be addressed
The security situation destabilises project implementation and does not allow for IFAD supervision missions to travel to the field	NGO implementation through people who are known and trusted in rural communities as well as by local notables should decrease this risk; the project will turn to an HR company to hire nationals to carry out supervision missions – they will be trained by IFAD

D. Gender Strategy

IFAD's premise of economic empowerment of women leading to wider positive repercussions with respect to intra-household resource allocation, intra-household decision-making power, respect in community settings, social status and role in public affairs, etc., seems to hold true for the case of Iraq as it does for many other countries. SARP will therefore focus its gender mainstreaming efforts primarily at increasing target women's incomes. Another lesson learned, which is that one of the key success factors of an effective gender strategy is the active involvement of men whenever possible and appropriate, equally applies.

The project's gender strategy includes a number of measures detailed further in Appendix 4. These include:

- Gender targets of at least 40% for the total of project beneficiaries participants;
- Working with NGOs at Governorate level that either specialise in, or have a proven track record of, working with women;
- A tentative pre-selection of activities that is heavily skewed in favour of women's direct participation (bee-keeping, vegetable farming, small livestock rearing, off-farm activities such as sewing, etc.);
- Gender sensitive selection of interventions to maximise returns to women's labour and support their social and economic empowerment;

- The selection of productive infrastructure will need to be endorsed – separately – by women;
- A gender inclusive programme management and implementation team; and
- Adherence to best practice in gender sensitive monitoring and evaluation of programme impact.

Table 5: Women's background characteristics (GoI 2008)

Characteristics	N	percent
Marital Status		
Single	5,395	35.9
Currently married	8,680	59.9
Widowed	348	2.4
Divorced	191	1.5
Separated	61	0.4
Age		
15-19	3,360	22.2
20-24	2,938	19.5
25-29	2,345	16.0
30-34	2,150	15.0
35-39	1,663	11.2
40-44	1,394	10.0
45-49	825	6.1
Place of residence		
Urban	9,803	66.5
Rural	4,872	33.5
Main region		
South/Centre	12,345	86.2
Kurdistan	2,330	13.8
Education		
No education	2,901	17.3
Primary	5,823	40.1
Intermediate	2,784	20.0
Secondary	1,506	10.8
Higher	1,661	11.7
Literacy		
Attended at least intermediate	5,951	42.6
Can read a whole sentence	3,384	23.1
Can read part of a sentence	1,739	12.0
Cannot read at all	3,515	22.0
No card with required language	29	0.1
Blind/visually impaired	57	0.3
Employment		
Currently not working	12,722	86.7
Professional/ Technical/ Managerial	652	4.4
Clerical	397	2.7
Crafts women/ street sellers/ agriculture	710	4.8
Skilled manual	195	1.3
Total	14,675	100.0

Appendix 3: Country performance and lessons learned

SARP is IFAD's first investment in Iraq and as such there are no country performance lessons to be derived yet.

IFAD has supported Iraq in a grant financed regional agriculture research project implemented by ICARDA. The implementation of that grant in South Mossul faced major constraints because of the deteriorating security situation. It has, however, managed to successfully train farmers, staff members from other development projects, technical staff, extension staff, decision makers, and local administration staff, on community-based development approaches. Through the latter conflicting interests and objectives between crop and livestock farmers regarding the use of marginal communal land can be more easily managed because any decisions are normally based on broad local consensus rather than imposed from above.

The project also found that Iraq was well ahead of other grant recipients in being able to develop feed blocks produced from agro-industrial by-products within a short period of time, and to assist other countries in doing the same. By 1999, more than 20 feed block manufacturing plants were established by the private sector in Iraq, some of which were family enterprises producing and selling feed blocks. The quality of production was monitored by the M & M Project. Total production was around 37,000 tonnes, distributed among some 9,000 sheep owners. Livestock owners have readily accepted feed blocks.

Demonstrations can be effective channels for transferring technology and knowledge. Results of a sample survey of 149 sheep owners in Iraq indicated that 94% of the participants in field demonstrations have used feed blocks at least once. Among crop farmers, a farm survey of 250 barley farmers showed that all farmers who participated in the project demonstrations adopted an improved cultivar and/or fertilizer, whereas only 37% of field-day attendees and non-participant farmers adopted fertilizers.

While few donors have worked in the agriculture sector in Iraq and most have concentrated on humanitarian interests or large infrastructure projects, there is relevant experience that can be gleaned from the experience of IFAD investment projects in NEN countries and from those of a few donors who have worked on some aspects of agriculture. Some of the important lessons that emerge from this analysis which are critical given the fragility of the country and the neglect of the agriculture sector include the following:

- *Recognising the strengths and weaknesses of collective action in developing countries*: Assessing the capacity of farmer institutions is key for project activities that require collective or group action. However, recognizing that the cooperative movement has not been a strong movement in this part of the world will help in realistically identifying the limits of group action, avoid elite capture and at the same derive some of the benefits of group action such as reducing transactions cost, aggregating produce for collective marketing and bargaining and achieving economics of scale.
- In fragile, conflict prone situations, community-driven development (CDD) approaches contribute to reconstitute much needed social capital and to re-build trust within and between rural population groups. Even when development projects do not, strictly speaking, choose a CDD approach, they can usefully adopt some of its elements. This ensures that decisions on how to allocate project resources are based on participatory methodologies and on strong consensus at all levels including primary stakeholders in local communities. Implementation arrangements that feature this type of decision-making mechanism lead to increased transparency, stronger accountability and they ultimately play a vital role in terms of the longer-term empowerment of rural citizens.

- *In the crop sector emphasis has to be on both production and post-harvest and marketing activities:* Too many projects have by focusing only on enhancing production and ignoring the capacity of the farmer to undertake post-harvest and marketing activities have as a result failed to appreciably enhance incomes of farmers. Farmers everywhere typically have a lagged response

to production decisions as they are generally responding to the previous years market condition in making cropping decisions. In this regard it is better to begin from the market backwards in guiding farmers on how to assess market demand.

- *Recognizing the risk mitigation strategies of small farmers and designing to encourage their participation:* Small-scale farmers are willing to adopt improved production technologies, but they need to see results first. Given small scale farmers are risk averse, incentives to pay for the first year the cost of incremental inputs and services of the new technologies, are essential to help taking risk.
- Capacity building and training in the adoption of new technologies and assets is key for the effective use of any investments and needs to be accompanied by a comprehensive course of training and skill development. There are many examples of different agencies providing assets to the rural communities and introducing new technologies without proper training in the use of those technologies.
- Importance of including the non-farm rural sector as key for employment generation and poverty alleviation in rural areas in Iraq: While the agriculture sector is key in rural areas, many of the districts in the south of the country have over the years significantly lost their potential for agriculture production due to reduction in water supply and increasing levels of soil salinity. These households have limited options within the agriculture sector and need to identify livelihood opportunities outside the agriculture sector. Youths in particular may be easier to attract into business opportunities downstream or outside of agriculture in the rural non-farm economy, particularly in densely populated rural and peri-urban areas.
- Dedicated resources, well specified targets and staff are key for the participation of any marginalised target group such as women, women headed household, youth and other marginal groups.
- To minimize (the risk of) élite capture, project implementation arrangements can set up and draw on multi-stakeholder partnership platforms which include civil society and in which government plays a prominent but not a dominant role. Iraq's decades-long culture of top-down planning needs to evolve through practical exposure to participatory approaches. As the Iraqi government continues to decentralize it is expected that the Governorate, district and sub-district levels will constitute a mode conducive enabling environment for pro-poor service delivery.
- Building a trusted relationship with government and seeking to advance a agriculture sector policy dialogue agenda based on implementation evidence should be given top priority (this is a lesson derived, e.g., from several UN initiatives); the current security level in Baghdad makes regular meetings between international staff and GoI staff very complicated and costly.
- *Value chain finance offers opportunities to provide greater value to clients at minimal costs and enhanced social impact.* MFIs can introduce innovative approaches to value chain finance to serve both micro and small producers, enabling them to leverage relationship with suppliers and buyers in urban markets (USAID).

Appendix 4: Detailed project description

1. The Small Holder Agriculture Revitalization Project (SARP) would be implemented over a 7 year period and would consist of three main components namely; (i) Climate Resilient Investments; (ii) Agriculture & Livelihood Diversification and (iii) Project Management & Coordination. The first year of the project would be a preparatory year and would begin by recruitment of staff, identifying service providers, preparation of the implementation manual and monitoring and evaluation arrangements. It would provide assistance in enhancing the capacity of the different implementing partners for project management and procurement. This first year of capacity building and implementation readiness is required due to the fact that this is IFAD's first investment in Iraq and the Government and implementing partners are not familiar with project implementation modalities and processes. Furthermore, the country is suffering from extreme fragility and conflict and requires a flexible approach to project implementation and supervision arrangements.

Component 1: Climate Resilient Investments

2. This component includes two sub-components; (i) Irrigation Infrastructure schemes and (ii) Knowledge Management and Institutional strengthening. The component is designed to deal with one of the major constraints in the country that centres around the growing scarcity of irrigation water and to assist the country with strengthening its capacity at the national level for monitoring climate change patterns and providing relevant information to key stakeholders and farmers to enable them to undertake adaptation and risk mitigation measures through an early warning system. This component would integrate the funds available from ASAP and the Adaptation Fund (AF).

3. **Sub-Component 1.1: Modernization and rehabilitation of irrigation Infrastructure:** *The SARP project is to set examples for other schemes in* the Governorates in dealing with reduced water availability and climate change. Because of the limited budget, SARP cannot do more than invest in a few schemes and hence demonstrate that a new type of agriculture based on new crops and high water efficiency is economically sustainable in the southern part of Iraq. One of the important approaches therefore *is to integrate agricultural development activities of the project with the activities of the irrigation development*. These activities should therefore be combined on the selected irrigation scheme for modernization. In this way new solutions can be found (other cropping patterns) that on the one hand lead to increased production, increased income and diversification (i.e. livestock development) and, on the other hand, to increased water efficiency and therefore towards a sustainable development.

4. Based on the above it is concluded that the main emphasis of the subcomponent 1.1 would be to modernize existing schemes and therefore introducing efficient irrigation in small landholder irrigation systems with less emphasis on rehabilitation (although it may be so that some rehabilitation is required to ensure the water availability in the scheme). The project will support investments mainly in those parts of the irrigation system that are considered tertiary and field level, will remove the bottlenecks hampering the regular access to water in the main and secondary system and promote the establishment of village based profitable agri-business.

5. It is important to state that Sub-component 1.1 and Sub-component 1.2 (i.e. institutional strengthening) should go hand in hand. Decentralized water management by water users is important for sustainable development. A combined approach is therefore promoted in SARP. Training of staff and farmers in modern water and irrigation management is provided for. A specific training is proposed to engineers from MWR and MoW on the modern irrigation techniques including an excursion to a location (or another country) where these techniques are applied. These latter are trainings related to the understanding and improvement of the selection process, the scheme development process and the facilitation of meetings with farmers.

6. The Directorate of Water Resources together with the Ministry of Agriculture at the Governorate level and in consultation with the Ministry of Environment should identify the small scale irrigation systems to be rehabilitated. During the first year of project selection, building up farmers' organization

and technical design including hydrological assessment will be conducted to select schemes. A Water Users Associations law has been published in the official gazette on February 3, 2014. During Project Year 1, SARP will make a determination as to the most promising approach to be used to address the institutional dimensions of operation and maintenance of the tertiary and in-field irrigation systems at local level. Options to be considered relate to WUAs, revival of traditional systems, and/or a mixed approach. The final choice will be irrigation site specific and will need to be based on broad consensus and buy-in from farmers. Similarly, it will be necessary to ensure representation of irrigation farmers on the Advisory Committees at Governorate level, by Project Year 2 at the latest.

7. The projected shift to high value and more labour intensive crops will be one of the key aspects to be evaluated in the prioritization of investment proposals as it will not only provide the basis for the assessment of the IRR but also of the potential for employment generation.

8. Funds for irrigation development are limited under SARP as compared to the need for total modernization and rehabilitation in the Governorates. The SARP will address about 8312,5 ha on a total of 145,750 ha in the Governorates for which a budget of $ 11,100,000 is available (including 3 % contingencies) . It is important to realize that this budget include the funds from the ASAP that are intended to execute climate resilience related measures. On average an investment of $ 1200 per hectare is foreseen ($ 300/dunum). Currently rehabilitation is foreseen in 2 Governorates; with an estimated investment cost of $ 2,000,000 to $ 2,500,000 per scheme a total of 4 to 5 schemes can be implemented with an average size of 1,600 to 2,100 ha.

9. Sub-**Component 1.2: Knowledge Management and Institutional strengthening;** Climate Change poses a growing threat to the agriculture sector especially because of its impact on the length of the growing season, reduction in precipitation and increasing water scarcity. The Ministry of Environment is interested in developing a climate change adaptation strategy for dealing with the agriculture sector The Ministry of Agriculture has established an Agro Meteorological Monitoring Network in Baghdad with weather stations installed across the country from which it receives regular information on weather patterns. This network includes 40 remote monitoring stations with communication via EUMETSAT Satellite. In addition to the remote stations, two receive sites have been installed to collect data in the central locations of Baghdad and Erbil. As of 2015 the network has expanded to over 100 Agro-Met stations. The system measures wind speed and direction, solar radiation and sunshine hours, barometric pressure, etc. Some of the parameters also include dew point, precipitation, soil temperature, soil moisture, leaf Wetness and evapotranspiration. The project would upgrade the receive system and install an additional six remote monitoring stations needed for providing greater resolution in the data. There is a team of young technical specialists working on receiving and analyzing the data. The team has received initial training regarding the operation, maintenance, troubleshooting and installation of the system. The staff needs additional training and the project would arrange technical training for the staff to strengthen their programmatic and analytical capacity.

10. The project would also assist in the dissemination of the information relevant for the extension centres, research stations and farmers. The project would assist in information analysis and dissemination so that the farmers can benefit from an early warning system. In developing the early warning system, the project would assist the Agro Meteorological Monitoring Network to work closely with farmers to understand how they assess and identify changes in weather patterns, growing seasons, planting and harvesting dates and other information useful for them. The technical needs for developing the system would be identified including identifying the most effective mechanisms to disseminate the information including SMS messaging, radio broadcasting, television, lead farmer contacts, etc. SARP would provide support to this component through the use of the Adaptation Fund.

Component 2: Agriculture & Livelihood Diversification

11. This component would consist of two subcomponents; (i) Crop, Livestock & Off-Farm Development and (ii) Skills Development & Capacity Building. The purpose of this component would be to assist poor households enhance their level of food security and diversify their incomes from

agriculture as well as improve their skills and assets to enable them to engage in off-farm income generating activities.

12. **Sub-Component 2.1: Crop, Livestock & Off-Farm Development:** For crop production, the project interventions would focus on enhancing the productivity of high value crops and vegetables and other horticulture crops such as date production. The project would provide smallholder farmers, women and farmer associations and cooperatives, grants for enhancing crop and livestock productivity. The packages could include assistance in installing improved irrigation systems, small greenhouses for high value vegetable production, apiculture, fisheries and livestock packages for women from poor households, etc., identified on a demand driven basis by the smallholder men and women farmers and their groups or associations.

13. To replenish the depleted stock of livestock, which can be an important source of nutrition, food security and income increase, the project would offer 5 heads of sheep/goats, one cow and 100 hens as an income and nutrition security package. The targeted families could choose one of these package based on their capacity to manage the package. Ewes or cow delivered to farmers would be carefully selected from those at late stage of pregnancy to give birth within 2-3 months. The poultry package would include hens, which are at least 15 weeks of age and disease free. The package of support would include simple equipment for animal feeding and milking and training on animal management and nutrition. The project would work closely with the Directorate of Livestock to train staff in AI and vaccinations.

14. The off-farm activities could include a wide range of enterprises based on local demand but typically are expected to include for women establishment of small retail stores, bakeries, food catering and processing businesses, beauty salons, handicrafts, stitching, etc. For men, it could include kits that would assist them in gaining apprenticeships as carpenters, plumbers, electrician or mobile outlets or repair, etc. The groups would include at least 5 men or women to undertake collection production and marketing activities and could consist of Unions, Cooperatives or informal associations or groups. The beneficiaries would be given an asset and other needed inputs under this sub-component. The value of the asset and inputs would, on average, be around USD 1500 per person or USD 10,000 for groups or associations. The upper limit could be relaxed if justified by a higher number of beneficiaries. Beyond this limit the beneficiaries would have to contribute their own funds in cash or kind. It is expected that the project would benefit around 7400 households to get a productive asset that would increase their incomes on a sustainable basis.

15. **Skills Development & Capacity Building**: The project would provide several types of trainings; (i) technical and business training associated with the provision of the asset; (ii) training in climate resilient approaches and technologies and (iii) vocational training for young men and women; (iv) management training for community groups and farmer organizations and (v) Institutional capacity building for Government extension staff including learning and exposure visits. It is expected that the project would training around 4400 individuals in the project area of which at least 1400 would be women.

16. ***Technical & Business Training related to Assets***: The first type of training would be provided to all those who have been selected to receive an asset for on-farm or off-farm activities. This would include training in technical, managerial and business aspects and would precede all provision of assets. Community groups and associations would also be given training in management and business plan development for the operation and maintenance of collectively owned assets such as post-harvest facilities, food and dairy processing, apiculture, plastic houses, fisheries, etc. The project would provide business development services to individuals, groups and cooperatives interested in engaging in livestock enterprises, fodder and feed production, dairy processing or additional businesses which can support the livestock sector or related to livestock products. The training programme would include training on basic animal nutrition, health and management, production of hygienic milk, fattening, early weaning, Para-Vet skill, and inclusion of by-products in animal feeding, dairy processing (cheese, ghee, yogurt), mechanical wool shearing, bee keeping, and poultry raising. Women would be trained in poultry management, dairy processing.

17. In all cases, each beneficiary would be assisted in closely examining the economic and technical feasibility of their enterprises and the monitoring of the expenditure and revenue streams. There are several NGOs in the project areas which have the capacity to provide these trainings and hand holding support on an individual and collective basis. UNIDO has been providing support in one of the project governorates in Thi Qar through its Enterprise Development and Investment Promotion Programme since 2008. UNIDO has maintained its presence in South Iraq and has indicated its willingness to provide support to the project.

18. ***Training in climate resilient approaches and technologies:*** The second type of trainings the project would provide would be for the promotion and adoption of climate resilient approaches and technologies that would enhance crop and livestock production. The project would promote crop rotations away from monoculture to a shift to high value fruit and vegetable crops. The training would also include improved irrigation practices and on-farm water management to deal with the growing water scarcity in the area. The project would provide trainings for the introduction of saline resistant wheat, rice and fodder crop varieties, which have been developed in Iraq but have not been widely disseminated. Al Hussein wheat variety which is characterized by its tolerance to the salinity. Methods of dry cultivation of rice could also be experimented with by use of drought tolerant rice genotypes and growing rice under sprinkler irrigation or use of intensive rice systems (IRS) to increase productivity and efficient water use.

19. The training would also focus on the date palm which is the most common and widely cultivated plant in the arid regions of the Middle East and is an important crop for smallholders in Iraq. Pests such as Dubas Bug, Borers, and Fungal diseases directly affect the product but others such Red Palm Weevil (RPW) Rhynchophorus ferrugineus which have invaded the country, pose a real threat to the date palm wealth in Iraq. The project would collaborate with the Food and Agriculture Organization to use their experience of Training of Trainers for the surveillance, monitoring and control of the disease through using Integrated Pest Management.

20. The interventions would also include support to livestock extension and health services including training of small ruminant holders in animal nutrition, animal health, integration of livestock into farming systems and the valorisation of crop residues in improved livestock feed. In designing the training programme, the project would design a full package of technology for the introduction of modern animal management. The package would include introduction of Artificial Insemination or improved rams for enhancing breeding rates, animal health, selection, early weaning, balanced ration, feeding alternative feed resources, increase twinning rates with hormone therapy. Increase the depleted stock of livestock in the irrigated areas to maximize the return from land especially by growing forages and grazing animals on crop residues. The project would focus on training of animal nutrition and use of alternative animal feed resources through preparation of feed-blocks, silage and improved fodder crops.

21. ***Vocational Training for ancillary services to support on-farm activities:*** The third type of training would support the young men and women in these governorates who have very limited opportunities for productive employment within the agriculture sector or are under-employed or unemployed but motivated to pursue vocational training or practical training to establish their own income-generating activities (IGAs) or enterprises. The types of IGAs would be based on local opportunities and demand and could include operation of farm machinery services, rural handicrafts and small-scale rural services such as training as para-vets, operators of agriculture machinery, operation of drip irrigation systems, generators, hatcheries, or carpentry, electricians and plumbing. The Government's vocational centres could also be used in providing support for the training.

22. ***Strengthening Community Organizations:*** The project would support the range of small-farmer unions, associations and cooperatives that exist in the project area. Some of them like the Beekeepers Association, Poultry Union and Youth Association have gradually grown in the area but have been provided very little support or capacity building. The Poultry Union has in particular been assisting small poultry producers with undertaking poultry production. The services that they have provided has enabled their members to capitalise on economies of scale and reduce transaction costs

and become much more competitive. Women's groups have also organized into small groups in a few cases but have had few opportunities to organize and grow. The management and members of these groups would be provided tailor made support under the project. Some small local NGOs which have been working closely in providing safety nets to the poor as well as a range of training and social sector services would be strengthened to support local communities on a sustainable basis.

23. ***Public Sector institutional Strengthening***: The project would provide opportunities for the staff from the Directorate of Agriculture in the project governorates to strengthen their capacity to deliver extension services especially crop production and livestock services. The staff of the relevant Directorates would be provided special training and learning opportunities and exposure visits. The training would include capacity for diagnose crop and animal disease analysis, disease surveillance, AI, impact of climate change and communication with farmers. Special TOTs would be conducted to ensure that the knowledge is transmitted to famers. The effective use of information on climate change to enable farmers to adopt suitable mitigation or adaptation measures would be incorporated in the training programmes. The project would also provide support to upgrade one diagnostic animal health laboratory in each governorate; these labs would enhance the veterinarian ability in animal disease diagnostic. The project would enhance the capacity of the cattle AI lab to introduce AI services for sheep and goats as well. To assist farmers on control the external parasites, the project would offer 6 mobile dips for sheep and goats.

24. The National Programme Coordinator would develop the training programme for the public sector agencies in coordination with the officers of the Directorate from the governorate. It is expected that 300 people from different agencies could avail of specific trainings in addition to the learning and exposure visits. South-South and Triangular Cooperation (SSTC) would be explored as a tool to understanding how countries in the region with similar socio-economic profile have resolved some of the challenges in agriculture and rural development. These areas could include understanding how different countries have dealt with some of the following issues important for Iraq; (i) climate change issues and developed early warning systems (Nepal and Bangladesh); (ii) implemented integrated pest management approaches especially for the elimination of the Red weavil in date palm (Iran and Kuwait); (iii) development of the cooperative movement (Morocco).

Component 3: Project Management & Coordination

25. This component would be designed to support the implementation of project activities. Government and IFAD would jointly finance the component with government only providing in-kind support. While the Government staff would assume the key responsibility for project implementation at the national and Governorate level, IFAD would provide additional support through recruitment of dedicated service providers, technical assistance and provide all logistical and operational support for the implementation of the project. This component would pay for all incremental costs of project management including operational costs, technical assistance, monitoring and evaluation, financial management, gender audit and mainstreaming, and knowledge management.

Appendix 5: Institutional aspects and implementation arrangements

A. Approach

1. The context in Iraq warrants a ***differentiated and flexible operational approach*** (see Attachment 1) to project management, project roll out and supervision because of its classification as one of the most fragile countries. Implementation and supervision procedures would be fine-tuned as required and keep in mind the evolving security conditions in consultation with FSU/ UNDSS. The project has kept the design simple and has specified procedures that recognize the challenges of working in the current context. Recognizing the limited capacity of local public and private sector institutions, the project implementation arrangements count on the combined capacity of both public, private and community institutions to assist in project implementation. The supervision arrangements also take the local context into account and propose arrangements, which would ensure that the teams assigned to undertake supervision can travel to the field given the heightened travel restrictions in some of the areas.

2. The quality of fiduciary management or social, environmental and climate safeguards would not be compromised and would strictly comply with IFAD and Government guidelines. The key here will be the establishment of a group of Iraqi service providers (individual and/or organisations that will receive capacity development (with regard to IFAD requirements and standards especially for fiduciary and M & E matters) and “on-the –job” experience through participating (as trainees) in IFAD Implementation Support and Supervision missions within the region).

3. The project also makes a sharp distinction between development assistance and humanitarian assistance and would only intervene in development interventions and would refer all cases qualifying for safety net programmes to the Directorate of Social Welfare or to the International Office of Migration (IOM) which is working on a community stabilization programme and supports host communities as well.

4. The approach adopted recognises that GoI is preparing a decentralization policy. In this regard the design of SARP focuses on governorate level institutional capacity this reading relevant organisations to take up responsibilities that may be assigned as and when the decentralisation policy is implemented.

5. ***Guiding principles for engaging in the most fragile situations:*** The project design and implementation approach incorporates the guiding principles for engaging in the most fragile situations namely maintaining a focus on the following: (a) risk management and resilience; (b) focus on root causes (within IFAD's mandate and comparative advantage); (c) gender mainstreaming and targeting; (d) institution-building to promote trust and social cohesion; (e) flexible and responsive resources, instruments and approaches; (f) strategic and complementary partnerships; and (g) results measurement and learning. Programme activities would enhance the resilience of target communities and enable them to manage risk and would be resilient to the effects of conflict and other shocks. Thus for project management and supervision reliance would be placed on local institutions and service providers. In addressing some of the underlying roots causes of the fragile situation, the project would foster inclusive community-based organizations and in partnership with public sector institutions at the governorate level capitalise on the decentralised structures to encourage effective and responsive local government service delivery. The project would with communities on long-term development programmes to achieve long-term development outcomes. It is expected that the funding to the governorates through the project would serve to highlight their credibility with the people and build a relationship of trust so critical for dealing with the root cause of the conflict and strife in the country.

6. ***Strategic and complementary partnerships***: The project design recognizes that partnerships help IFAD to manage risks and enable it to stay engaged in more challenging contexts because they provide the means to address root causes of fragility that lie outside IFAD's areas of comparative advantage. The IFAD Partnership Strategy would guide IFAD’s use of partnerships in fragile situations. Partnerships with the Rome-based agencies (RBAs), would be prioritized, as would partnerships with other development partners with strong implementing capacity, such as trusted civil

society organizations. The project design includes assistance partnership with UNIDO to provide support in management of micro-enterprises, with FAO in disseminating the IPM technologies for date palm and synergy with UNICEF which is providing complementary social sector services to the people of the marshlands. The project also envisages using the local farmer Unions, Poultry Unions and the private sector involved with vegetable marketing, dairy processing and packing and processing of dates. Partnerships with humanitarian agencies specially IOM, WHO, UNICEF, WFP, etc., and civil society are included as a key strategy for bridging the humanitarian-development gap.

7. ***Achieving, measuring and learning from results:*** The project recognizes that given the hardships suffered by the local communities, it would be critical to design investments that are simple, easy to implement and show quick results and demonstrable impact. This is key for the credibility of IFAD, local governments which have been recently decentralised and to justify the incurring higher levels of risk and higher cost of implementation. The need to learn from IFAD's engagement would be crucial not just for the organization but for Governorates which could replicate the experience over time. Given the limited capacity, the project would explore options to develop monitoring and evaluation (M&E) processes and impact assessment methodologies that are simple and cost-effective yet capable of capturing coherent data on results. The outcome and impact level assessment would also include indicators on institutional development and women's empowerment, given the centrality of these issues to fragility.

8. **Preparatory Phase**: A sequential approach would be adopted to ensure that implementation arrangements are in place prior to the start of the project activities on the ground. For this purpose, much of the first year of the project would be used to undertake preparatory activities, prepare implementation manual, recruit and second project staff, establish the various steering and advisory committees, recruit and brief service providers, guide staff on IFAD procedures and processes, prepare work plans, etc. The project would have four stages: Stage 1: Preparatory and Diagnostic Phase (See Attachment 2 for further details): This would entail recruitment and training of project staff, holding participatory dialogues with local communities to assess constraints, needs and market opportunities and coordination with UN agencies based in Basra to identify opportunities for collaboration and synergy; Stage 2: Institutional Development: The investments in infrastructure, management capacity and feasibility studies and skills would be used as an entry point around which individuals and institutions would be strengthened and management and entrepreneurial capacity of local people would be built; Stage 3: Production and Livelihood Intensification: This stage would begin with providing assets to individual households and groups and guiding them through the process to initiate sustainable livelihoods and links with markets; Stage 4: Sustainability and Exit: This phase would be expected to be reached when the individuals, institutions and rural enterprises need less and less support from the project and start becoming sustainable through profits that accrue.

9. **Participatory and Demand Driven Approach**: The implementation approach of the project would be demand driven and would be follow a process in which individual and group beneficiaries would participate in selecting their activities. A diagnostic process would be adopted and implemented by the service providers hired especially to discuss individual and group investment opportunities and develop plans based on their potential, aspirations and capacities. The project would tailor project activities and services to the needs of the target beneficiaries and ensure their capacity to operate and manage the services for long-term sustainability. The project would ensure close partnership with each of the beneficiaries and rural community institutions to clearly identify the roles and responsibilities of each, the terms of partnership agreed by both parties, implementing arrangements, roles and responsibilities of each and if required agree on MOUs with Unions, Associations, groups and individuals to clarify expectations and agree on targets and monitoring and reporting responsibilities.

B. Organizational framework

10. **National Level**: The Ministry of Agriculture would be the lead agency responsible for the implementation of the project. The project would have a Project Steering Committee (PSC) the composition of which will be: (maximum of 13 people with at least 4 women):

i. Chair: Deputy Minister of Agriculture
ii. Director General of Environment
iii. Director General of Water Resources

iv. Director General, Ministry of Planning
v. Director General of Planning , Ministry of Agriculture
vi. 3 technical resource people (nominated by the Chair) including women
vii. Technical members as required – including women
viii. Project Manager (Secretary)

11. The PSC would meet at least once twice a year to approve the programme and provide guidance on key aspects. The National Programme Coordinator would be the Secretary of the PSC.

12. **A Project Management Team (PMT)** would be established in Baghdad and be responsible for overseeing implementation of the project. The PMT would be led by a National Project Coordinator and would be assisted by a Financial Officer, a Procurement Officer, a Monitoring and Evaluation Specialist who would coordinate the reports from the Governorates to present quarterly statistical reports and annual progress reports on the project. The PMT would also include a Climate Change Adaptation Specialist (CCAS) who would assist in developing an early warning system based on discussing with farmers what would be relevant information to provide them.

13. **Governorate level:** The Director of the Directorate of Agriculture would assume the overall responsibility for the project, at the governorate level. At the Governorate level, the structure would include an Advisory Committee that would advise the Department of Agriculture in each Governorate on key technical, social and institutional aspects of the project during implementation. The Governorate level Advisory Committees will comprise: (max 11 people with at least 4 women):

i. Chair: Governorate Director of Agriculture
ii. Governorate Director of Environment
iii. Governorate Director of Water Resources
iv. The Governorate Council representative (a woman)
v. Business Representatives of 3 key Value chains (including women)
vi. NGO representatives (2) including women
vii. Representative of Agriculture University

14. The Department of Agriculture could co-opt key resource persons as and when required to provide guidance and advice.

15. A Governorate Coordination Team (GCT) would implement and coordinate project activities. The GCT would have a dedicated Governorate Coordinator who would be responsible for day to day implementation in each governorate. The staff of the GCT would include a Training and Community Organizer and a Monitoring & Evaluation Officer. The Directorate of Water Resources would implement the irrigation investments. The team would be supported by a competitively recruited service provider who would be selected from local NGOs or private sector firms that would be responsible for identifying the target group and supporting them in the implementation of the various project activities in coordination with the Department of Agriculture Extension. Short Term Technical Assistance would be used for any specific assistance during project implementation. The Government would provide all key staff and IFAD would pay an additional stipend of 30%. However, the service provider and technical assistance would be supported by IFAD financing. The project would also provide vehicles, office equipment, operation and maintenance and support all field activities.

Attachment 1 SARP Flexibility Matrix

SARP – Flexibility Matrix – southern Iraq is a fragile project area				
Area	**Rating**			**Comments/Discussion**
	Fixed	Firm	Flexible	
Scope/Approach				
Project Area	√			Need to make provision for studies for future projects/up-scaling
Institutional Development decentralisation and policy changes			√	Need to focus on governorate/scheme level institutions; need to seize opportunities emerging from institutional, legal and policy changes to promote bottom-up participatory planning and advocate for rural development
Empowerment of target groups through local institutional development			√	During Project Year 1, the Training and Community Organizer will work with local partners in the governorates to identify opportunities for investing in local institutions and elaborate an action plan for empowering target groups
Irrigation Modernisation			√	Clear emphasis on modern efficient methods – must be selected for individual schemes
Scheme Governance		√		Evidence from fragile states indicates that we need to work with the each scheme in line with local people and conditions but with clear criteria/guidelines
Rural Enterprises			√	This needs to be implemented with sympathy to market and the needs of the target group
size		√		Ceilings established– to be reviewed annually
type			√	Use VC/market assessment to establish viable options
Market assessment /Value Chains		√		Key models to be assessed first – progressive coverage of potential irrigation based systems
Business management capacity building			√	This will be critical – need to use business mentors/on the job training etc
Schedule				
Time allocated	√			
Project Year 1		√		Schedule established, IFAD need to support and review actively in this first year
Remaining 6 years			√	To be established during year one – particular attention to be paid to supporting/reviewing AWPBs during their preparation
Cost				
Project Size	√			Focus will be on using funds effectively
Unit Costs		√		The PMT with IFAD support will need to clearly establish “real/actual “ costs during year 1 and then annually
Quality				
Fiduciary Requirements	√			IFAD standards to be meet
Assessing Fiduciary Standards		√		Need to i) establish an IFAD fiduciary team in country ii) use output/milestone based contacts rather than input measurement ones iii) consider use of GIS/digital evidence iv) recognise scanned authorised documents in case of damage to project facilities –

				provide for digital back-up
Targeting		√		Standards have been set – need to recognise need to social cohesion within irrigation schemes that may mean “larger” farmers have to be included
Monitoring and Evaluation	√			We need to “invest” in capacity building to get output/outcome concepts introduced and used
M & E Instruments			√	During Year 1 need to assess what instruments are practical and useful – can we use satellite imagery to assess irrigation schemes
Definitions				
Fixed	Clearly established parameter – set in project instruments - changed only through amendment to financing agreement			
Firm	A well founded parameter – able to be changed during mid-term review(s)or through formal management letters from IFAD to GoI			
Flexible	A variable parameter that can be amended as and when required through AWPBs, exchange of letters between the project management unit and IFAD these may need to be confirmed during implementation support/supervision missions – with regard to fiduciary matters may require prior review by IFAD Finance Department			

Attachment 2: Implementation Plan Preparatory Year - 2018

No	Action	Schedule	Responsible	Comments
1	**Project Processing Activities**			
1.1	GoI Ratification of Project and Financing Agreement – legal opinion, cabinet approval, parliament approval (may take some time) – likely to take 3 months	Dec 2017	GoI	needs good follow-up by MoF and MoP there is a clear mechanism for grants and loans including getting to negotiations – can a copy be sent to IFAD
1.2	Project Budget Approved by GoI – 2018 AWPB- in the GoI investment budget	June 2017	MoF & M	
1.3	Entry into Force of IFAD Financing Agreement(s)	Jan 2018	GoI & IFAD	
1.4	IFAD Implementation Support Mission Schedule	Feb, Jun and Oct 2018		
1.5	Identification and capacity building of IFAD Iraq Implementation Support and Review Team	Feb 18	IFAD	Develop local team for fiduciary oversight
1.6	Opening of Bank Accounts	Jan 18	MoF	
1.7	Authorizing Signatories	Jan 18	MoF & IFAD	
2	**Project Management Component 3**			
2.1	Project Start-Up Workshop	Feb 2018	PMT	
2.2	Joint Project Review and Realignment Workshop i) Key lessons learnt ii) Project reporting formats & guidelines including where English versions are needed	June 18	PMT & IFAD	Review 2018 AWPB and align if needed project docs
2.3	Appointment of Project Teams 1) National 2) Muthanna 3) Missan 4) Thi Qar 5) Qadisiya	June 17 for PMT Oct 17 for GCT	MoA	
2.4	Preparation of detailed AWPB (incl procurement plan) – GoI	Jun 18	PMT & GCT	To meet 2019 GOI AWPB schedule
2.5	Preparation of PIM (in Arabic)	April 2018	PMT with support from IFAD	
2.6	Financial management system i) Selection/procurement/confirmation ii) Establishment of reporting systems for GoI and IFAD including automatic generation of withdrawal applications	Installed and operating by March 18	PMT with MoA & IFAD	

	iii) Capacity building for PMT & GCT teams			
2.7	Preparation of Implementation organisation (capacity /responsibility assessment) Matrix 1) Government agencies 2) Service organisations	Sept 18	PMT	
2.8	IFAD Project Implementation Capacity Building i) Logframe and SARP ii) SARP Knowledge Management and M & E iii) Capacity Building PMT and GCT Learning Tour to IFAD programme in eg Pakistan iv) Building the SARP Project Implementation Manual – learning by doing v) Carry out market research on potential service providers, suppliers and contractors including tender procedure training needs assessment	During Implementation support missions	IFAD with PMT	
2.9	Establish SARP procurement procedures in line with GoI and IFAD	June 18	PMT with IFAD review	
2.10	Prepare on-line procurement/tendering capacity building (service providers and contractors to complete to be eligible to submit tenders	Sept 18	PMT/GCT	On-going requirement
2.11	Establish procedures for linking irrigation schemes to grant package processes	April 18	PMT	
4	**Component 1 Climate Resilient Investments**			
4.1	Establish and have approved scheme identification and selection criteria and procedures i) Focus on optimal use of available water ii) Consultation with farmers re cropping patterns wanted iii) Review water supply and drainage iv) Water permits etc	October 2017	PMT with IFAD	As developed in PDR Workshop
4.2	Based on agreed criteria develop shortlist of schemes	January 2018	PMT & GCTs with IFAD	
4.3	Review/complete/up-date initial feasibility studies of selected schemes including consultations with farmers regarding cropping patterns	Thru 2018	GCTs	Support of a experienced irrigation engineer (community based modern schemes)
4.4	Build up water users associations including design matters	On-going from June 2018		
4.5	Tender first round of irrigation works	asap	PMT	
4.6	Engage with WUAs	On-going		

3	**Component 2 Enterprises**			
3.1	Analysis Rural enterprise economy and farming systems	May 18	PMT with IFAD support	
3.2	Market Studies (I per Gov)	Oct 18	PMT	Key enterprise to be selected – but not same for each governorate
3.3	Targeting Guidelines developed based on existing data bases (as much as is possible)	June 18	PMT with support from IFAD	
3.4	Grant mechanisms established and approved	June 18	PMT	
3.5	Specifications/ToR for Governorate Service Providers developed	December 2017	PMT with support from IFAD	
3.6	Business plan templates and guidelines developed	March 2018	PMT & GCT with IFAD	
3.7	Capacity Building Community Mobilisation and enterprise development i) PMT and GCT ii) Implementing partners iii) Service providers iv) Business management training needs and modules	Form March 2018	Implementation Support missions	To be taken up by service providers
3.8	Finalise Service Provider(s) ToR and tender initiated	September 2018	PMT & GCTs	

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

Overview

1. This appendix describes the planning, monitoring, evaluation and knowledge management arrangements for the SARP Project. The Project Design team has taken on board the guidance provided by IFAD's Results and Impact Management System (RIMS) and the revised RIMS framework refined in 2017[31], to prepare the Project Log-frame and identify the monitoring and evaluation guidelines. The Log-Frame uses the output, outcome and impact indicators relevant for the current project. However, at the goal level the change in asset ownership and changes in child nutrition status are still considered the best proxy indicators to measure a households progress out of poverty and have been used.

2. For SARP, in line with lessons learnt [32] from fragile country development situations the following key principles need to be applied in the development of the IFAD approach outlined below:

(a) The safety of stakeholders, partners and communities need to be fully respected

(b) With limited access monitoring trust is essential – without trust no monitoring system can be set up

(c) We need to be gender sensitive

(d) Our methodology needs to be adaptable to the situation recognising that we will most likely be dealing with patchy data/information

(e) Our accountability systems need to reflect the situation and be sensitive to the challenges that society is facing in the four project area governorates.

Planning

3. The first year would be a preparatory year in which the project would after recruitment of staff conduct a Start-up Workshop, with the aim of sensitizing and training the MoA, the Project Management Team and the Governorate Management Teams and other potential implementing partners to the project objectives and scope. At this workshop, time would be allocated to familiarize all participating partners with the planning and annual work plan process as well as the monitoring and evaluation system of IFAD. The staff of the project would also be provided an opportunity to learn about IFAD's systems of procurement, financial management, annual work plans and monitoring and evaluation. Given that this is IFAD's first investment in Iraq, the first six months would be spent in establishing the project implementation arrangements and hiring the service providers for implementation and project supervision. During this initial period, the staff would also be prepared in the preparation of the Project Implementation Manual and understanding and making the arrangements for the baseline survey and putting in place a monitoring and evaluation system.

4. Annual Work Plan and Budget (AWPB) and corresponding procurement plans would be the project's principal planning instruments. The AWPB would be used as a tool for specifying implementation priorities, identifying the financial and procurement requirements and establishing a work plan for the staff. The AWPB would constitute the basis for release of funds and for financial management. The National Project Coordinator in the PMT would assume the overall responsibility for the preparation of the AWP/B. He/She would coordinate with the Governorate Coordinators for the purpose. The AWPB would be prepared at a time which would enable its inclusion in the Government of Iraq's budget each year and would be submitted six months prior to the start of the next Financial Year in June each year. The AWP/B would be submitted to IFAD for its no-objection prior to its

[31] Taking IFAD's Results and Impact Management System (RIMS) to the Next Level. IFAD. 2017

[32] " A quick Guide to Monitoring , Evaluation, Accountability and Learning in Fragile Contexts" Oxfam, 2014 and "Evaluating in settings of fragility" DAC Network on Development Evaluation- 16th Meeting 12 – 13 February 2014

inclusion in the Government budget. Appendix 6 gives some more details of the planning, monitoring and evaluation aspects of the project.

Monitoring and evaluation

5. The Project's Logical Framework provides indicators for Project implementation along with their corresponding means of verification. The M&E system is expected to generate quantitative and qualitative information on the project's performance in a form that would compare physical progress against the planned targets and allow assessment of performance and undertake any remedial action if required. The project uses IFAD's revised RIMS framework to enhance the measurement of IFAD's results at the outcome level. The monitoring and evaluation indicators have been disaggregated by gender. The project team would fine-tune the progress and performance and impact indicators of the project at the Start-Up Workshop with support from IFAD, if required. The Project Management Team would define targets and indicators for subsequent years annually as part of the internal planning processes and build on the experience gained as the project evolves.

6. The overall responsibility for the M&E activities would be assumed by the National Project Coordinator who would be assisted by the Monitoring and Evaluation Officer at the national level and the M&E officers at the Governorate level in preparing all progress and monitoring reports. Given the limited capacity for monitoring and evaluation overall in the country especially among the NGOs and some of the local partners who are expected to partner with the project, the project would select strong monitoring and evaluation staff and provide them proper guidance on IFAD's RIMS and provide guidance on the statistical and narrative report formats.

7. A Third Party would be contracted to undertake a ***Baseline Survey*** that would be conducted during the first year of the Project. IFAD would provide the PMT guidelines in developing the terms of reference and the household questionnaire for the baseline survey. Assistance would be sought from IFAD's newly established Strategic Planning and Impact Assessment Division if required. The LFA has Beneficiary Feedback Surveys planned for year 3 and year 6. These are designed to assess progress and the initial assumption regarding the intermediate outcomes such as adoption rates and the revenue stream that is begging to emerge. The IFA specifies which of the indictors re to be collected using these beneficiary surveys.

8. A ***Mid-Term Review*** would be carried out towards the end of the Project's third year. The review would cover: (i) physical and financial progress as measured against AWPBs; (ii) progress in the implementation and emerging outputs and intermediate outcomes of the irrigation infrastructure schemes; (ii) assessment of the efficacy of the institutional development and capacity building activities; (iii) progress in crop and livestock productivity through provision of assets, training and market linkages; (vi) progress in establishing off farm income generating activities providing ancillary services for agriculture growth (vii) implementing of climate change resilient activities; (vii) the participation of women and the emerging outcomes reported by them.

9. **Final Evaluation:** An independent Final Evaluation would take place three months prior to the Project completion date, and would assess overall project outreach, outcomes and impact. The final evaluation would also review the sustainability of results and the potential for scaling-up. The final evaluation would provide recommendations based on lesson learnt that would be taken into consideration while designing similar projects in the future in similar contexts. The Final Impact Assessment would be undertaken by a neutral agency with no previous involvement in project implementation. The Terms of Reference for this evaluation would be prepared by IFAD.

Learning and knowledge management

10. Given that this is the first IFAD loan financed project in the country, the compilation and dissemination of project information, experiences and results on an on-going basis for the country and for IFAD headquarters are important. The project would package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, and web). This knowledge-sharing process would be supported by a well-focused series of workshops and joint learning events and visits.

11. The overall responsibility for Knowledge Management and communication would be shared by IFAD and the PMT in Iraq. The PMT would coordinate with the Governorate Coordinators and the M&E Officers in identifying specific case studies of interests which illustrate how the project activities have had an impact on rural livelihoods. The PMT would be assisted by the project Service Providers in the preparation of special case studies and Learning Notes. These would be shared more widely by IFAD through its various tools for sharing the knowledge gleaned from IFAD-supported projects and programmes such as through the use of what is termed as “Learning Routes" with the objectives of valuing local knowledge and facilitating the development of platforms in which experiences are shared and as a complementary model for knowledge transfer among development partners.

Appendix 7: Financial management and disbursement arrangements

Inherent risks: country issues, entity risks and project design

1. **Overall risk assessment**. The country risk is rated as High. Transparency International's Corruption Perception Index ranked Iraq 166st out of 176 countries in 2016 (stable compared to 2015) with a score of 17/100 (16/100 in 2015). The analysis of the trend of TI rating, for the period 2012-2015, had shown a recurrent structural and institutional issues related to country public systems and governance capacities (18/100 in 2012 and 16/100 for 2013-2014 and 2015) The most recent PEFA dated from June 2008, highlighted large areas of weakness related to public financial management systems including budgeting process, central bank organisation and centralisation and sustainability of internal and external controls of public expenditures. The lack of recent data related to the country public financial management systems and governance could be considered as indicator of the high inherent risk.

2. **Financial management risk assessment**: To determine the project specific control risks, a Financial Management (FM) risk assessment of the SARP and its fiduciary arrangements has been completed at a first stage. This assessment concluded that the project financial management arrangements and internal control systems will satisfy IFAD's minimum requirements to provide accurate and timely information on the progress of project implementation and appropriate accountability for funds. The residual financial management risk is rated as High, after the implementation of appropriate risk mitigation measures to ensure accountability of funds such as competitive recruitment of fiduciary staff, training and support in FM and procurement at start-up and during PY1, PIM and software as disbursement conditions

Proposed financial management and disbursement arrangements

3. **Financial management.** The SARP financial management team would be part of the PMT, which will be fully embedded and located within the MoA, and vested with financial and administrative autonomy. The financial team would be seconded from MoA staff or hired through a competitive process. In both cases, there would be two types of contract for PMT staff: (i) The staff that cannot be sourced from MoA would be competitively recruited on contracts that are annually renewable, upon satisfactory performance; and (ii) subject to IFAD no-objection on proposed profiles, GoI would second competent staff to the PMT ensuring that relevant competencies are identified and that full-time availability is guaranteed.

4. **Accounting and financial reporting arrangements:** The borrower/recipient would open three (3) USD denominated Designated Accounts (DAs) for the IFAD loan and grant, the ASAP grant and the Adaptation Fund grant at Central Bank in order to receive IFAD loan and grant resources. The authorized allocation will be equal to approximately 3 months of project expenditure, from both IFAD loan and grant (ASAP) resources. Flow of funds. A chart of the proposed flow of funds arrangements for the project is shown in Attachment 1 to this Appendix.

5. The MoA will open 3 separate bank accounts to manage funds from Central Bank and to pay providers and 3rd parties. The Central Bank under the MoF maintains the accounts of general budget public institutions and executes the replenishments of Project's bank accounts opened at MoA. For that purpose, GoI has developed a web-based Public Expenditures and Accounting Information System as Integrated Public Financial Management-IPFM system includes budget, procurement and contract management, monitoring and evaluation modules, etc. However, the system will not enable the PMT to directly generate financial reports, withdrawal applications and statements of expenditure as per IFAD reporting requirements, which would lead to the use of an Excel based financial reporting mechanism. Within the first six months, the project would (i) acquire and configure a financial, accounting and operational software to support all the transactions, budget and cash forecasts analysis, operational and financial dashboards; and (ii) prepare a draft Project Implementation Manual

(at minimum the fiduciary part), acceptable to IFAD, including financial, accounting, procurement and administrative arrangements for project activities. AWPBs showing all activities planned during the given year, disaggregated by quarter and by financier, should reach IFAD 6 months before the beginning of each fiscal year.

6. All accounting policies and procedures related to the project will be clearly documented in the financial, accounting and administrative procedures manual, which will make reference to the MoF system manual. The PMT will record eligible expenditures following international accounting standards (cash basis). The PMT will submit monthly financial reports analysing cumulative disbursements, AWPB execution, treasury position and forecast, implementing partners' financial situation, procurement plan execution and any salient administrative issues.

7. Interim unaudited financial reports for all financing sources (IFRs) will be submitted to IFAD no later than 45 days after the end of each calendar quarter during the project implementation period. A comprehensive, tabulated review of planned activities and their cost is sufficient. A few pages with analytical comments should be added, listing key achievements, major deviations from the AWPB, implementation issues, resource constraints, and proposed solutions. The Interim Financial Reports should reflect all project activities, financing, and expenditures, including counterpart funds. They could also reflect any substantive contributions in kind such as labor and accommodation.

8. Annual reports shall be prepared. The nature of annual reports is different from that of quarterly reports. In addition to a simple review of implementation progress, this requires analysis by project management. A full picture of project resources, achievements of the past year and since the beginning of the project, as well as annual and cumulative expenditure need to be presented. Analysis is required of successful approaches and outputs, failures and constraints, performance of implementing partners, and whether progress is being made towards achieving project objectives. Such analyses should lead to conclusions about the effectiveness of project strategies, the need for modification of the logical framework, and planning for the following year. The annual reports should also reflect contributions in kind such as salaries and office space.

9. **Counterpart funding***:* The GoI contribution to project costs will be in the form of tax exemption, and in kind contributions (essentially office space and utilities, and compensation part of salaries for seconded staff). The project end-beneficiaries will participate in the project costs in the form of in kind contributions.

10. **Audit:** The annual external audit of the project will be carried out by the Federal Board of Supreme Audit, the country's SAI, in accordance with the International Standards on Auditing and the IFAD Guidelines for Project Audits and based on terms of reference subject to IFAD no objection. The final audit report and management letter are required to be submitted to IFAD by the Borrower at the latest six months after the end of each fiscal year. In addition to external audit activities, In addition, the internal audit unit of MoA will include the review of the transactions of IFAD project at Central level audit as legal mandatory requirements. The internal Auditor Role in the organisation is correctly structured (independent and reporting directly to the Ministerial Cabinet). The internal audit unit expressed its commitment to deliver IFAD a quarterly report on their review.

11. **Internal controls:** All internal control mechanisms will be detailed in the financial volume of the PIM, to be prepared before disbursement. IFAD will be requested to provide no-objection on the PIM.

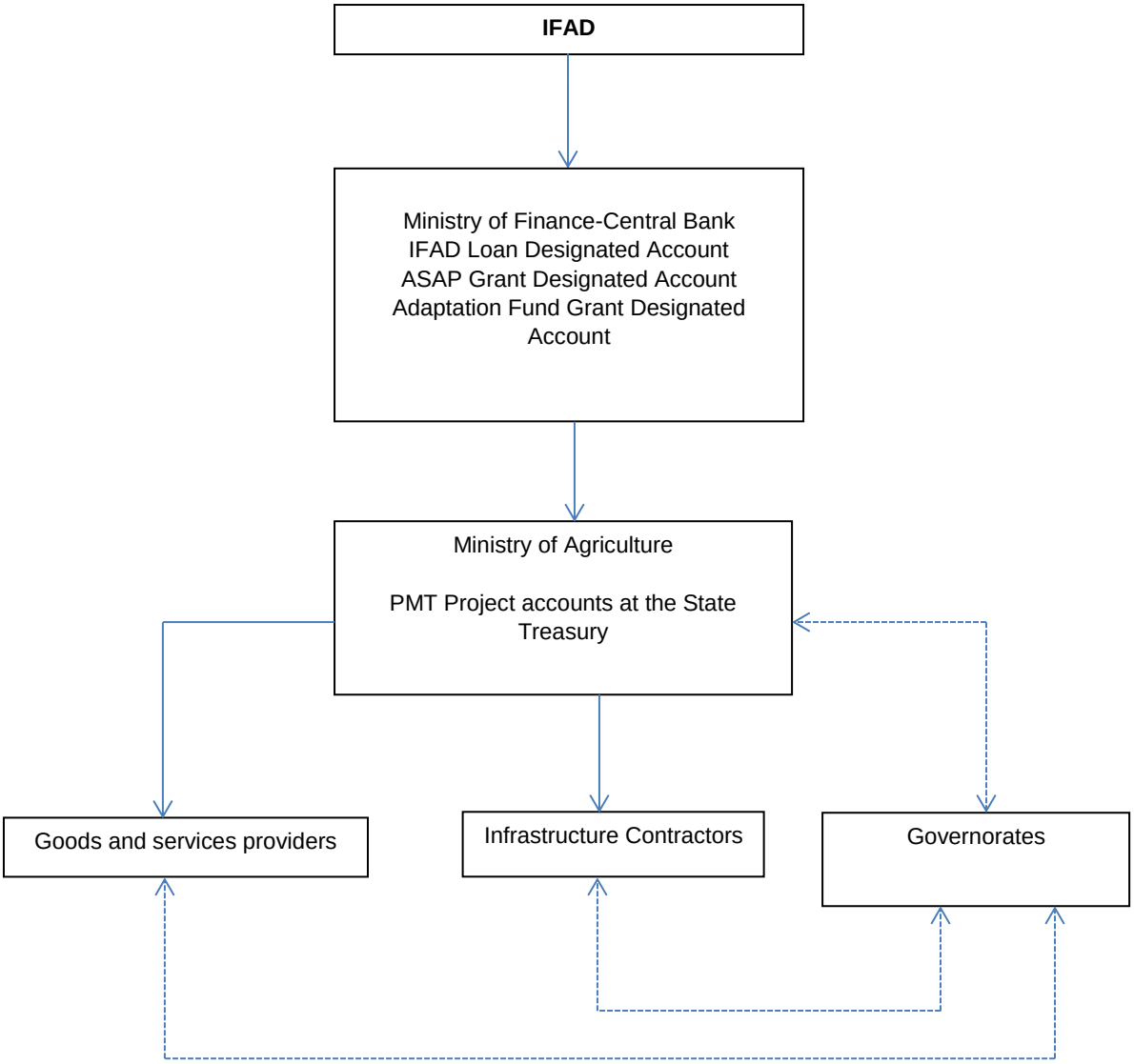
12. **Budgeting:** All project activities for all components and subcomponents will be included in an Annual Work Plan and Budget (AWPB). The AWPB will indicate which budgeted expenditures are intended to be financed from each financing source (IFAD loan, ASAP grant, AF grant, counterpart funds and beneficiaries contributions). Budgets will be in a format that includes the quarterly financing requirements for each financier separately. The approved budget would be incorporated in State Treasury Strategic Planning and Budget Systems in accordance with government budgetary charts of accounts. The AWPB would be prepared in time to ensure its inclusion in the government budget for the forthcoming year.

13. **Anticorruption and good governance framework**: The primary responsibility of detecting fraud and corruption lies with the Borrower. However, IFAD applies a Zero Tolerance Policy towards fraudulent, corrupt, collusive or coercive actions in projects financed through its loans and grants. "Zero Tolerance" means that IFAD would pursue all allegations falling under the scope of this policy and that appropriate sanctions will be applied where the allegations are substantiated. IFAD shall

take all possible actions to protect from reprisals individuals who help reveal corrupt practices in its project or grant activities and individuals or entities subject to unfair or malicious allegations. Given IFAD's Zero Tolerance described above, it is important that the staff and all stakeholders of the project are familiar with IFAD's as well as national anticorruption policies and whistleblowing procedures. The IFAD anticorruption policy is available on the IFAD website at www.ifad.org/governance/anticorruption/index.htm. The IFAD website also provides instructions on how to report any alleged wrongdoing to the Office of Audit and Oversight (http://www.ifad.org/governance/anticorruption/how.htm).

14. The dissemination of IFAD's anti-corruption policy amongst project staff and stakeholders, as well as the adoption of IFAD procurement guidelines for SARP procurement, would reinforce the use of good practices. In addition, SARP would promote good governance through the involvement of Governorate staff and beneficiaries in (i) the preparation of the annual work plans and budgets, (ii) the procurement process and (iii) the monitoring and evaluation of project activities.

Annex 1. Flow of Funds



Cash flows

Flows of information, approvals on implementation

Attachment 2. Project Control Risk – Summary

Risk Category	Initial FM Risk Rating (H/M/L)	Proposed Risk Mitigating Measures	Residual FM Risk Rating (H/M/L)
9. Inherent Risks			
Country Level 1. TI rating have lowered rating, putting Iraq at 161/167 countries in 2016.	High		High
Entity and Project design (a) First IFAD project in the country and entire unit dedicated to the project in the technical ministry. .	Medium	a) PMT staff will be seconded from MoA Staff or selected competitively from the local market. IFAD will provide guidance and assistance (particularly in 1st year of implementation) on FM and procurement	Medium
10. Project Control Risks			
1. Organization & Staffing A. Institutional and organizational aspects due to change on Public entities budget requirements may result in coordination problems, flow of information bottlenecks, reporting delays and disbursement effectiveness.	High	*a)* Finance and Accounting supervisor to be recruited. *b)* Staff ToR to be cleared by IFAD before recruitment/secondment. *c)* All Finance Team of PMT will be required to complete FM training on IFAD procedures and provide certification.	High
2. Budgeting 1. Timely submission and coordination with the different implementing agencies/partners will be challenging. 2. Under spending, absorbing capacities and unrealistic budgets. 3. Level of decentralisation	High	*a)* Budget preparation and coordination will remain with PMT. *b)* To ensure that timely inputs are received, the Project Coordinator will initiate the process 3 months before the budgets are due. *c)* To ensure a realistic budget, deliverables on previous budgets will be reviewed by the technical and financial teams; significant variances will be investigated regularly and corrective actions will be documented. *d)* Budgets to include all sources of financing separately and to show estimates by quarter. *e)* Interim financial reports showing progress against budgets to be submitted to IFAD quarterly; IFAD will provide the necessary support remotely and during field visits.	Medium
3. Funds Flow & Disbursements 1. IFAD funds flow through Central Bank through MoF System monitored by the State Treasury 2. Implementation delays due to lack of knowledge of IFAD procedures and limited abilities to align forecast liquidity needs with designed categories.	High	a) Budgeting issues will be mitigated, thereby facilitating the forecast of funds utilization. b) Clearly detailed fund flow arrangements and continuous follow-up of the same within the first year of implementation to ensure any needed corrections will be made to mitigate risk of liquidity problems and ensure	Medium

		smooth flow of funds. c) Financial procedures manual will be a condition to disbursement and knowledge of the same will be mandatory for all staff involved in finance.	
4. Accounting Systems, Policies & Procedures a) MOF Web based Public Expenditures system is mandatory for executing any payment from national budget including international funded projects. Manuals for the system are also available and updated whenever system is upgraded.	Medium	***a)*** Categories of expenditures designed in State Treasury System are not aligned with project categories of expenditures and suffer from flexibility. The finance team should made more efforts to customize the expenditures categories and detailed accounts.	Medium
5. Reporting & Monitoring a) The accounting system should be designed to implement donor-funded projects. b) Accounting is on cash basis. c) Adequate procedures are in place for accounting. d) Large volume of reports requested on quarterly basis by the State Treasury .	High	a) Training on the new accounting and financial system (Budget and Financial Reporting Module) will be provided for all finance staff involved. b) Reporting and monitoring requirement will be detailed within PIM. c) Data recorded in Project accounting system to be reconciled on monthly basis with MOF system and ensure timely correction for any identified discrepancies.	High
6. Internal Audit a) Periodic reporting of internal control weaknesses to MoA internal audit.	High	a) Internal controllers of MoA to report on annually basis on effectiveness of Internal Control. b) Internal Audit will be carried periodically through inter-ministerial audit plans. The internal audit cover will include IFAD projects. c) TOR of external auditors to be extended to include review of internal controls and field visits.	Medium
7. Auditing a) The Project will appoint SAI for external audit.	High	a) External auditors scope should be extended to cover all contributions in the project including those in kind.	Medium
Project Fiduciary Risk at design:			
OVERALL FM RISK	**HIGH**		**HIGH**
* H=High, M=Medium, L=Low			

Appendix 8: Procurement

Summary of Procurement Assessment

1. **Public Procurement legal framework**. Public Procurement in Iraq was governed by the Coalition Provisional Authority (CPA) Order No 87 of 2004 and the implementing regulations No. 1 for 2008 promulgated by Council of Ministers and prepared by the Ministry of Planning (MoP) since 2004. However, the Council of Ministers issued a Resolution dated May 16, 2011 to abolish the existing procurement framework. A draft Law was developed by an inter-ministerial working force with the assistance of the World Bank and reviewed by the Shura Council as an appropriate legal framework for the country, but there were calls to discard the draft Law and instead to prepare a new concise By-Law or Regulation. Consequently, and in the absence of a new legal framework, the Ministry of Planning has issued a set of regulations in 2014 to replace the 2008 regulations.

2. **Public Procurement, a major component of the Iraqi economy**. According to the most recent "*Iraq Systemic Country Diagnostic*" that has been released by the World Bank in February 2017, Public procurement was roughly estimated to represent 25% of the country's GDP or over US$50 billion in 2013. Doing business with the Iraqi Government presents considerable challenges and high fiduciary risks. Issues with corruption and transparency in Iraq, as evidenced by the country's consistently low rankings in international surveys such as ranking 166 out of 176 countries under Corruption Perception Index of Transparency International (2017), exacerbate these challenges. Existing institutional weaknesses have manifested themselves in particular in the governance and performance of the country's public procurement system. A 2012 World Bank report on Oil Revenue Management for Economic Diversification and Public Expenditure Review cited unsatisfactory procurement procedures as one of the main bottlenecks in budget execution in Iraq. The 2012 Investment Climate Assessment (ICA) for the country confirmed a similar finding.

3. **Delays in payment**. A World Bank report on "*Benchmarking Public Procurement*" that has been carried out by the World Bank in 2017 to assess public procurement regulatory systems in 180 economies shows that considerable delays in payment hinder participation by private firms in the public procurement process-especially small and medium enterprises (SMEs) that struggle with limited cash flow. In fact, suppliers must wait, in Iraq, more than six months to receive payment from purchasing entities. Poor procurement processes have been identified as a major cause of bottlenecks in budget execution. Additionally, the Iraq Systemic Country Diagnostic (World Bank, 2017) has shown that there is a broad consensus among stakeholders that government at the federal, regional, and local levels continues to struggle to spend its procurement budget because of a weak capacity to implement projects and programs.

4. **Complaint mechanism**. Regulations 1 for 2014 establish the right of bidder to raise a complaint to a centralized committee at each procuring entity. However; bidders do not have adequate access to independent administrative review and appeal processes. Although civil courts have jurisdiction over civil and commercial matters, access to them is perceived as inadequate by participating bidders, and the administrative review and court systems are not operating adequately under current circumstances. Although CPA 87 of 2004 stipulated the right to file a protest with the Administrative Tribunal; however; the administrative tribunal was not created. It cannot be said that the complaint procedure meets the test of independence from the officials that are involved in the actions, omissions and decisions that may be the subject of the review. The implementing entity is the body to which the complaint is brought, is also the body that approves the key aspects of the proceeding under review (in particular the contents of the bidding documents and the award decision). In the absence of formal independent complaint mechanism, bidders are appealing to Ministry of Planning (MoP)/ Directorate of General Governmental Contracts (DoGGC) or through the applications of General Secretariat of Council of Ministers through Citizen E-Government.

5. **Ongoing reforms**. There have been recent positive steps in reforming public procurement system at the federal level namely: **i**) 18 Standard Bidding Documents (SBDs) were developed, piloted, and mandated for use in July 2016; **ii**) a national implementation manual was published on the Ministry of Planning (MoP) website; and **iii**) a training strategy was prepared and collaboration with universities have started to build capacity of procurement professionals. The World Bank will continue its support to the Iraqi authorities on a multi-year engagement under new Public Financial

Management (PFM) project by providing implementation support at the Federal and KRG levels to use the issued SBDs, create a sustainable capacity building program including online courses, establishment of a web-based single portal for procurement information, and strengthen management and monitoring of procurement activities.

6. **Overall assessment**. Despite the recent positive reform efforts, the public procurement system in Iraq is still assessed to be too bureaucratic and unnecessarily procedural, lacking transparency and accountability. This has left procurement open to abuse, waste, and corruption and resulted in inefficient public expenditures and resource management.

7. **Assessment of the Project Implementing Agency Procurement Capacity.** IFAD undertook an assessment of the Project Implementing Agency (Ministry of Agriculture – MoA) procurement capacity. According to the assessment's findings, MoA has no experience with IFAD financed project management and related procurement procedures. The Project Management Team (PMT) would, therefore, require

8. considerable capacity building in order to be able to provide the necessary management oversight in compliance with IFAD's procurement guidelines.

9. **Procurement risks:** The SARP project presents the following risks:

a. Capacity constraints of PMT staff to carry out procurement and management of contracts;
b. High risk and weak control environment, Iraq's ability to manage public resources is undermined by poor security and capacity constraints. Moreover, Iraq has a poor ranking in Transparency International's Corruption Perception Index;
c. Weak capacity of local supplying/contracting companies and lack of interest of international contracting companies to participate due to security restrictions;
d. Lack of experience in procurement planning and expected delays in implementation because of capacity constraints and security conditions in Iraq; and
e. MoA lacking experience of working with IFAD-financed operations.

10. Based on the overall assessment of the implementing agency (MoA) capacity and the information available on the procurement environment in Iraq, the overall procurement risk is judged to be '**High'**. This rating therefore requires the assignment of dedicated and qualified staff to the PMT to handle the project and afferent procurement functions, as well as the provision of formal and on-the-job training to the project team on procurement and project management both before and during project implementation.

11. **Risk mitigating measures**. The following measures, corresponding to the risks identified above, are expected to be implemented:

a. Elaborate a detailed Project Implementation Manual (PIM);
b. Include in the PIM a well-described procurement process;
c. Follow IFAD's procurement guidelines and the PIM;
d. Assign dedicated and qualified staff to the PMT, including a procurement officer to handle the project and afferent procurement functions;
e. Hire, if needed, an international implementation consultant to support the PMT in the supervision of the project implementation;
f. Carefully package procurement to encourage qualified bidders, including international firms, to participate;
g. Ensure a close implementation support by IFAD;
h. Conduct frequent training and on-the-job training of the PMT on procurement and project management both before and during implementation;
i. Establish a procurement and contract management training capacity in the NGO service providers to support local supplying/contracting companies in meeting minimum tender quality standards (this service needs to be distinct form the PMT and the GCT; and
j. Establish monitoring and record keeping tools for contracts and activities under implementation and establish adequate record keeping (archiving).

12. **Arrangements for Procurement under the Project.** For each contract to be financed by IFAD proceeds, the types of procurement methods, the need for pre or post-qualification, estimated cost, prior review requirements and time frame are agreed between the Borrower and IFAD respectively in the Procurement Plan. The methods to be used for the procurement under this project, as well as the threshold contract values for the use of each method are set in Table below:

Table 6: Procurement Method Thresholds

Procurement Method Thresholds	
Procurement Method	**Procurement Method Threshold (US $)**
ICB and LIB (Goods)	› 500,000
NCB (Goods)	≤ 500,000
Shopping (Goods)	≤ 100,000
ICB and LIB (Works)	› 1,000,000
NCB (Works)	≤ 1,000,000
Shopping (Works)	≤ 200,000

b) Goods estimated to cost more than USD 500 000 equivalent per contract may be procured through International Competitive Bidding (ICB) method using the World Bank's applicable Standard Bidding Documents (SBDs). Goods estimated to cost between USD 100,000 and USD 500,000 equivalent per contract may be procured through National Competitive Bidding (NCB). Goods estimated to cost less than USD 100,000 equivalent per contract may be procured through the National Shopping method.

c) Works estimated to cost more than USD 5,000,000 equivalent may be procured through International Competitive Bidding (ICB) method using the World Bank's applicable SBDs. Works estimated between USD 200,000 and USD 5,000,000 equivalent may be procured through the NCB. While works estimated below USD 200,000 may be procured through National Shopping.

d) Consultancy services generally estimated to cost more than USD 100 000 equivalent for firms will be on the basis of Quality and Cost Based Selection method. However, the specific nature of the assignment will finally determine the selection method to be followed and will be pre-determined in each annual procurement plan.

e) **Prior Review Thresholds.** Given the **High** procurement risk rating in Iraq, ALL contracts under the SARP project shall be submitted to IFAD's prior review. However, the prior review thresholds may be reviewed / modified by IFAD during the course of project implementation based on experiences in the field.

f) **Bidding Documents.** Under ICBs, the applicable World Bank SBDs will be used. However, for NCBs, the PMU shall use the relevant SBDs that were developed by MoP with the World Bank assistance and mandated for use in July 2016 (available at: http://www.mop.gov.iq/mop/index.jsp?sid=1&id=738&pid=580)

g) Classification of procurement items:

a) Procurement of Goods. The goods to be financed under the project include but are not limited to the following: (i) small packages related to irrigation productions systems; (ii) small ruminant packages, and (iii) off farm packages.

b) Procurement of Works. The works to be financed under the project include, but are not limited to, the following: (i) rehabilitation of irrigation channels and schemes, (ii) drainage, and (iii) construction of post-harvest infrastructure.

c) Procurement for Consulting Services. The consulting services to be financed under the project include but are not limited to the following: (i) four (4) Community Development Officers, (ii) four (4) Monitoring & Evaluation Officers and (iii) four (4) Service Providers, (iv) a consulting firm to carry out baseline, mid-term and end-line surveys, and (v) auditor. Depending on the nature and cost of the service to be provided, one of the following methods would be employed:

- Quality and Cost Based Selection (QCBS), specifically for the marketing advisory services;
- Selection based on Consultants' Qualifications (CQ); and
- Individual Consultants (IC): For the individual consultants to be hired for more than six months duration, the positions would be advertised for expressions of interest in international and/or national media depending on the expertise required, and selection would be based on comparison of qualifications.

Appendix 9: Project cost and financing

1. Project costs: The Smallholder Agriculture Revitalisation Project (SARP) is estimated to cost USD 31.77 million with base cost at USD 30.3 million. Component 1: Climate resilient investments is estimated to cost USD 12.1 million representing 40% of the total base costs whereas Component 2: Agriculture and livelihood diversification component would cost USD 13.6 million, representing 45% of total project base costs. Component 3: Project Management and Coordination is estimated at USD 4.6 million representing the smallest portion, 15% of the total base costs.

2. Assumptions: The following key assumptions below have been used in estimation of project costs. The project will start in 2018 for a seven year period. In Costab the input currency has been the USD. However for conversion purposes only, the exchange rate of 1,177.85 (i.e. 1USD=1,177.85 IQD) has been used. Price contingencies (inflation) are included at 4%. This is lower than the local inflation because the input currency has been set in USD. Physical contingencies have been estimated at 3% on works only. Table 1 below shows the project cost summary by components:

Table 1: Project costs by component

Smallholder Agriculture Revitalization Project-SARP **Components Project Cost Summary**	(IQD '000)			(US$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
A. Climate Resilient Investments								
1. Irrigation Infrastructure schemes	13,300,659.1	-	13,300,659.1	11,292.3	-	11,292.3	-	37
2. Knowledge Management and Institutional strengthening	735,566.4	244,111.8	979,678.2	624.5	207.3	831.8	25	3
Subtotal	14,036,225.5	244,111.8	14,280,337.3	11,916.8	207.3	12,124.1	2	40
B. Agriculture & Livelihood Diversification								
1. Crop, Livestock & Off-Farm Development	9,624,542.1	3,715,209.8	13,339,752.0	8,171.3	3,154.2	11,325.5	28	37
2. Skills Development & Capacity Building	2,667,540.4	-	2,667,540.4	2,264.8	-	2,264.8	-	7
Subtotal	12,292,082.6	3,715,209.8	16,007,292.4	10,436.0	3,154.2	13,590.3	23	45
C. Project management and coordination	4,962,953.9	427,968.9	5,390,922.7	4,213.6	363.3	4,576.9	8	15
Total BASELINE COSTS	31,291,261.9	4,387,290.4	35,678,552.4	26,566.4	3,724.8	30,291.3	12	100
Physical Contingencies	370,980.3	-	370,980.3	315.0	-	315.0	-	1
Price Contingencies	1,266,489.7	106,354.5	1,372,844.2	1,075.3	90.3	1,165.6	8	4
Total PROJECT COSTS	32,928,732.0	4,493,644.9	37,422,376.9	27,956.6	3,815.1	31,771.8	12	105

3. **Project financing:** The project will be funded by IFAD loan, IFAD grant, the Adaptation for Smallholder Agriculture Programme (ASAP), the Government of Iraq and beneficiaries. IFAD has confirmed a loan of USD 15.73 million and a grant of USD 500,000 covering 49.5% and 1.5% of the total project costs. ASAP will also extend a grant of USD 2 million towards SARP financing, covering 6.3% of the project costs. Furthermore, extra funds of USD 9.17 million or about 28.9% of the total project cost (net of IFAD management fees) are to be mobilized from the Adaptation Fund. The government will finance salaries, any taxes and provide other in kind contributions like office space. Beneficiaries will also make in-kind contribution in form of casual labour, some minor inputs and equipment. This will be mainly under sub-component 2.1. At design, beneficiary contribution is roughly estimated to be USD 1.9 million. All in kind contribution will be determined appropriately during implementation and tracked. The project-financing plan is shown in table 2 below:

Table 2: Project costs by category of expenditures and financiers (thousands of US dollars)

Expenditure category	*IFAD loan*		*IFAD grant*		*ASAP grant*		*Financing gap*		*Beneficiaries*		*Borrower/ counterpart*		*Total*	
	Amount	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*
1. Civil works	4 912	43.7			1 334	11.9	5 001	44.5					11 246	35.4
2. Vehicles	328	100											328	1.0
3. Equipment and materials	6 471	54.0	500	4.1	160	1.3	2 949	24.6	1 922	16.0			11 983	37.7
4. Training and workshops	155	22.6					530	77.4					685	2.2
5. Consultancies	1 969	82					433	18					2 402	7.6
6. Technical studies	905	100											905	2.8
7. Operating costs	993	97.5					26	2.5					1 019	3.2
8. Expenses for project teams					507	15.8	232	7.3			2 465	76.9	3 204	10.1
Total	**15 734**	**49.5**	**500**	**1.5**	**2 000**	**6.3**	**9 170**	**28.9**	**1 922**	**6.0**	**2 465**	**7.8**	**31 772**	**100**

Annex I: Other Summary project cost tables

Table 3: Project costs by components by years

Project Components by Year -- Totals Including Contingencies
(US$ '000)

	Totals Including Contingencies							
	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
A. Climate Resilient Investments								
1. Irrigation Infrastructure schemes	1,405.5	1,549.8	2,000.3	2,667.0	3,556.0	555.6	333.4	12,067.7
2. Knowledge Management and Institutional strengthening	329.5	430.3	20.2	20.2	20.2	20.2	20.2	861.0
Subtotal	1,735.0	1,980.1	2,020.5	2,687.3	3,576.3	575.9	353.6	12,928.7
B. Agriculture & Livelihood Diversification								
1. Crop, Livestock & Off-Farm Development	3,421.0	4,770.5	3,513.0	21.5	10.8	-	-	11,736.7
2. Skills Development & Capacity Building	800.0	259.2	259.2	259.2	259.2	259.2	259.2	2,355.3
Subtotal	4,221.0	5,029.7	3,772.2	280.7	270.0	259.2	259.2	14,092.1
C. Project management and coordination	996.3	624.3	656.8	624.3	624.3	656.8	568.1	4,751.0
Total PROJECT COSTS	6,952.3	7,634.2	6,449.5	3,592.3	4,470.6	1,491.9	1,180.9	31,771.8

Table 4: Project costs by Expenditure Categories

Smallholder Agriculture Revitalization Pr **Expenditure Accounts by Compone** (US$ '000)	**Climate Resilient Investments**		**Agriculture & Livelihood Diversification**					
	Irrigation Infrastructure schemes	**Knowledge Management and Institutional strengthening**	**Crop, Livestock & Off-Farm Development**	**Skills Development & Capacity Building**	**Project management and coordination**	**Total**	**Physical Contingencies %**	**Physical Contingencies Amount**
I. Investment Costs								
A. Civil works	10,374.0	-	124.8	-	-	10,498.8	3.0	315.0
B. Vehicles	-	-	-	-	323.2	323.2	-	-
C. Equipment and materials	-	705.2	10,732.7	-	132.5	11,570.4	-	-
D. Consultancies	832.0	-	468.0	1,744.8	135.2	3,179.9	-	-
E. Training and workshops	86.3	-	-	520.0	52.0	658.3	-	-
Total Investment Costs	11,292.3	705.2	11,325.5	2,264.8	642.8	26,230.6	1.2	315.0
II. Recurrent Costs								
A. Operating costs	-	-	-	-	979.7	979.7	-	-
B. Salaries and allowances	-	126.5	-	-	2,954.4	3,080.9	-	-
Total Recurrent Costs	-	126.5	-	-	3,934.1	4,060.6	-	-
Total BASELINE COSTS	11,292.3	831.8	11,325.5	2,264.8	4,576.9	30,291.3	1.0	315.0
Physical Contingencies	311.2	-	3.7	-	-	315.0	-	-
Price Contingencies	464.1	29.3	407.5	90.6	174.1	1,165.6	1.1	12.6
Total PROJECT COSTS	12,067.7	861.0	11,736.7	2,355.3	4,751.0	31,771.8	1.0	327.6

Table 5: Project costs by Disbursement accounts by financier

Disbursement Accounts by Financiers (US$ '000)	**The Government**		**IFAD Loan**		**IFAD Grant**		**ASAP**		**AF**		**Beneficiaries**		**Total**		**For. Exch.**	**Local (Excl. Taxes)**
	Amount	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**		
1. Civil works	0	-	4,912	43.7	-	-	1,334	11.9	5,001	44.5	-	-	11,246	35.4	-	11,246
2. Vehicles	-	-	328	100.0	-	-	-	-	-	-	-	-	328	1.0	328	-
3. Equipment and materials	0	-	6,471	54.0	481	4.0	160	1.3	2,949	24.6	1,922	16.0	11,983	37.7	3,486	8,497
5. Training and workshops	-	-	155	22.6	-	-	-	-	530	77.4	-	-	685	2.2	-	685
6. Consultancies	0	-	2,874	86.9	-	-	-	-	433	13.1	-	-	3,307	10.4	1	3,306
7. Operating costs	0	-	993	97.5	-	-	-	-	26	2.5	-	-	1,019	3.2	-	1,019
8. Salaries and allowances	2,465	76.9	-	-	-	-	507	15.8	232	7.3	-	-	3,204	10.1	-	3,204
Total PROJECT COSTS	2,465	7.8	15,734	49.5	481	1.5	2,000	6.3	9,170	28.9	1,922	6.0	31,772	100.0	3,815	27,957

Table 6: Project costs by Expenditure accounts by financier (thousand USD)

	IFAD loan		IFAD grant		ASAP grant		Financing gap		Beneficiaries		Borrower/ counterpart		Total	
Expenditure category	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Civil works	4 912	43.7			1 334	11.9	5 001	44.5					11 246	35.4
2. Vehicles	328	100											328	1.0
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Total	**15 734**	**49.5**	**500**	**1.5**	**2 000**	**6.3**	**9 170**	**28.9**	**1 922**	**6.0**	**2 465**	**7.8**	**31 772**	**100**

Table 7: Project costs by Disbursement semesters

Disbursements by Semesters and Government Cash Flow (US$ '000)	Financing Available						be Financed	The Government	
	IFAD Loan Amount	IFAD Grant Amount	ASAP Amount	AF Amount	Beneficiaries Amount	Total	Project Costs	Cash Flow	Cumulative Cash Flow
1	1,915	224	141	1,098	-	3,377	3,476	-99	-99
2	1,915	224	141	1,098	-	3,377	3,476	-99	-199
3	1,924	8	119	1,037	541	3,628	3,817	-189	-387
4	1,924	8	119	1,037	541	3,628	3,817	-189	-576
5	1,676	8	159	772	420	3,036	3,225	-189	-765
6	1,676	8	159	772	420	3,036	3,225	-189	-954
7	789	-	199	620	-	1,607	1,796	-189	-1,143
8	789	-	199	620	-	1,607	1,796	-189	-1,332
9	974	-	252	820	-	2,046	2,235	-189	-1,521
10	974	-	252	820	-	2,046	2,235	-189	-1,709
11	340	-	72	145	-	557	746	-189	-1,898
12	340	-	72	145	-	557	746	-189	-2,087
13	249	-	59	94	-	402	590	-189	-2,276
14	249	-	59	94	-	402	590	-189	-2,465
Total	15,734	481	2,000	9,170	1,922	29,307	31,772	-2,465	-2,465

Annex I: Detailed project cost tables

Table 1: Climate resilient Investments

Table 1. Climate resilient Investments
Detailed Costs
(US$)

		Quantities									Totals Including Contingencies ('000)							
	Unit	2018	2019	2020	2021	2022	2023	2024	Total	Unit Cost	2018	2019	2020	2021	2022	2023	2024	Total
I. Investment Costs																		
A. Infrastructure schemes																		
1. Drainage and Irrigation channels	Dunum	1,995	3,990	5,985	7,980	10,640	1,662.5	997.5	33,250	300	667	1,334	2,000	2,667	3,556	556	333	11,113
2. Feasibility & detailed design studies	ls	0.5	0.5	-	-	-	-	-	1	400,000	216	216	-	-	-	-	-	433
Subtotal											883	1,550	2,000	2,667	3,556	556	333	11,545
B. Knowledge management and institutional strengthening																		
1. Remote monitoring metrological stations	stations	-	6	-	-	-	-	-	6	64,000	-	410	-	-	-	-	-	410
2. Early Warning System (climate change)	Ls	1	-	-	-	-	-	-	1	300,000	319	-	-	-	-	-	-	319
Subtotal											319	410	-	-	-	-	-	729
C. Strategy for climate adaptation for agriculture sector																		
1. Development of the strategy	ls	1	-	-	-	-	-	-	1	83,000	90	-	-	-	-	-	-	90
2. Climate change adaptation training	ls	1	-	-	-	-	-	-	1	400,000	433	-	-	-	-	-	-	433
Subtotal											522	-	-	-	-	-	-	522
Total Investment Costs											1,725	1,960	2,000	2,667	3,556	556	333	12,797
II. Recurrent Costs																		
A. National level																		
AF Project Coordinator salary	month	6	12	12	12	12	12	12	78	1,200	8	16	16	16	16	16	16	101
AF Project Coordinator allowance	month	6	12	12	12	12	12	12	78	360	2	5	5	5	5	5	5	30
Total Recurrent Costs											10	20	20	20	20	20	20	132
Total											1,735	1,980	2,021	2,687	3,576	576	354	12,929

Table 2: Agriculture and livelihood diversification

Table 2. Agriculture and livelihood diversification
Detailed Costs
(US$)

		Quantities									Totals Including Contingencies ('000)							
	Unit	2018	2019	2020	2021	2022	2023	2024	Total	Unit Cost	2018	2019	2020	2021	2022	2023	2024	Total
I. Investment Costs																		
A. Crop and livestock development																		
1. Grant packages for individuals & Farmer Groups																		
Small grant package /a	beneficiaries	-	1,800	1,345	-	-	-	-	3,145	2,000	-	3,844	2,881	-	-	-	-	6,725
Large grant package /b	farmer groups	-	30	30	-	-	-	-	60	15,000	-	480	482	-	-	-	-	962
Subtotal											-	4,324	3,363	-	-	-	-	7,687
2. Livestock development																		
Diagnostic Animal Health lab	cost/province	-	4	-	-	-	-	-	4	30,000	-	134	-	-	-	-	-	134
Strengthen the AH lab	cost/province	1	1	1	1	-	-	-	4	10,000	11	11	11	11	-	-	-	43
AH lab equipment	cost/province	-	2	2	-	-	-	-	4	10,000	-	21	21	-	-	-	-	43
Sheep dippers	cost/province	-	1	1	1	1	-	-	4	10,000	-	11	11	11	11	-	-	43
Rehabilitation Milk collection centers	cost/province	-	2	2	-	-	-	-	4	25,000	-	53	54	-	-	-	-	107
Subtotal											11	230	96	21	11	-	-	369
3. Income diversification package																		
Women	Ls	2,000	-	-	-	-	-	-	2,000	1,000	2,129	-	-	-	-	-	-	2,129
Youth	Ls	1,000	-	-	-	-	-	-	1,000	1,000	1,065	-	-	-	-	-	-	1,065
Subtotal											3,194	-	-	-	-	-	-	3,194
4. Market studies & assessments																		
Market studies	study	4	4	1	-	-	-	-	9	50,000	216	216	54	-	-	-	-	487
Subtotal											3,421	4,771	3,513	21	11	-	-	11,737
B. Skills development and capacity building																		
Small holder farmers	cost per year										216	-	-	-	-	-	-	216
Public&Private Agriculture support service providers	cost per year										216	-	-	-	-	-	-	216
Other capacity building and demonstrations /c	cost per year										108	-	-	-	-	-	-	108
Service providers	month	48	48	48	48	48	48	48	336	4,543	236	236	236	236	236	236	236	1,651
Techinical assistance	months	2	2	2	2	2	2	2	14	10,800	23	23	23	23	23	23	23	164
Subtotal											800	259	259	259	259	259	259	2,355
Total Investment Costs											4,221	5,030	3,772	281	270	259	259	14,092
II. Recurrent Costs																		
Total											4,221	5,030	3,772	281	270	259	259	14,092

Table 3: Project management and coordination

Table 3. Project management
Detailed Costs
(US$)

	Unit	Quantities 2018	2019	2020	2021	2022	2023	2024	Total	Unit Cost	Totals Including Contingencies ('000) 2018	2019	2020	2021	2022	2023	2024	Total
I. Investment Costs																		
Baseline survey	Ls	1	-	-	-	-	-	-	1	70,000	76	-	-	-	-	-	-	76
Start-up workshop	Ls	1	-	-	-	-	-	-	1	50,000	54	-	-	-	-	-	-	54
Mid term survey	Ls	-	-	1	-	-	-	-	1	30,000	-	-	32	-	-	-	-	32
End line survery	Ls	-	-	-	-	-	1	-	1	30,000	-	-	-	-	-	32	-	32
Accounting package /a	package	5	-	-	-	-	-	-	5	5,000	27	-	-	-	-	-	-	27
Vehicles /b	no	8	-	-	-	-	-	-	8	40,000	328	-	-	-	-	-	-	328
Computers	no	32	-	-	-	-	-	-	32	3,000	102	-	-	-	-	-	-	102
Printer	no	5	-	-	-	-	-	-	5	1,000	5	-	-	-	-	-	-	5
Digital GPS camera	no	5	-	-	-	-	-	-	5	500	3	-	-	-	-	-	-	3
Total Investment Costs											595	-	32	-	-	32	-	660
II. Recurrent Costs																		
A. Central staff salaries																		
National project coordinator	month	12	12	12	12	12	12	12	84	1,500	19	19	19	19	19	19	19	136
Financial officer	month	6	12	12	12	12	12	12	78	1,200	8	16	16	16	16	16	16	101
Procurement officer	month	6	12	12	12	12	12	12	78	1,200	8	16	16	16	16	16	16	101
Monitoring and evaluation	month	6	12	12	12	12	12	12	78	1,200	8	16	16	16	16	16	16	101
Subtotal											43	66	66	66	66	66	66	440
B. Central staff PT allowances /c																		
National project coordinator	month	12	12	12	12	12	12	12	84	450	6	6	6	6	6	6	6	41
Financial officer	month	6	12	12	12	12	12	12	78	360	2	5	5	5	5	5	5	30
Procurement officer	month	6	12	12	12	12	12	12	78	360	2	5	5	5	5	5	5	30
Monitoring and evaluation	month	6	12	12	12	12	12	12	78	360	2	5	5	5	5	5	5	30
Subtotal											13	20	20	20	20	20	20	132
C. Governorate staff salaries																		
Governorate Coordinator	month	24	48	48	48	48	48	48	312	1,500	39	78	78	78	78	78	78	506
Grants & Community dev. officer	month	24	48	48	48	48	48	48	312	1,200	31	62	62	62	62	62	62	405
Accounts assistant	month	24	48	48	48	48	48	48	312	1,200	31	62	62	62	62	62	62	405
Monitoring and evaluation officer	month	24	48	48	48	48	48	48	312	1,200	31	62	62	62	62	62	62	405
Support staff /d	month	24	48	48	48	48	48	48	312	600	16	31	31	31	31	31	31	202
Subtotal											148	296	296	296	296	296	296	1,924
D. Governorate staff PT allowances /e																		
Governorate Coordinator	month	24	48	48	48	48	48	48	312	450	12	23	23	23	23	23	23	152
Grants & Community dev. officer	month	24	48	48	48	48	48	48	312	360	9	19	19	19	19	19	19	121
Accounts assistant	month	24	48	48	48	48	48	48	312	360	9	19	19	19	19	19	19	121
Monitoring and evaluation officer	month	24	48	48	48	48	48	48	312	360	9	19	19	19	19	19	19	121
Support staff /f	month	24	48	48	48	48	48	48	312	180	5	9	9	9	9	9	9	61
Subtotal											44	89	89	89	89	89	89	577
E. Planning and audit																		
Annual workplan and budget workshop	Per year	1	1	1	1	1	1	1	7	40,000	43	43	43	43	43	43	43	303
External audits	per year	1	1	1	1	1	1	1	7	10,000	11	11	11	11	11	11	11	76
Subtotal											54	54	54	54	54	54	54	379
F. Operating costs																		
Operation and management	Ls										22	22	22	22	22	22	22	151
Car maintenance /g	Ls										35	35	35	35	35	35	-	208
Fuel /h	Ls										22	22	22	22	22	22	-	130
Other	Ls										22	22	22	22	22	22	22	151
Subtotal											100	100	100	100	100	100	43	640
Total Recurrent Costs											402	624	624	624	624	624	568	4,091
Total											996	624	657	624	624	657	568	4,751

\a 5 accounting packages
\b 1 vehicle for the PMT
\c Project Team allowance is 30% of base salary

Appendix 10: Economic and Financial Analysis

1. **Beneficiaries:** SARP is expected to benefit about 25,400 individuals directly but a working figure of 20,000 has been used given the effect of (double counting as those who receive assets are also likely to receive some training and skill development). This translates to 140,000 people based on the rural household size of 7 people. The cost per beneficiary is calculated to be USD 236.

2. The **quantifiable benefits** include the following:

i. It is expected that around 9,000 hectares or 36,000 dunums would benefit from improved irrigation infrastructure. High value crops would be grown and with capacity building on irrigation efficiency, cropping intensity is projected to increase by 15%. An increase in irrigation efficiency from 35% to 75% has the potential to increase crop intensity from 85% to 130% targeting high value crops and vegetables and also provide improved irrigation for date production. Available reports show that for water use efficiency, supplemental irrigation in rain-fed areas resulted in higher yield, increased water productivity from 0.96 kg to 3.7 kg of grain per m3 of water, prevented excessive use of water, and modified the crop calendar considered as an adaptation measure to climate change. Irrigation through mechanized raised bed technology increased wheat productivity while saving on water resources - applied water was reduced by 30%, yields increased by 25%, seed rate reduced by 50 %, and on-farm water use efficiency increased by 72%. Taking into all factors, the mission has computed that incremental income per ha would be ID 168,000 in the first year of irrigation increasing to ID 280,000 per the third of irrigation as the efficiency improves.

Table 7: Irrigation efficiency and crop intensity targets

	Targets	
Irrigation system (IS)	*Irrigation efficiency*	*Crop intensity*
Current traditional surface irrigation system	35%	85%
Improved traditional surface irrigation system*	45%	100%
Advanced surface sprinkle irrigation system	60%	115%
Irrigation localized irrigation system	70%	130%

*Raised bed technology

ii. The project proposes to introduce crop varieties and use of production technologies that are better adapted to climate change. In saline areas, the project would introduce wheat and fodder varieties that have demonstrated their tolerance to high levels of soil salinity.
iii. The project would also introduce high value vegetable production through providing support for establishing green houses, apiculture, fisheries, IPM for dates and other crops, provision livestock packages for women, assets for men and youth that would help them engage more effectively in agriculture production or providing the support services to the agriculture and rural sector.
iv. Establishment of post-harvest facilities such as grading packaging, cold storage, etc.
v. Off-farm income generating activities;
vi. Representative models have been used to estimate the benefits. More models are to be developed as the design progresses. The representative modes currently used are milk production, wheat crop, barley, broad bean to which would be added high value vegetable crops, fisheries, apiculture, enhanced value added from date production,

3. The nutrition status of both rural and urban population is increasingly dependent on the heavily subsidized ‘’food basket” provided by the Iraqi Public Distribution system (TDS) which is an essential policy measure to ensure food security and avoid possible malnutrition. However, the subsidized food rationing on a national scale with imported food has had a negative impact on the local grain market with consequent depressing effects on producer prices and on agriculture sector investment. Such subsidies are not considered in the economic costs.

4. The project would strengthen the institutional capacity of the Government to monitor and report on climate change and provide farmers an early warning system that could help them to take appropriate mitigation and adaptation measures to deal with changes in temperature and precipitation levels.

5. **Net Present Value (NPV) and Economic Internal Rate of Return (EIRR).** The net present value of the project over a ten-year period is calculated to be ID 5.9 million and the economic internal rate of return is estimated to be17% at a discount rate of 10%.

6. **Sensitivity analysis:** A sensitivity analysis was conducted to assess the changes in NPV and EIRR due to variations in the future benefit stream of costs or delay in project implementation. The Project remains profitable under a wide range of project scenarios as shown below:

SENSITIVITY ANALYSIS (SA)				
	Δ%	Link with the risk matrix	IRR (%)	NPV (USD M)
Base scenario			17%	5.33
Project benefits	-10%	Yield levels declines	17%	16.69
Project benefits	-20%		15%	12.27
Project costs	10%	Unforeseen factors that increase costs	18%	19.27
Project costs	20%		16%	10.24
1 year lag in ben.		Risks related to low start-up implementation capacity, staff turn over, many other public instututions involement	16%	16.49
2 years lag in ben.			14%	12.21
Output prices	-10%	Overproduction coupled with the weak marketing infrastructure	17%	16.40
Output prices	-20%		15%	12.10
Input prices	10%	Market price fluctuations	16%	9.80
Input prices	20%		14%	11.50

Overall computation of the Economic Rate of Return

A) PRODUCTION

FINANCIAL ANALYSIS

	Farm models'net incremental benefits (in '000 of IQD)			
	Milk production	Wheat Crop	Barley crop	Broad bean crop
PY1	(1,490)	(174)	(83)	(164.1)
PY2	3,379	26	27	35.3
PY3	5,257	26	27	35.3
PY4	5,257	39	40	48.7
PY5	5,257	39	40	48.7
PY6	5,257	39	40	48.7
PY7	5,257	39	40	48.7
PY8	5,257	39	40	48.7
PY9	5,257	39	40	48.7
PY10+	5,257	39	40	48.7
NPV (IQD.)	37,068	117	211	200
NPV (USD)	33.1	0.1	0.19	0.2
FIRR (@10%)	262%	19.3%	40.5%	26.3%

D) BENEFICIARIES, ADOPTION RATES AND PHASING

	PY1	PY2	PY3	PY4	PY5	PY6	PY7	Total	Adoption rate 92%
Irrigation Investments	0	3,000	3,000	3,000	3,000			12,000	
Adjusted (adoption rate)	*0*	*2,700*	*2,700*	*2,700*	*2,700*	*0*	*0*	*10,800*	*90%*
Crop & Livestock diversification for smallholders	0	750	750	750	750			3,000	
Adjusted (adoption rate)	*0*	*675*	*675*	*675*	*675*	*0*	*0*	*2,700*	*90%*
Productivity Enhancement and skills development/a	0	750	750	750	750			3,000	
Adjusted (adoption rate)	*0*	*675*	*675*	*675*	*675*	*0*	*0*	*2,700*	*90%*
Employment Generati	0	500	500	500	500	0	0	2,000	
Adjusted (adoption rate)	*0*	*450*	*450*	*450*	*450*	*0*	*0*	*1,800*	*90%*
									90%
								20,000	*100%*

B) PROJECT COSTS AND INDICATORS FOR LOGFRAME

TOTAL PROJECT COSTS (in million USD)	**32.99**	Base costs	24	PMU	1
Beneficiaries	**140,000** people	20,000 Households			
Cost per beneficiary	**236** USD x person	1,649 USD x HH		**Adoption rates**	**92%**

Components and Cost (USD million)		Outcomes and Indicators
Climate Resilient Investments	12.05	
Agriculture & Livelihood Diversification	12.2	
Project Management & Coordination	8.72	

C) MAIN ASSUMPTIONS & SHADOW PRICES[1]

FINANCIAL

Output	Yields	Price (in I)	Input prices	Price (IQD)
Milk production	4350	1250	Fertilizer	750
Wheat Crop	1680	550		
Barley crop	1260	650	Improved seeds	800
Broad bean	1334	1,000	Rural w age	15000

ECONOMIC

Official Exchange rate (OER)	1120	Discount rate (opportunity cost of capital)	10%
Shadow Exchange rate (SER)	1120	Social Discount rate	8%
Standard Conversion Factor	1.00	Output conversion factor	1
Labour Conversion factor			

[1] All prices expressed in Local Currency (LC). See definition and formulas in the INSTRUCTIONS

E)

ECONOMIC ANALYSIS

	NET INCREMENTAL BENEFITS					NET INCREMENTAL COSTS				Cash Flow
	(i) Cropping intensity accruing from Irrigation schemes	(ii) Crop & Livestock diversificatio n for smallholders	Employment Generation for youth	Productivity Enhancement and skills	Total Net Inc. Benefits	Economic Investment Costs	Economic recurrent Costs	Economic O&M Costs ('000 Ic)	Total Incremental Costs	
							Economic			
PY1	0	0	0.00	0.00	*0*	3,207	0	0	*3,207*	**(3,207)**
PY2	0	30	0.00	0.00	*30*	5,684	0	0	*5,684*	**(5,653)**
PY3	1,680	61	0.00	0.00	*1,741*	6,872	0	0	*6,872*	**(5,132)**
PY4	4,760	91	0.00	0.00	*4,851*	8,802	0	0	*8,802*	**(3,951)**
PY5	8,680	99	0.00	0.00	*8,779*	10,807	0	0	*10,807*	**(2,027)**
PY6	10,360	99	0.00	0.00	*10,459*	2,974	0	0	*2,974*	**7,485**
PY7	11,200	99	0.00	0.00	*11,299*	2,374	0	0	*2,374*	**8,925**
PY8	11,200	99	0.00	0.00	*11,299*	1,454	0		*1,454*	**9,845**
PY9	11,200	99	0.00	0.00	*11,299*	1,454	0		*1,454*	**9,845**
PY10	11,200	99	0.00	0.00	*11,299*		0		*1,454*	**9,845**
						1,454				

NPV@ 10 % ('million IQ	**5,969**
NPV@ 10% ('million US	**5**
EIRR	**17%**

Overall aggregation of benefits and computation of Economic Rate of Return

	Reference	Y1	Y2	Y3	Y4	Y5+	Y6	Y7	Y8	Y9	Y10
(i) Cropping intensity accruing from Irrigation schemes											
Beneficiaries (160,000 dunums serving 40,000 ha)		-	10,000	15,000	15,000	-					
Cascaded and phased benefits											
Phased benefits											
		Y1	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**	**Y8**	**Y9**	**Y10**
HH in their year 1		-	10,000	15,000	15,000						
HH in their year 2		-	-	10,000	15,000	15,000	-				
HH in their year 3		-	-	-	10,000	15,000	15,000	-	-		
HH in their year 4+		-	-	-	-	10,000	15,000	15,000			
Progressive benefits- ha		**-**	**168,000**	**224,000**	**280,000**	**280,000**	**280,000**	**280,000**	**280,000**	**280,000**	**280,000**
Phased benefits- all ha in operation											
HH in their year 1		-	-	-	-	-	-	-	-	-	-
HH in their year 2		-	-	1,680	2,520	2,520	-	-	-	-	-
HH in their year 3		-	-	-	2,240	3,360	3,360	-	-	-	-
HH in their year 4		-	-	-	-	2,800	4,200	4,200	-	-	-
HHs in their year 5		-	-	-	-	-	2,800	4,200	4,200	-	-
HHs in their year 6		-	-	-	-	-	-	2,800	4,200	4,200	-
HHs in their year 7		-	-	-	-	-	-	-	2,800	4,200	4,200
HHs in their year 8		-	-	-	-	-	-	-	-	2,800	4,200
HHs in their year 9		-	-	-	-	-	-	-	-	-	2,800
Total benefits (IQD'Millions)		***0***	***0***	***1,680***	***4,760***	***8,680***	***10,360***	***11,200***	***11,200***	***11,200***	***11,200***
(ii) Crop & Livestock diversification for smallholders											
Number of house holds participating (3000 HH)		-	750	750	750	750					
Phased benefits											
		Y1	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**	**Y8**	**Y9**	**Y10**
HH in their year 1		-	750	750	750	750					
HH in their year 2			-	750	750	200	750				
HH in their year 3				-	750	750	200	750	-	-	-
HH in their year 4+					-	750	750	200	750	-	-
Progressive benefits		40,480	40,480	40,480	40,480	40,480	40,480	40,480	40,480	-	-
Phased benefits		-	-	-	-	-	-	-	-	-	-
HH in their year 1		-	30	30	30	30	-	-	-	-	-
HH in their year 2		-	-	30	30	8	30	-	-	-	-
HH in their year 3		-	-	-	30.36	30.36	8.10	30.36	-	-	-
HH in their year 4		-	-	-	-	30.36	30.36	8.10	30.36	-	-
HHs in their year 5		-	-	-	-	-	30.36	30.36	8.10	30.36	-
HHs in their year 6		-	-	-	-	-	-	30.36	30.36	8.10	30.36
HHs in their year 7		-	-	-	-	-	-	-	30.36	30.36	8.10
HHs in their year 8		-	-	-	-	-	-	-	-	30.36	30.36
HHs in their year 9		-	-	-	-	-	-	-	-	-	30.36
Total benefits (IQD'Millions)		**-**	***30.36***	***60.72***	***91.08***	***99.18***	***99.18***	***99.18***	***99.18***	***99.18***	***99.18***
Total Incremental Economic Benefits		**-**	**30**	**1 741**	**4 851**	**8 779**	**10 459**	**11 299**	**11 299**	**11 299**	**11 299**
Programme economic costs											
Programme economic costs- IQDmillions		3,206.7	5,683.7	6,872.3	8,802.4	10,806.6	2,973.9	2,374.1			
Recurrent costs after Project closure									1,454	1,454	1,454
Total Programme Economic Costs		**3,206.7**	**5,683.7**	**6,872.3**	**8,802.4**	**10,806.6**	**2,973.9**	**2,374.1**	**1,453.9**	**1,453.9**	**1,453.9**
Net Incremental Economic Benefits		**(3,206.7)**	**(5,653.4)**	**(5,131.6)**	**(3,951.3)**	**(2,027.4)**	**7,485.3**	**8,925.0**	**9,845.2**	**9,845.2**	**9,845.2**
ERR		**17%**									
NPV- Millions of IQD (10%)		**5,969**									

Beneficiary phasing

SARP Beneficiaries								
Sub component	**Programme intervention**							
		Target Beneficiary (Households)	**PY1**	**PY2**	**PY3**	**PY4**	**PY5**	**PY6**
Crop, Livestock & Off-Farm Development	Irrigation Investments	12,000	0	3000	3000	3000	3000	
	Crop & Livestock diversification for smallholders	3,000	0	750	750	750	750	
	Employment Generation for youth	2000	0	500	500	500	500	
	Productivity Enhancement and skills development/a	3000	0	750	750	750	750	
		20,000						

a/ includes only 1000 from skills development to avoid double counting

Economic Programme Costs (Costab)

IRAQ
Smallholder Agriculture Revitalization Project-SARP

Project Components by Year -- Totals Including Contingencies	Totals Including Contingencies (IQD '000)								Totals Including Contingencies (US$ '000)							
	Y1	Y2	Y3	Y4	Y6	Y7	Y8	Total	Y1	Y2	Y3	Y4	Y6	Y7	Y8	Total
A. Climate Resilient Investments																
1. Irrigation Infrastructure schemes	656,091	1,744,564	2,603,725	3,768,636	4,608,432	742,211	455,824	14,579,482	557	1,481	2,211	3,200	3,913	630	387	12,378
2. Knowledge Management and Institutional strengthening	35,671	341,422	22,931	22,931	22,931	22,931	22,931	491,750	30	290	19	19	19	19	19	417
Subtotal	691,762	2,085,986	2,626,656	3,791,567	4,631,363	765,142	478,755	15,071,232	587	1,771	2,230	3,219	3,932	650	406	12,796
B. Agriculture & Livelihood Diversification																
1. Crop, Livestock & Off-Farm Development	857,377	1,872,215	2,559,391	3,404,028	4,517,471	703,864	422,319	14,336,665	728	1,590	2,173	2,890	3,835	598	359	12,172
2. Skills Development & Capacity Building	38,219	76,438	114,657	152,876	203,834	31,849	19,109	636,981	32	65	97	130	173	27	16	541
Subtotal	895,596	1,948,653	2,674,047	3,556,903	4,721,305	735,713	441,428	14,973,646	760	1,654	2,270	3,020	4,008	625	375	12,713
C. Project management and coordination	1,619,345	1,649,085	1,571,589	1,453,948	1,453,948	1,473,056	1,453,948	10,674,919	1,375	1,400	1,334	1,234	1,234	1,251	1,234	9,063
Total PROJECT COSTS	3,206,702	5,683,725	6,872,293	8,802,419	10,806,617	2,973,911	2,374,131	40,719,797	2,723	4,826	5,835	7,473	9,175	2,525	2,016	34,571

Appendix 11: Draft project implementation manual

Annotated Table of Contents

Preparation of the Project Implementation Manual (in Arabic) is scheduled as a key activity for year 1(preparatory phase) that needs to be carried out as a learning by doing exercise with the Project Management Team (PMT) and at least Heads of the Governorate Coordination Teams (GCTs). Given the newness of IFAD and its approaches – especially building from "grassroots" then this engagement is considered critical for the key project teams to fully support the project approach and methodology especially with regard to upward budgeting and consultative MIS and impact assessment.

Chapter 1: Introduction and background (One Page)

Describe the purpose and objectives of PIM, mention who are going to use this PIM, indicate the advantages of using PIM. Please state that **PIM is a dynamic document and it should be updated as when required by the PMU staff.**

Chapter 2: Project Summary (about 6-10 pages)

Briefly describe the background to the project.

Attach Project Log-frame at the end of this Chapter for clarity.

Chapter 3: Project Organisation and Management

Briefly describe coordination and management arrangements, project steering committees, and their roles and functions, coordination arrangements at grassroots levels, organisation structure at national and Governorate levels, staffing plan and roles and responsibilities and terms of reference of staff.

Arrangements for implementation of project interventions, agencies responsible for the implementation of various project components and subcomponents, etc.

Develop and provide a matrix with following columns: project intervention, coverage, implementation responsibility, procurement, timeline and schedule of implementation, etc.

Briefly indicate PMT staff responsibilities or TORs and recruitment of staff and procedures for recruitment. Provide an outline of duties and responsibilities of individual staff and also indicate the need for gender balance in staff structure etc.

Chapter 4: Guidelines for Investments in Infrastructure, Training and Grants under the Project

Purpose and objective of this section would be to identify the criteria for the selection of all types of infrastructure and provision of in kind grants to individuals and groups building on the initial criteria given in the different components.

Identify the selection criterion for each of the project components specifying by gender, youth and women headed households, landholding size, herd size and other proxy indicators for income and asset ownership.

Chapter 5: Procurement Procedures

Describe general conditions of procurement and methods of procurement Regulations;

Describe the procurement procedures in detail and as applicable to the project;

Describe approval procedures and appropriate authorities; review mechanisms: prior and ex-post review; review of pre-qualification bidders or tenders; describe the procurement committees at different level and thresholds for approvals at different level;

Prepare a 18-month procurement plan and attach it at the end of the chapter;

Chapter 6: Finance Management (to be extracted from LTB)

Provide a brief introduction regarding purpose of this section.

One or two paragraphs on project costs and financing arrangements;

Describe in brief the flow of fund mechanism;

Describe type of accounts: designated account, project account, subproject account etc and their operations;

Describe the disbursement procedures and withdrawals (to be obtained from the Letter to the Borrower and its attachments)

Include checklist for sending withdrawal application;

Describe audit procedures and arrangements in place for conducting effective audit for each year and also describe arrangement for internal audit and its procedures;

Identify annual audit statements and indicate how these statements are prepared and forwarded to IFAD and other entities; indicate how project completion report will be carried out and required financial statements.

Indicate a list of registers and records to be maintained at PMU and RPMU office such as contract record, individual contract monitoring form etc.

Chapter 7: Management Information System

Use the LFA for specifying the Project's M&E framework: (i) first level output monitoring; (ii) second level outcome monitoring and (iii) third level impact evaluation;

Indicators for output monitoring;

Indicators for outcome monitoring;

Indicators for impact evaluation;

Impact assessment indicators and anchor indicators – which have also been included at the impact level of in the Logical Framework Analysis.

Specific beneficiary surveys and third party baseline and mid-term and completion surveys required and their cost estimates

Reporting and communication: annual reports, RIMS survey reports

Attachments: RIMS indicators including the use of the Revised RIMS framework (2017)

Chapter 8: Guidelines for preparing Annual Work Plan and Budget

Purpose and objective of this section

General introduction on the preparation of AWP&B

AWP and B will be synchronized.

The result-oriented AWP&B will typically have the following elements:

- Quarterly targets for implementation (physical)
- Appraisal Target (physical)
- AWP&B Target (physical)
- Unit cost for the proposed activity
- Achievements by Appraisal estimates and Annual Plan estimates
- Budget estimates by Appraisal and Annual plan
- Financing rule
- Budget Category

- Procurement Method etc.

Key Tools for the preparation of AWP&B are: project Log-frame, detailed cost table, AWP&B template, financing plan, financing rules in the procurement methods, Finance Agreement, last project progress report.

KEY ANNEXES

- Project Log-frame, updated
- RIMS/RIDE Indicators
- Template for AWPB
- TOR for PMT and GMT staff
- Procurement Plan
- Sample form for Record of Contracts
- Sample form for tracking Service providers contracts
- Staff and community training programme/Calendar
- Indicators for output, outcome and impact monitors
- Any other

Appendix 12: Compliance with IFAD policies

1. **Adherence to IFAD Policies**: IFAD's fifth Strategic Framework covers the period 2016-2025. It serves as an overarching policy guideline to provide direction to IFAD's work, and as a key instrument for consolidating IFAD's development effectiveness. The current project is well aligned to meeting its overall goal and is well aligned with its five principles of engagement namely that IFAD-supported programmes will consistently aim to target and benefit the largest number of poor rural people possible, empower them socially and economically, and promote gender equality. IFAD will place a premium on innovation, learning and scaling up of successes and, in the process, leverage effective and efficient partnerships where comparative advantages are exploited for greater impact. SARP is also well aligned to achieving IFAD's strategic objectives in its key areas of thematic focus.

2. The design of SARP has been informed by both local and regional knowledge, with the government and other local partners providing key inputs into the design process. The design has been informed by the lessons learnt from other countries in the region with similar or comparable contexts and the policies of IFAD.

3. Further the innovation for a fragile state of holding a three day PDR review workshop with key government stakeholders has added a new, substantive perspective to building an understanding between IFAD and its policies and government stakeholders (Ministries of Finance, Planning, Agriculture, and Water).Given that this is the first IFAD investment with Iraq the opportunity to rigorous examine the project. Learn in more detail about key aspects of southern Iraq communities, water use and associated farming systems and to explain and discuss relevant IFAD policies and approaches was invaluable.

4. Following commitments made under the Consultations on the Ninth and Tenth Replenishments of IFAD's Resources, and the corporate-level evaluation on fragility, the project also incorporates some of the key elements of IFAD strategy for engagement in countries with fragile situations. The current project has been kept intentionally simple and flexible to accommodate the weak institutional structures in the country and the conflict in the North which has its reverberations across the country. The strong focus of the project on rehabilitating livelihoods and building capacities and local institutions stems from the fragility of the country.

5. The design of the current project benefitted from the guidance tools relevant for the current project such as those related to targeting, gender, small farmer organizations, community development, climate change and the private sector. IFAD's poverty targeting and gender sensitive design and implementation guidelines updated in January 2013 are annexed. Women and youth are given a central role in the project design and dedicated staff, specific targets and separate budget line items have been allocated for them.

6. Smallholder Farmers' Organizations (FOs) are considered strategic partners for IFAD, not simply as project beneficiaries but as institutions that deliver services to their members, speak on their behalf and becoming key actors in social and policy dialogue at the local, national and international levels. The project retains this focus on farmer's organizations and community driven development in its approach in the implementation of the project. Given the local social development context, separate women's groups and associations would be formed which would work with women.

7. IFAD's climate change strategy[33] recognizes that the speed and intensity of climate change are outpacing the ability of poor rural people and societies to cope. The current project takes cognizance of the fact that poor rural people are in the front line of climate change impacts; the ecosystems and biodiversity on which they rely are increasingly degraded. This is particularly true of the southern Governorates of Iraq. The project incorporates IFAD's assessment that climate-related risks, and potential opportunities, can be addressed more systematically within its projects and policy advice. The current project has made use of the ASAP grant to integrate climate change and environmental concerns within the project design. Weather stations are being planned for the project area to assist vulnerable farmers with timely information on changes in weather, rainfall, temperatures and their use in shaping decisions regarding watering, use of adapted crop varieties, animal breeds and other

[33] Climate Change Strategy. IFAD, May 2010.

adaptation measures. The investments to be undertaken within the project will promote resilience and take into consideration the vulnerability of the target areas in terms of water shortage, salinity and post-harvest losses. The project will also promote policy engagement relevant to adaptation of the agriculture sector to climate change. A detailed climate change vulnerability assessment was undertaken in collaboration with WFP to ensure the identification of the main risks and consequent project interventions, in an effort to enhance the resilience of poor rural communities.

8. The current design is in full accord with IFAD's Private Sector Development and Partnership Strategy which places strong emphasis on further developing and strengthening the linkages of smallholder farmers with the private sector. The Farmers Unions and Associations, the women's groups and Youth Associations and Agriculture Cooperatives will be linked with markets. The project would follow an approach that works backwards from the market to ensure that there is a demand for the products of the smallholder and that market links are established with private firms prior to initiation of any activities.

9. In keeping with the principles established in the IFAD Rural Finance Policy and the IFAD Decision Tools for Rural Finance, the project would not include a rural finance component given that the guiding principles enshrined in the IFAD policy cannot be implemented in the fragile and weak institutional base of the country and that market-based approaches that strengthen rural financial markets cannot be implemented in the country at this stage.

10. At the corporate level in IFAD, there are several key platforms and policy dialogues that have been initiated which would be highly relevant for Iraq. One of these is the Platform for Agricultural Risk Management (PARM), an initiative focused on making risk management an integral part of policy planning and implementation in the agricultural sector. While Iraq is not currently a country of focus for PARM, it could add significant value in assisting the country to deal with the risk in the agriculture sector such as that arising from water scarcity and increasing levels of salinity that has forced many of the smallholders away from agriculture. At some point in the future the country should be added within the purview of PARM.

Appendix 13: SECAP Review Note

1. Major landscape characteristics and Issues (Social, natural resources, and climate)

1.1 Socio-economic context

Iraq has a territory of about 435,052 km that extends between latitudes 29 º 5' and 37 º 22' north, and between longitudes 38 º 45' and 48 º 45' east. Iraq is an oil-rich upper middle-income country in the region with a population of 36.0 million growing at 3% per year and of which 33% are rural. It is estimated that the population will rise to 40.4 million by 2025. The per capita gross national income (GNI) amounted to USD 5,550 in 2015 corresponding to a purchasing power price (PPP) of USD 14,850. The agriculture sector accounts for 8.6% of Gross Domestic Product (GDP) including the oil sector, and 32% without the oil sector. Economic growth has averaged 7.1% per year over the past five years, and it is projected to grow at 7.2% in 2016 and at around 5% in the next few years. This is driven by the projected ramp-up in oil production, increase in oil-related FDI, structural reforms and implementation of the IMF program. However, conflict, and excessive dependence on oil pose significant challenges to Iraq's socio-economic development. Iraq was ranked 141 out of 187 countries in the 2015 Human Development Index. Unemployment rate is 11% nationally (7% of males and 13% of females). Around 653,000 people are unemployed, of which 496,000 are male and 157,000 are female. Youth (15-24 years) unemployment is high at 18% (27% of females and 17% of males). The renewal of civil unrest in 2013 has displaced some 1.1 million Iraqis or made them refugees, and created a population of concern of 1.5 million. The loss of homes and businesses in the conflict is considerable.

Iraq has been identified as a country with extreme fragility by IFAD (included in the list of countries with most fragile situations), peer organizations and IFIs (World Bank) and international assessments (in the 'high alert' category in the Fund for Peace Index, which forms the basis for OECD's assessment of fragility). Fragility affects rural development significantly, reducing institutional capacity and service delivery. For Iraq, this fragility is complex, subnational and multi-dimensional mainly stemming from weak institutional capacities and structures for good governance. Volatile and transboundary security with associated risks are not very conducive to private sector investment for reconstruction, inclusive economic growth and job creation.

Rural poverty. In 2012, rural poverty rate stood at 31 %, nearly the double of the urban poverty one (15 %) with 19% cumulative poor people in Iraq living below the national poverty line of less than 2.2 US$ per person per day. About 54% of the labour force is rural and the rural population is more adversely affected by Illiteracy (25%) than the urban population (14%). The average rural household size is 9.25 persons. Rural poverty in Iraq is a direct consequence of the rapid 3% population growth, internal conflict and insecurity, climate change, increasing water scarcity and rapid desertification. The combined effects resulted in reduced prospects for viable rainfed and irrigated agricultural and livestock production, and lack of sustainable income-generating opportunities for rural communities.

At the regional level, and out of the 18 Governorates in Iraq, the poverty ratio ranged from 35% to 52% for the 5 poorest governorates, from 11% and 26% for 9 governorates and from 2% to 10% for the remaining 4 governorates. In the rural areas of the 5 poorest governorates, small-scale farmers and livestock producers are the most marginalized households with unemployed young men and women members as the most vulnerable. Small-scale farmers with a holding size ranging from 2.5 to 7.5 ha account for 35% of total number of farmers with subsistence cereal crops accounting for 58 % of their cultivated area. Medium size farmers account for 34% with a holding size ranging between 7.6 and 12.5 ha.

Livelihoods and nutrition. Given the current low crop and livestock productivity, agriculture is no longer the major source of livelihood for smallholder farmers. The nutrition status of both rural and urban population is increasingly dependent on the heavily subsidized ''food basket" provided by the

Iraqi Public Distribution system (TDS) which is an essential policy measure to ensure food security and avoid possible malnutrition. However, the subsidized food rationing on a national scale with imported food has had a negative impact on the local grain market with consequent depressing effects on producer prices and on agriculture sector investment.

Gender. Despite steps taken towards gender equality since 1990, traditional societal views of women, insecurity and weak performance of state functions are affecting the role of Iraqi women in rebuilding the country. However, there are some positive signs of women's participation in higher levels of the public sector and government (e.g. in 2010, the average rate of parliament seats held by women was 27%).

The ratio of girls to boys in primary school rose from 0.88 in 2006 to 0.94 in 2011; in secondary school, the ratio rose from 0.75 in 2006 to 0.85 in 2011.[34] It was estimated that in 2011, 28.2 percent of women 12 years or older were illiterate, more than double the male rate of 13 percent.[35] Only one third of young women - those aged 15 to 24 - living in rural areas are educated. Women's health has seen some gains. The percentage of births attended by skilled personnel has risen significantly in the last decade. And the maternal mortality rate - which at 84 per 100,000 births in 2006 was the highest in the region - appears to have dropped significantly, to 24 per 100,000 in 2011.[36]

There is considerable inequality in the labor force. Only 14 percent of women are working or actively seeking work, compared to 73 percent of men. Those who are employed are mostly working in the agricultural sector. The percentage of women in paid employment in the non-agricultural sector has risen from 12.1 percent in 2008 to 14.7 percent in 2011. Women with a diploma have a harder time finding jobs: 68 percent of women with a bachelor's degree are unemployed. The rural unemployment rate is higher for females than males. Due to years of war and political instability, 10 percent of households are headed by women, most of them widowed, but many of them divorced, separated or caring for sick spouses. They represent one of the most vulnerable segments of the population and are generally more exposed to poverty and food insecurity as a result of lower overall income levels.[37]

Youth. Iraq is facing a 'youth bulge' and individuals between 15–24 years old. represent 19.6% of Iraq's population. The number of young people entering their reproductive years and the labour force is expected to increase significantly between 2011 and 2015, creating both an opportunity and a challenge to Iraq's society and economy. This segment of the population has been deeply affected by the on-going war and conflict that they have witnessed for much of their lives. The various conflicts have significantly limited young people's educational and employment opportunities in Iraq and deeply impacted their vision of their future. The enrolment ratio in intermediate education is barely 40 percent; for secondary education it is less than 30 percent. The illiteracy rate is high, and the unemployment rate for both sexes combined is estimated at about 30 percent. Adolescent girls are worse off than boys in every respect. There is a high probability that girls will be married before their 18th birthday without their consent. In terms of participation, only 40 percent of youth perceive the value of taking part in social and political life. A survey[38] indicated that only 56.9% felt optimistic about the future, they have little trust in the current system of governance and almost 17% expressed a strong desire to emigrate.[39] Despite several measures taken by the Government recently to deal with youth, significant challenges remain.

1.2 Natural resources and Climate

Iraq can be divided in four zones: (i) the Mesopotamian alluvial plain that occupies a quarter of the area of the country. equivalent to 132,500 km2; (ii) the desert plateau located in the west of Iraq, occupying about less than half the size of Iraq or 168,552 km2; (iii) the mountainous region located in the northern and north-eastern parts of the country, covering about 92,000 km2; (iv) and the undulating region, a

[34] Multiple Indicator Cluster Surveys (MICS) conducted by the UN Children's Fund (UNICEF) and the Government. March 2013.
[35] Iraq Knowledge Network (IKN) survey of 2011.
[36] World Health Organization.
[37] UN Fact Sheet. March 2013.
[38] National Youth Survey by the United Nations Population Fund (UNFPA) and the Government of Iraq. 2009
[39] http://uniraq.org/index.php?option=com_k2&view=item&id=1140:iraqi-youth-key-statistics-and-resources&Itemid=606&lang=en

transition zone between the low-lying Mesopotamian plain in the south and the high mountains in the far north and north-eastern areas, that covers 67,000 km2.

The climate of Iraq is continental and subtropical. Winters are usually cool to cold, with an average daily temperature that might reach 16ºC dropping at night to 2ºC. Summers are dry and hot to extremely hot, with a shade temperature of over 43ºC during July and August, yet dropping at night to 26ºC. Most of the rainfall falls during winter, spring and autumn, and is non-existent in the summer period. Average annual rainfall is 154 mm, and it ranges from less than 100 mm over 60 % of the country in the south up to 1,200 mm in the north-east mountains[40].

Agricultural resources. The total agricultural area of variable quality and potential, amounts to 11 million ha of which 6 million are actually cultivated with 2,5 million ha under rainfed in the North and 3,5 million ha under irrigation in the Centre and the South. The production systems include an irrigated-based system in the Centre and South and a rainfed-based system predominantly in the North. In the irrigated system, in addition to cereals, winter and summer vegetables, corn, rice and fruit trees with predominantly date palm are grown. The rainfed farming system is crop/small ruminant based. In both systems the productivity is low.

About 0.3 million ha are irrigated from surface water and the rest from underground aquifers. Of the total land cultivated, the cereal crop group is preponderant (53.5%, from which 31.6% of barley, 19.4% of wheat, and 1.1% of maize). From these main crops there is a dynamic upward trend for wheat and maize crops, along with a decrease in barley[41]. Livestock during 1990-2011 presents a sharp decline from 10.06 LSU/ha in 1990 to 6.05 LSU/ha in 2011, when it represents only 60.10 % from the livestock. The main decrease is found in poultry from 8.67 LSU/ha in 1990 to 2.77 LSU/ha in 2000, to 4.14 LSU in 2010 and to 4.63 LSU in 2011. The main reason is the massive importation of poultry, favoured by the political events that took place in Iraq[42].

Table 1. The crop structure in Iraq during the period 1990-2012[43]

Specification	1990		2000		2010		2012	
	thousand hectares	%	thousand hectares	%	thousand hectares	%	thousand hectares	%
Wheat	1,180.6	22.6	1,200.0	27.9	1,383.3	32.9	1,200.0	28.5
Barley	1,922.1	36.8	1,110.0	25.8	1,005.8	23.9	600.0	14.3
Corn	69.3	1.3	72.8	1.7	113.1	2.7	130.0	3.1
Dates	123.5	2.4	110.0	2.6	123.0	2.9	124.6	3.0
Fresh vegetables	29.0	0.6	30.0	0.7	18.6	0.4	22.0	0.5
Vita de vie	18.8	0.4	13.0	0.3	10.0	0.2	11.0	0.3
Total main crops	3,355.4	64.2	2,549.3	59.3	2,683.5	63.7	2,122.7	50.4
Other cultures (pastures, meadows)	1,874.6	35.8	1,750.7	40.7	1,526.5	36.3	2087.3	49.6
Total (ha)	5,230.0	100.0	4,300.0	100.0	4,210.0	100.0	4,210.0	100.0
1990 (%)	*100.0*	*X*	*82.2*	*X*	*80.5*	*X*	*80.5*	*X*

Table 2. The structure of animal load per cultivated hectare in Iraq during 1990-2011[44]

Specification	1990		2000		2010		2011	
	UVM	%	UVM	%	UVM	%	UVM	%
Cattle	0.18	*1.8*	0.18	*4.48*	0.23	*4.13*	0.23	*3.83*
Sheep and goats	1.21	*12*	0.99	*25.1*	1.16	*21*	1.19	*19.65*
Poultry	8.67	*86.2*	2.77	*70.4*	4.14	*74.9*	4.63	*76.52*
Total	10.06	*100*	3.94	*100*	5.53	*100*	6.05	*100*
	100.0	***x***	***39.2***	***X***	***55.0***	***x***	***60.1***	***x***

Agriculture accounts for 76% of total water use. Irrigation infrastructure in Iraq includes: (i) a wide range of hydraulic dams and water reservoirs for a cumulative retention capacity of 70 billion m^3; (ii)

[40] Zakaria, S. et al (2013) Historical and Future Climate Change Scenarios for Temperature and Rainfall for Iraq. Journal of Civil Engineering and Architecture, Vol. 7, Nº 12 (Serial Nº 73).

[41] Yousif, M.D. et al (2015) The agriculture potential development in the Republic of Iraq. Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 15, Issue 4.

[42] Yousif, M.D. et al (2015) The agriculture potential development in the Republic of Iraq. Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 15, Issue 4.

[43] FAO http://faostat3.fao.org

[44] FAO http://faostat3.fao.org

45,000 km of water conveyance systems and 85,000 km of drainage canals; and (iii) 38,000 pumping and control stations for irrigation and drainage. Most of the conveyance canals is in state of disrepair as a result of poor maintenance and most of the drainage canals are non-functional due their lack of cleaning. Water use efficiency both at the conveyance level and on farm is low and ranges from 35% to 40%. The non-water saving surface irrigation system is practiced in 95% of irrigated areas and crop intensity does not exceed 85% of cultivated land. Over 75% of irrigated land is affected by salinity.

Water resources. The rivers Tigris and Euphrates with their tributaries form the main surface resources in Iraq. The catchments area of these rivers is shared by five countries: Iraq, Turkey, Iran, Syria and Saudi Arabia. Generally, the total annual flow of the Tigris and Euphrates rivers greatly fluctuates from year to year due to changing metrological conditions. The period extending from October to February is referred to as variable flood period where discharges in both rivers fluctuate depending on intensity and duration of rainfall at their basins. This period is usually followed by what is known as steady flood period extending from March to April.

Increasing water scarcity and reduced water availability are dominant economic and environmental challenges in Iraq. Current water use for all purposes far exceeds renewable supplies. The average yearly inflow of the Euphrates declined from 30.44 billion m^3 for the period 1933-1971 to 12.75 billion m^3 (42%) for the period 2008-11. For the Tigris, the inflow declined from 49.22 billion m^3 for the period 1933-98 to 33.11 billion m^3 (67%) for the period 1999-2011. The decline in the inflow is due to over exploitation, climate change and the Ataturk Dam in Turkey. The annual share of renewable fresh water resources per capita in Iraq declined from 4,587 m^3 in 1964 to 998 m^3 in 2014. The quality of irrigation water is deteriorating in terms of salinity and chemical contaminants.

1.3 Key Issues

1.3.1. Main Threats

Unsustainable Environmental and Natural resource management

Iraq's environmental conditions have suffered greatly from the impact of poor policies on pollution and resource management. The years of conflict left chemical pollution affecting the livelihoods and safety of an estimated 1.6 million Iraqis. The natural resources for agriculture use, namely land, water, forest and pasture have been inefficiently and unsustainably managed with underground water resources overly exploited beyond their recharge capacity. The percentage of dried Mesopotamian marshlands is now 90%. This resulted in increasing threats of land degradation, desertification, water shortage, increased soil and water salinity, low irrigation efficiency, reduced soil fertility and low forest cover of 4.0%.

Iraq was considered rich in its water resources compared with other countries where the annual allocation per capita reached 6029 m3 in 1995 and 2100 m3 in 2015[45]. Construction of dams on the Tigris and Euphrates and their tributaries outside the border of Iraq, and the growing demand for water in Turkey and Syria will lead to dry the Tigris and Euphrates Rivers in 2040. Furthermore, the supply will be 43 and 17.61 BCM in 2015 and 2025 respectively while current demand is estimated between 66.8 to 77 BCM. These suggest that the Iraqi government needs to take quick, prudent and firm action as a high priority. To overcome these problems in Iraq, there is a great need for prudent management of water resources and the adaptation of nonconventional techniques to augment water resources.

Decreasing water supplies have been exacerbated by drought conditions between 2005 and 2009, which have devastated agriculture and caused drinking water shortages, particularly in rural areas. 39% of cropland suffered a reduction in coverage for two years in succession between 2007 and 2009, and livestock has been decimated[46]. The Tigris and the Euphrates, Iraq's two major surface water sources, may dry up by 2040 if current conditions prevail.

[45] Al-Ansari, N. et al (2014) Present conditions and future challenges of water resources problems in Iraq. Journal of Water Resource and Protection, 2014, 6.
[46] Hameed A. et al (2013) The Challenges of Water Sustainability in Iraq. Eng. & Tech. Journal, Vol. 31, Part (A) Nº5.

Diminishing water availability, increased water salinity and low irrigation efficiency. About 75% of the irrigated area of Mesopotamian plain (more than 2 million ha) is moderately saline and another 25% has levels of salinity that have converted once productive lands into salt-affected wastelands. Over 39% of Iraq's agricultural land suffered a reduction in cropland between 2007 and 2009. Farmers of saline soils are using only 30% of their land for cropping and are achieving only 50% of the expected yields. Soil salinity caused cropping systems to move away from high-value crops to lower-value crops.

One of the most serious effects of the excessive use of chemical fertilizers is their infiltration into underground waters, contributing to enhance the process of eutrophication of water courses, along with the existence of a process of salting the soil. Another phenomenon produced in Iraq due to the overuse of chemical fertilizers is the proliferation of diseases and parasites, whose development is more on excessively fattened crops with nitrogen. Effect of applying those fertilizers was looked into Iraq's agriculture through knowledge of quantities consumed of nitrogen (N) and phosphorus (P), expressed as the total amounts of nutrients active substance (s)[47].

Table 3. Evolution of fertilizers' quantities in agriculture in Iraq during the period 2004-2011[48]

Specification	UM	2004	2006	2008	2009	2010	2011
Nitrogen fertilizers	thousands to a.s. N	102 .7	167.0	164.1	171.8	108.0	138.3
	%	*100.0*	*162.6*	*159.8*	*167.3*	*105.1*	*134.7*
Fertilizer with phosphorus	thousands to a.s P2O5	6.9	55.0	63.6	46.4	24.4	24.4
		100.0	*795.0*	*919.9*	*670.3*	*352.4*	*352.4*
Fertilizer with potassium	thousands to a.s. K2O	…	…	…	46.4	4.8	5.4
					100.0	*10.4*	*11.6*

Climate change

The Arab Forum for Environment and Development (AFED) in 2009 reported that the MENA countries - which already suffers from aridity, recurrent drought and water scarcity - are in many ways among the most vulnerable in the world to the potential impacts of climate change, mostly the increased average temperatures, less and more erratic precipitation and sea level rise. Five MENA countries including Kuwait (52.6ºC), Iraq (52ºC), Saudi Arabia (52ºC), Qatar (50.4ºC) and Sudan (49.7ºC) were among 19 countries that set new record high temperatures in 2010. Iraq faced during the past 30 years frequent non-uniform drought periods in an irregular repetitive manner. The temporal analyses of the standardized precipitation index (SPI) indicate the presence in the country of two drought types regarding the extent of the event: local and National. National drought having full dry extent at all meteorological stations, occurred more seldom during the historical years of 1983, 1998, 1999, 2000 and 2008. On the other hand, local drought events occurring at one or two regions were evidenced in the years 1987, 1989, 1990, 2001, 2002, 2003, 2004, 2005,2007 and 2009[49]. Devastating drought gripped Iraq in the 2007-2008 growing season[50], particularly hard-hitting the country's leading wheat producing regions in the north (over 90 percent – between 675,000 and 725,000 ha - of the Nineveh governorate's cropland remained barren throughout the winter, from a combination of aborted planting operations and drought-induced crop failure) where wheat production was down 45% from a normal harvest.

IFAD has financially supported ICARDA to undertake an assessment of climate change impacts in Iraq and Jordan[51]. According to this analysis, for the period 2010-2040, the annual precipitation is set to decline significantly, but here the outcomes from scenarios A1b and A2 differ substantially. A decline of 5–20% is expected in > 90% under scenario A1b; the same decline is anticipated in only 18% of Iraq under scenario A2. The climate projections from a more recent study - "Iraq: A Climate

[47] Yousif, M.D. et al (2015) The agriculture potential development in the Republic of Iraq. Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 15, Issue 4.
[48] FAO http://faostat3.fao.org
[49] Al-Timimi, Y.K. et al (2013) Assessment of spatial and temporal drought in Iraq during the period 1980-2010. International Journal of Energy and Environment, Vol. 4, Issue 2.
[50] Trigo, R.M et al (2010) The intense 2007-2009 drought in the Fertile Crescent: impacts and associated atmospheric circulation. Agricultural and Forest Meteorology.
[51] De Pauw, E. et al (2015) Mapping climate change in Iraq and Jordan. ICARDA Working Paper 27.

Vulnerability Analysis" - produced by WFP with IFAD funding in 2017, and based on a largest set of 25 models examined for the lowest and the highest emission scenarios for 2030-2050-2080, are more in line with ICARDA's results under scenario A2, as they predict the maintenance of rainfall at least at current levels, with the south-west and south-east regions. There are erratic patterns in loss/gain of summer precipitation, although in the eastern part (scenario A1b), there are gains of > 20% in summer precipitation, which can be considered irrelevant due to the scarce average seasonal precipitation. The same trend of increase (> 20%) extends into the autumn.

Monthly and annual temperature and change are very similar between scenarios A1b and A2 in the ICARDA report. The changes in mean annual temperature between current climate and those for 2010–2040 across the study area are in the range 1–1.5°C. For the lowest emission scenario, the WFP report predicts the maintenance of temperature at moderately more elevated levels than today for the lowest emissions scenario, while very large increases are expected for the highest emission scenario for the three assessed dates. Seasonal differences can be expected in the temperature increase. The temperature increases in spring and autumn are expected to be higher than in winter: about 80% of Iraq in the range of 1.0–1.5°C increase for scenario A1b, and 50% of Iraq even in the range 1.5–2°C. Still higher increases (1.5–2°C) can be expected in summer in 100% of Iraq under both scenario A1b and A2. For the WFP report, temperature increases will be higher from late summer till early winter.

Across Iraq a trend towards more arid conditions prevails, being in most cases the result of higher potential evapotranspiration due to higher temperatures under both declining/increasing precipitation predictions. The region with higher risk of aridification is in the north-western part of the country (Niniveh, the northern extreme of Al-Anbar northwards of the Euphrates river, the western half of Saleh-ad-Din and the southern extreme of Arbil) where the highest drought severity has been registered in the four major droughts of the 2007-2014 period. Changes in the temperature-limited growing period are expected to affect small high-altitude areas, with about 6% of the country expected to have an increase in the temperature-limited growing period of 1–30 days. The net effect on the moisture- and temperature-limited growing period would be a reduction of 0–15 days in the vast majority of the country (70–90%), with an increase of 0–30 days in a maximum of 8% of Iraq.

A shortage of water may arise between 2020 and 2030 in the Tigris and Euphrates rivers due to growing demand in the riparian countries. An emergency situation might develop already around 2020 because the expected annual 4 km3 of water remaining as surplus in the two rivers will not be sufficient[52]. Since water shortages are forecast to occur with the development of irrigation, solutions have to be found for an integrated basin-level planning of water resources development. Another main issue in water resources management is protection of water quality. The level of salinity especially in the Euphrates River is high and is expected to increase with the development of irrigation in the basin and, as a consequence, the diminutions of the water flow particularly in the dry season. It is therefore, with excessive use of water in irrigation and high evapotranspiration rate, urgent that adaptive management practices such as drip irrigation, conventional residue management should be adopted throughout the watersheds in order to secure long-term ecosystem productivity and sustainable agricultural communities.

The WFP report considers the Climate Risk for Iraq to be Moderate, except for an area in the north-western part of the country - (Niniveh, the northern extreme of Al-Anbar northwards of the Euphrates river, the western half of Saleh-ad-Din and the southern extreme of Arbil) which is considered to have a High Climate Risk. The High Climate Risk region has registered the highest drought severity in the four major droughts between 2007-2014, with a long-term tendency for decreasing rainfall in the past 20 years accompanied by a corresponding decreasing tendency and high inter-annual variability in vegetation cover. The rest of the country with Moderate Risk is undergoing a warming tendency in winter months coupled with increases in rainfall in the early stages of the rainfall season (September-November). This has led to significant increases in vegetation cover as well as a shift in the timing of green up towards earlier stages of the season. Current decreasing trends in rainfall in the south-eastern regions dominated by irrigated agriculture may not have much of an impact given the very small amounts of the current climate and the dependence on irrigation for agricultural production. One

[52] Hameed A. et al (2013) The Challenges of Water Sustainability in Iraq. Eng. & Tech. Journal, Vol. 31, Part (A) Nº5.

question that remains unexplored is the effect of the rising temperatures in the extent of snow cover and snow water equivalent and therefore on the dynamics of snowmelt and on the timing of water supply. A reduction in snow water storage is a very likely scenario given the extremely likely further rise in temperatures in the highlands of the basin. This needs to be discussed with local experts on what might be possible consequences for irrigated agriculture in Iraq.

Policy, Governance and Institutional drivers

Iraq is in the middle of a triple political, security and socio-economic transition. According to a 2014 report by the Centre for Strategic and International Studies (CSIS) on Iraq's economic and governance crisis, fundamental political and economic reforms are required to achieve any meaningful form of unity and stability and to overcome the sectarian and ethnic divisions in the country.

The overall constraints relate to diminishing productivity for crop and livestock are:

(i) Use of traditional and low yielding production technologies including mono-cropping and cereals-fallow rotation.

(ii) Governance problems. The authority of traditional farmer organizations (WUAs, Cooperatives, farmer associations…) has been eroded by the unrest of the last two decades, and the various land reforms that fragmented ownership including tenure reform associated with irrigation development. Institutional support is needed to ensure that these groups regain their role and contribute to the development of the agricultural sector.

(iii) Lack of enabling agriculture input and output price policy - the prices of seeds, fertilizers, pesticides, veterinary drugs and agriculture machinery and equipment are very high for local producers to compete, without incentives, with the heavily subsidized imported food items available in the local market. There is a need to identify policy gaps that need to be addressed to help increase competitiveness of the sector and enhance its contribution to rural development and poverty alleviation.

(iv) Weak agriculture research and extension services for technology transfer particularly to small producers: The capacity of the MoA and MoWR and other government institutions to provide services to the agriculture sector has drastically deteriorated over the past 20 years. Budget cuts reduced the level of services resulting in the departure of skilled human resources in agriculture support services such as research, extension, animal health, artificial insemination, plant quarantine and disease control. Most of agriculture research assets (buildings, labs and farms) have been damaged, and technicians are insufficient in number or quality. The sanctions imposed on Iraq disrupted for a long time contacts with the outside world except to some extent with ICARDA and FAO. There is a lack of a real extension and training strategy with adequate operating budget, involving effective decentralization, privatization, gender empowerment, farmer participation, use of modern information technologies, linkages with research and other institutions such as universities, private sector, and support to women and youth.

(v) Traditional societal views of women, insecurity and weak performance of state functions are affecting the role of Iraqi women in rebuilding the country, with serious educational constraints, lack of employment opportunities, and gender-based violence.

(vi) Weak private sector. Given the absence of incentive policies, the private sector and its institutions did not invest in agribusiness. Problems include security, unclear requirements for registering and closing businesses, license requirements, limited communication infrastructure and logistics, difficult access to finance and a non-competitive business environment lacking transparent and clear legal frameworks for rules-based-market competition.

(vii) Limited access to rural financial services.

1.3.2. Main Opportunities

A) Climate Change mitigation and adaptation

According to the draft FNC document prepared by the Government of Iraq, it is likely that the adverse effects of climate change would reduce the agricultural production and make the problem of water shortage in Iraq worse. Thus, several priority measures should be taken for adaptation and be

integrated in policy development at the national and sub-national levels to enhance agriculture development strategies and increase their advantages.

The most important and required adaptation actions for the agricultural sector are:

- Improve management of rain-fed agriculture by digging water wells and applying complementary irrigation.
- Raise the irrigation efficiency in irrigated agriculture through development of efficient irrigation technologies (e.g. drip irrigation, sprinkler irrigation).
- Conduct further research to identify and/or develop crop varieties which are low water demanding, and resistant to drought, high temperatures, pests, and/or soil salinity, as well as livestock breeds climate-adapted, disease-resistant and highly productive.
- Use integrated methods for agricultural pest management and reduce reliance on pesticides and herbicides in agricultural systems.
- Establish an effective monitoring system of weather/crop production and natural pastures conditions, including early warning systems for drought, floods, and desertification trend.
- Strengthen strategic crops storage conditions for crops like wheat and barley to address potential drought seasons.
- Dig water wells for drinking and livestock grazing in desert areas and expand the establishment of nature reserves.
- Use advanced systems to restore and increase natural vegetation cover in pastoral areas, especially in the western desert. This should include the production of seeds from grassland plant species.
- Expand projects of soil stabilization to reduce sand dune encroachment making use of innovative methods suitable for the Iraq context.
- Apply and expand water harvesting techniques in desert areas to take advantage of rain floods.
- Use modern methodologies for an integrated management planning of water resources in Iraq.

Emerging national agriculture development programs. There are currently several emerging national programs being carried out by the Ministry of Agriculture that are piloting new practices and aiming at productivity enhancement and efficient use of natural resources and adaptation to climate change. These programs include: (i) the national program for the use of on-farm modern irrigation systems; (ii) the national program for the improvement of wheat production; (iii) the national program for the development of drought and salinity tolerant crops; (iv) the rangeland improvement and combatting desertification program; (v) the organic agriculture program; (vi) the program for the establishment of an agricultural meteorology network; (vii) the program for the genetic improvement of local animal breeds; and (viii) the conservation agriculture project.

Lessons learnt from IFAD and other donors' supported projects and programs.

The above national agriculture development programs have tested and demonstrated the effectiveness of a wider range of climate change adaptation approaches and advanced technology packages developed by the National Agricultural Research System (NARS) and other partners (e.g. ICARDA, FAO) through several regional agriculture research for development (R4D) projects (some co-financed by IFAD grants inclusive of Iraq). Among the promising validated technology packages released by these R4D projects, the following are relevant for being replicated and up-scaled by the Climate Resilient Crop and Livestock Production (CRCLP) Project:

- For water use efficiency, supplemental irrigation in rain-fed areas resulted in higher yield, increased water productivity from 0.96 kg to 3.7 kg of grain per m^3 of water, prevented excessive use of water, and modified the crop calendar considered as an adaptation measure to climate change. Irrigation through mechanized raised bed technology increased wheat productivity while saving on water resources - applied water was reduced by 30%, yields increased by 25%, seed rate reduced by 50 %, and on-farm water use efficiency increased by 72%.
- Comparison between water use efficiencies for various irrigation methods (drip, basin and bubbler) on date palms have shown that the drip system has the highest water use efficiency. Economic analysis found that the total cost for the subsurface drip irrigation system per hectare (including; investment management, operation, etc..) can be less than 30% compared to the center pivot system.

- For date palm, integrated pest management and organic fertilization practices are promising. In addition to environmental benefits, shifting from chemicals to bio-pesticide for the date palm Dubas Bugs resulted in an incremental return of USD 8440 per ha.
- For rainfed integrated crop-livestock production systems, diversification helped spread the risk and increase revenues. Diversification included bee-keeping, processing of crop produce such as dates, on-farm feed production, use of by-products for making feed blocks, barley production, fodder shrub plantations, improved natural pasture and range management, as well as alley cropping.
- For small ruminants, the application of holistic packages to improve sheep flocks' reproductive performance resulted in an increase of 55% to 80% of fertility rates and increased twinning rates from 5% to 24%. The reduction of winter-feeding gap by increased production of forage during the shortage period, not only released the pressure on natural rangelands, but also increased milk production by 15% per ewe and decreased mortality by 47%.

IFAD support to Iraq has so far been limited to grant financed regional agriculture research projects implemented by ICARDA. The key lessons learnt form IFAD financed regional research grants, IFAD investment projects in NEN countries, and work of other partners and donors and that can prove relevant to the CRCLP project design are:

- Small-scale farmers are willing to adopt improved production technologies, but they need to see results first. Given small scale farmers are risk averse, incentives to pay for the first year the cost of incremental inputs and services embodied in the new technologies, are essential to help taking risk.
- On-farm adaptive research complemented by a network of demonstrations at farmer's field composed of a lead farmer and several satellite farmers, and/or a network of farmer field schools (FFS) are effective platforms for quick dissemination of technologies. During this process, knowledge is shared and interactions among farmers produce a long-term effect.
- The sustainability of impact generated by IFAD investment projects beyond the completion date require government commitment to continue funding technology transfer activities and beneficiaries' ownership to operate and maintain the collective assets created by the project.

2. Potential project's social, environmental, and climate change impacts and risks

2.1 Key potential impacts

The project should not generate negative social, environmental, and climate change impacts, provided it builds on, fully integrates, and facilitates the replication and upscaling of the climate-resilient irrigation and agriculture management practices and technologies that are proposed as CC adaptation priorities by the emerging national programs of the Ministry of Agriculture (MoA), and have been tested by the National Agricultural Research System (NARS) and other partners (e.g. ICARDA, FAO) through several regional agriculture research for development (R4D) projects. In fact, SARP fully integrates in the project design the enhancement of environmental and social resilience in the target areas, with special focus to gender equity and integration of youth, through *climate resilient investments* and capacity development - technical and institutional - of key public and private actors (Component 1), and through agriculture and livelihood diversification (Component 2).

In fact, at this stage of the project design process, when the development of the full proposal has not yet taken place, it is important that the project design team takes into consideration the wider range of climate change adaptation approaches and advanced technology packages developed, tested and validated under IFAD-funded grants.

3. Environmental and social category

The project should qualify for *category B*, provided it fully integrates the approach, measures, lessons learned, and best practices of NARS, ICARDA, and FAO, through several regional agriculture research for development (R4D) projects (some of them funded with IFAD grants), and is used as a vehicle to upscale and expand best practices in terms of environmentally-sound technologies and

participatory and capacity development tools with a gender focus at the national level (institutional development and policy improvement) and at the local level.

In order to meet the environment and social objectives, SECAP recommends that the project considers the upscaling of the most promising validated technology packages released by these R4D projects, such as: water use efficiency (e.g. comparison between drip, basin and bubbler on date palms have shown that the drip system has the highest water use efficiency) and rehabilitation of irrigation and drainage infrastructure; integrated pest management and organic fertilization practices for date palms; income diversification including apiculture, fisheries and livestock packages for women from poor households, processing of crop produce such as dates, small greenhouses for high value vegetable production, etc.; post-harvesting infrastructure and equipment to reduce perishability of produce.

From the social point of view, SARP should capture the need to promote diversification of income sources in order to support rural livelihoods and build socio-economic resilience by reducing the risk of income loss caused by climate change. The strong role played by NGOs coming from a humanitarian background and specializing in reaching out to women (especially female-headed households) in project implementation is expected to ensure attention to gender equality and women's empowerment. For farmers' participation and capacity development, the implementation of effective methodologies successfully applied in Iraq and the region, such as farmer field schools composed of a lead farmer and several satellite farmers, and/or a network of farmer field schools (FFS) both for men and women will become effective platforms for quick dissemination of technologies among project beneficiaries.

4. Climate risk category

Based on the recent WFP report "Iraq, A Climate Analysis" funded by IFAD, climate risk in Iraq is considered Moderate, except for a region in the North-East which is considered to have a High Climate Risk. The four governorates - Muthanna, Qadisiya, Missan and Thi Qar – that make up the project area are located in the Moderate part of the country, therefore the project should qualify for *Moderate Risk*.

According to the draft FNC document prepared by the Government of Iraq, it is likely that the adverse effects of climate change would reduce the agricultural production and make the problem of water shortage in Iraq worse. Thus, SARP will support the implementation of priority adaptation measures already tested and validated in the field, and will help integrated in policy development at the national and sub-national levels to enhance agriculture development strategies. The most important and required adaptation actions for the agricultural sector are:

- Raise the irrigation efficiency in irrigated agriculture through water infrastructure rehabilitation and adoption of micro-pressurized efficient irrigation technologies (e.g. drip irrigation, sprinkler irrigation).
- Identify and promote crop varieties which are low water demanding, and resistant to drought, high temperatures, pests, and soil salinity, as well as livestock breeds climate-adapted, disease-resistant and highly productive.
- Use integrated methods for agricultural pest management with special focus on the date palm disease, and reduce reliance on pesticides and herbicides in agricultural systems.
- Strengthen strategic crops storage conditions for crops like wheat and rice to address potential drought seasons.
- Support income diversification opportunities (e.g. beekeeping, processing and marketing of agriculture produce especially dates, seed potatoes and high value vegetable crops to reduce the risk of climate shocks due to the dependence on just one economic activity, with especial focus on women and youth).
- Establish an effective monitoring system of weather/crop production and natural pastures conditions, including the upgrading and expansion of the Meteorological Monitoring Network, and the development of early warning systems for drought, floods, and desertification trend. Build governmental capacity to analyse and disseminate meteorological information and early warning to ensure that famers receive this information in a timely and actionable manner.

- Support institutional and technical development of governmental organizations at national and local level to mainstream CC adaptation in policy development, and in agriculture practice by extension agents, individual farmers, farmers' organization and water users' associations.

5. Recommended features[53] of project design and implementation

5.1. Mitigation measures

There is no need for additional information on mitigation measures, as climate change adaptation, poverty reduction and gender inclusion are fully integrated in the project design.

5.2. Multi-benefit approaches

SARP integration with the previous IFAD-funded programs that tested and demonstrated effective adaptation options to address climate change constraints - such as the growing trend of heatwaves, water scarcity, soil erosion, soil salinity, pests, among others – and facilitated farmers' participation and capacity development with special focus on women and youth, will helping upscale at a national level the lessons learned in these fields, and allow the overall IFAD intervention to have an impact on smallholders' income and rural livelihoods in general, and achieve economic, social, and environmental benefits in a framework of sustainability, by impacting this critical sector of the economy.

5.3. Incentives for good practices

The comparative advantage of IFAD relative to this project relies on its proven targeting and result-oriented approaches, its focus on the empowerment of smallholder farmers through the strengthening of their grass-root institutions and social capital, development of farmer's capacities and skills, support and dialogue to facilitate the adoption of enabling policies; gender integration; as well as close project supervision and implementation support. These provide a good platform and a promising opportunity to engage with, build on and scale-up within the IFAD first investment project in Iraq.

Smallholders dominate agriculture production in Iraq with limited ability to realise economies of scale or reduce their transaction costs, or deal with climate-resilient production, post-harvesting, processing and marketing issues. Farmers individually do not have the resources to invest in the marketing infrastructure and the private sector has not yet fully emerged to capitalise on the opportunities available. While a cooperative framework exists for the establishment of agriculture cooperatives and farmer associations there has been limited attention paid to their development. The cooperatives established several decades ago currently exist only on paper with limited incentives and support available to encourage their formation and growth.

The project would attempt to incentivize farming households who were obliged to abandon agriculture due to the deterioration of the irrigation infrastructure, which led them to suffer acute food shortages - women and children were particularly under-nourished - being forced to rely on daily wage labour or depend upon Government food security programme. The project will address the potential in the target Governorates to invest in irrigation infrastructure that with relatively little investment some of these schemes can be completed and others rehabilitated to ensure the supply of water to many of the villages in these extremely fragile districts. The combined project actions supporting investments in water infrastructure, grants for smallholder farmers, women and farmer associations and cooperatives to enhance their adoption of climate-resilient crop and livestock production systems, post-harvesting and processing, and the implementation of institutional and technical development programmes for building the capacity and demonstrating the benefits of individual and collective group action for improved input supply, post-harvest and marketing functions, will create the necessary incentives for the adoption of good practices. Moreover, in order to capitalize on the opportunities created by the Government for the unemployed rural youth, the project would provide opportunities for development of skills to increase their marketability and assist many of them to establish their own

[53] Guidelines as to what constitutes ENRM Core Principles and Best-Practice Statement can be found in IFAD 'Environment and Natural Resource Management Policy' (2011)

enterprises and income generating activities with support from the project in acquiring productive assets. The project would in particular focus on women and youth who have been given limited attention in the past.

5.4. Participatory processes

The project has developed a very proactive strategy for the participation of women in project activities especially recognizing that women have received a significant setback in Iraq due to years of conflict and the rise in the power of religious parties which has led to the deterioration of women's rights and confined many of them within the homestead in rural areas.

The implementation approach of the project would be demand driven and would follow a process in which individual and group beneficiaries would participate in selecting their activities. A diagnostic process would be adopted and implemented by the service providers especially hired to discuss individual and group investment opportunities and develop plans based on their potential, aspirations and capacities. The project would tailor project activities and services to the needs of the target beneficiaries and ensure their capacity to operate and manage the services for long-term sustainability. The project would ensure close partnership with each of the beneficiaries and rural community institutions to clearly identify the roles and responsibilities of each, the terms of partnership agreed by both parties, implementing arrangements, roles and responsibilities of each and if required agree on MOUs with Unions, Associations, groups and individuals to clarify expectations and agree on targets and monitoring and reporting responsibilities.

The SECAP recommends that the project includes in its inception phase a baseline assessment of: (i) the participatory processes promoted through the previous IFAD grant-funded interventions in the country (e.g. the FFS approach used in the ICARDA applied research interventions on climate-resilient agronomic practices supported by IFAD, and by other development agencies in Iraq and the region has proven to be a very successful participatory methodology for both women and men); and (ii) the successful achievements and the pilot activities tested through previous IFAD projects, and on the best practices and lessons learned by other donors engaged in agriculture development in Iraq.

6. Analysis of alternatives

Not applicable (social objectives are already included in the project design, and environmental/climate change adaptation objectives are part of the SARP interventions.

7. Institutional analysis.

7.1. Institutional framework

At the national level, The Ministry of Agriculture would be the lead agency responsible for the implementation of the project. The project would have a ***Project Steering Committee*** (PSC) which would be led by the Deputy-Ministry of Agriculture and have as its members the Director General of Ministry of Environment, the Director General Ministry of Water Resources, Director-General of Planning and the Director-General of Planning of the Ministry of Agriculture. The PSC would also include technical resource people to be nominated by the Ministry of Agriculture. The PSC would meet at least once a year to approve the programme and provide guidance on key aspects. The National Programme Coordinator would be the Secretary of the PSC. A ***Project Management Team*** (PMT) would be established in Baghdad and be responsible for overseeing implementation of the project. The PMT would be led by a National Project Coordinator and would be assisted by a Financial Officer, a Procurement Officer, a Monitoring and Evaluation Specialist who would coordinate the reports from the Governorates to present quarterly statistical reports and annual progress reports on the project. The PMT would also include a Climate Change Adaptation Specialist (CCAS) who would assist in developing an early warning system based on discussing with farmers what would be relevant information to provide them.

At the Governorate level, the Director of the Directorate of Agriculture would assume the overall responsibility for the project, at the governorate level. At the Governorate level, the structure would

include an ***Advisory Committee*** that would advise the Department of Agriculture in each Governorate on key technical, social and institutional aspects of the project during implementation. A ***Governorate Management Team*** (GMT) would implement and coordinate project activities. The GMT would have a dedicated Governorate Coordinator who would be responsible for day to day implementation in each governorate. The staff of the GMT would include a Training and Community Organizer and a Monitoring & Evaluation Officer. The Directorate of Water Resources would implement the irrigation investments. The team would be supported by a competitively recruited service provider who would be selected from local NGOs or private sector firms that would be responsible for identifying the target group and supporting them in the implementation of the various project activities in coordination with the Department of Agriculture Extension. Short Term Technical Assistance would be used for any specific assistance during project implementation. The Government would provide all key staff and IFAD would pay an additional stipend of 30%. However, the service provider and technical assistance would be supported by IFAD financing. The project would also provide vehicles, office equipment, operation and maintenance and support all field activities.

7.2. Capacity building

SARP Project Sub-Component 1.2 “Knowledge Management and Institutional Strengthening” will build the institutional and technical capacity of the Ministry of Environment for developing a climate change adaptation strategy for dealing with the agriculture sector, and will support the Ministry of Agriculture for upgrading and expanding its Meteorological Monitoring Network, and strengthen the programmatic and analytical capacity of the team of young specialists managing and maintaining the system, ensuring the dissemination of the information relevant for the extension centres, research stations and farmers. The project would also assist in the MoA in developing an early warning system.

The project would provide opportunities for the staff from the Directorate of Agriculture in the project governorates and other relevant staff to avail of special training opportunities and learning and exposure visits especially within the region. It is expected that 300 people from different agencies could avail of specific trainings in addition to the learning and exposure visits. South-South and Triangular Cooperation (SSTC) would be explored as a tool to understanding how countries in the region with similar socio-economic profile have resolved some of the challenges in agriculture and rural development. These areas could include understanding how different countries have dealt with some of the following issues important for Iraq: (i) climate change issues and developed early warning systems (Nepal and Bangladesh); (ii) implemented integrated pest management approaches especially for the elimination of the Red weavil in date palm (Iran and Kuwait); (iii) development of the cooperative movement (Morocco).p Visits would be organized to these countries which would be followed by the key resource visiting the project areas.

On the other hand, SARP Sub-Component 2.2. would provide several types of trainings; (i) technical and business training associated with the provision of assets and inputs through grants to smallholder farmers, women and farmer associations and cooperatives, for adopting climate-resilient crop and livestock productivity; (ii) training in climate resilient approaches and technologies, including efficient irrigation technologies, introduction of saline-resistant wheat, rice and fodder crop varieties, pest management of date palm diseases following integrated pest management principles and the training of trainers for surveillance, monitoring and control of pests, among others; (iii) vocational training for young men and women, including among other operators of climate-resilient machinery, operation of drip irrigation systems, income diversification training, including beekeeping and processing of dates, seed potatoes and vegetables, etc.; (iv) training on institutional development, management and business plan development, technical skills on the management of collectively owned assets (e.g. post-harvesting facilities and processing facilities for food, dairy, apiculture, plastic houses, fisheries, etc.) for community groups, water users associations and farmer organizations; and (v) Institutional capacity building for Government extension staff including learning and exposure visits. It is expected that the project would training around 4400 individuals in the project area of which at least 1400 would be women.

The project will build on the positive results of the IFAD-funded agriculture applied research projects implemented by ICARDA and other projects supported by development institutions in Iraq and the region, to help scale-up on-farm application of sustainable land management and climate resilient farming systems by farmers in Iraq. In this sense, the Farmers Field Schools (FFS) approach has

proven successful in agriculture development projects supported by IFAD in Iraq and the region, complemented with ad-hoc training for producers' associations, water users organizations and cooperatives, addressing all relevant institutional development, organizational, management, and technical issues. The project will include horizontal learning involving exchanges between the different FFS and other successful experiences in the country.

7.3. Additional funding

Through the allocation of ASAP funds (USD 2 million), which channels climate finance to smallholder farmers so they can access the information tools and technologies that help build their resilience to climate change, and a funding contribution of USD 9.17 million from the Adaptation Fund (AF), the project will leverage financing to support Climate Resilient Investments (infrastructure to improve irrigation and drainage; climate-proof post-harvesting infrastructure and equipment; agro-meteorological stations and early warning system) under Component 1, and to build institutional and technical capacity of key public and private actors climate-resilient agronomic systems and technologies and policy improvement.

8. Monitoring and Evaluation

The Project's Logical Framework provides indicators for Project implementation along with their corresponding means of verification. The M&E system is expected to generate quantitative and qualitative information on the project's performance in a form that would compare physical progress against the planned targets and allow assessment of performance and undertake any remedial action if required. The project uses IFAD's revised RIMS framework to enhance the measurement of IFAD's results at the outcome level. The monitoring and evaluation indicators have been disaggregated by gender. The project team would fine-tune the progress and performance and impact indicators of the project at the Start-Up Workshop with support from IFAD, if required. The Project Management Team would define targets and indicators for subsequent years annually as part of the internal planning processes and build on the experience gained as the project evolves.

The overall responsibility for the M&E activities would be assumed by the National Project Coordinator who would be assisted by the Monitoring and Evaluation Officer at the national level and the M&E officers at the Governorate level in preparing all progress and monitoring reports. Given the limited capacity for monitoring and evaluation overall in the country especially among the NGOs and some of the local partners who are expected to partner with the project, the project would select strong monitoring and evaluation staff and provide them proper guidance on IFAD's RIMS and provide guidance on the statistical and narrative report formats.

A Third party would be contracted to undertake a ***Baseline Survey*** that would be conducted during the first year of the Project. IFAD would provide the PMT guidelines in developing the terms of reference and the household questionnaire for the baseline survey. Assistance would be sought from IFAD's newly established Strategic Planning and Impact Assessment Division if required. A ***Mid-Term Review*** would be carried out towards the end of the Project's third year. The review would cover: (i) physical and financial progress as measured against AWPBs; (ii) progress in the implementation and emerging outputs and intermediate outcomes of the irrigation infrastructure schemes; (ii) assessment of the efficacy of the institutional development and capacity building activities; (iii) progress in crop and livestock productivity through provision of assets, training and market linkages; (vi) progress in establishing off farm income generating activities providing ancillary services for agriculture growth (vii) implementing of climate change resilient activities.

Final Evaluation: An independent Final Evaluation would take place three months prior to the Project completion date, and would assess overall project outreach, outcomes and impact. The final evaluation would also review the sustainability of results and the potential for scaling-up. The final evaluation would provide recommendations based on lesson learnt that would be taken into consideration while designing similar projects in the future in similar contexts. The Final Impact Assessment would be undertaken by a neutral agency with no previous involvement in project implementation. The Terms of Reference for this evaluation would be prepared by IFAD.

9. Further information required to complete screening, if any

There is no need for additional information to complete screening. Ideally, and to complement the detailed climate and environment assessments that have been undertaken, a matrix for ESMP would ensure that implementation is undertaken following the SECAP recommendations. However, in the fragile situation of Iraq, this will not be neither possible nor feasible. However, IFAD will ensure that the SECAP guidance and recommendations are followed within supervision mission and throughout implementation.

10. Budgetary resources and schedule

Not applicable.

11. Record of consultations with beneficiaries, civil society, general public, etc.

At this stage of SARP design process, the project formulation team held meetings - including a one day workshop - with representatives of the Ministry of Agriculture, Ministry of Environment and academicians to identify the adaptation measures that SARP should intervene in relevant to the agricultural sector in Iraq. The MoE requested IFAD support for developing a climate change adaptation strategy for the agriculture sector, an activity that has been included in the project design. All actions assessed and considered respond to the National Communication of Iraq to the UNFCCC, as well as to Government priorities.

The Mission also met with donors engaged in development, but IFAD is currently the only organization working on smallholder agriculture in Southern Iraq.

In the field the mission met with representatives of the World Bank, USAID, JICA and several NGOs in the country, as well as with several UN agencies including UNDP, UN Women, UNICEF, UNIDO, IOM, WFP, FAO and WHO, among others.

Appendix 14: Contents of the Project Life File

1. Iraq Background Documents Policy and UN Country Assessments:

- Dept. of Planning, Min. of Agric., 2017. *Pers. comm.* to the mission.
- FAO 2012. Investment Centre Iraq Agriculture Sector Note. Rome.
- GoI 2008. Iraq Family Health Survey Report, IFHS 2006/7.
- GoI 2009. Iraq National Youth and Adolescents Survey.
- GoI 2012. Iraq - Household Socio-Economic Survey.
- ICG 2016. International Crisis Group. Fight or Flight: Iraq Youth's Desperate Plight. Middle East Report. No. 169. August.
- IFPRI 2014. Discussion Paper 01349. Washington.
- Kubba 2011. Sam Kubba. The Iraqi Marshlands and the Marsh Arabs: The Ma'dan, Their Culture and the Environment.
- UNDP Iraq 2012. Women's Economic Empowerment: Integrating Women into the Iraqi Economy.
- UNDP 2014. Iraq Human Development Report: Iraqi Youth: Challenges and Opportunities.
- World Bank 2009. Iraq Poverty Assessment.
- World Bank 2016. Iraq Risk and Resilience Assessment, quoted in World Bank 2017.
- World Bank 2017. Systematic Country Diagnostic, Report No. 112333-IQ, February.

1. IFAD Background Documents:

- IFAD 2016. Iraq Smallholder Agricultural Policy Analysis. PTA. December
- Grant Agreement IFAD/ICARDA: Improved Livelihoods of small farmers in Iraq through integrated pest management and organic fertilization, 17 November 2008
- Agreement on Settlement of Iraq dues to IFAD, July 2016
- IFAD Country Strategy Note, February 2017
- IFAD Concept Note for the Smallholder Revitalization Project (SARP), January 2017
- OSC Minutes of 23 January 2017 for SARP Concept Note
- WFP Vulnerability Assessment for Iraq, December 2016
- SARP CPMT Meeting Minutes, 4 April 2017
- SARP CPMT Meeting Minutes, 15 December 2016
- SARP Quality Enhancement (QE) Panel Report, May 2017
- SARP QE Memo, 26 April 2017
- SARP QA Panel Report June 2017

Annex 1: Scaling-up Framework

SARP is IFAD's first loan to Iraq and as such will be an important laboratory for piloting approaches and joint learning, building trust with government, testing effective and sustainable support to farming communities and engaging with service providers. The comparative advantage of IFAD relative to this project lies in its proven targeting and result-oriented approaches, its focus on the empowerment of smallholder farmers through the strengthening of their grass-root institutions and social capital, the development of farmer's capacities and skills, support and dialogue to facilitate the adoption of enabling policies, as well as gender mainstreaming in all activities. These provide a good platform and a promising opportunity to engage with, build on and scale-up within and beyond IFAD's first investment project in Iraq.

The project's implementation arrangements are geared towards multi-stakeholder collaboration bridging the lines between the farming communities and groups, public sector, the NGO community and private sector businesses. While adopted by other partners in the country (UNDP, WB), this is relatively new in the agricultural sector, and particularly in the more marginalised southern governorates that SARP will be targeting. In the fragile context prevalent in the country, where private sector has been discouraged and Government has in the past, assumed all types of endeavours itself, this may be considered a first innovation and once the model proves successful, could be scaled up to other Governorates. A second innovation that could be scaled up is SARP's work with youth and UNIDO through its network of enterprise development centers in southern Iraq. The win-win dimension of this partnership relates to the fact that the project would finance young entrepreneurs in agriculture once they have graduated through the entire sequence of business development training, learning and counselling offered by the project supported networks. The innovation is twofold: (a) UNIDO has so far neither explicitly tackled agriculture in general nor young smallholder farmers in particular, and (b) because of the fact that SARP would provide an enterprise start-up grant, rather than a loan, entry barriers are lowered considerably in favour of IFAD's target groups. The clustering strategy of the project should lead to a critical mass in terms of demand for private sector advisory services downstream from agricultural production, which could be met by training youth against a fee. IFAD has similar experience in other countries and would be able to support the scaling up of community-based provision of business development services to youth. A third and last pre-identified innovation for scaling-up consists of the "conversion" of mature farmer organisations with infrastructure and assets in good condition to "value chain service providers". SARP would work, for example, with the Poultry Association of Thi Qar to play this role effectively; amongst other things, they would, for example, provide veterinary services and sell space in their cold storage facilities to members of other, smaller farmer associations. Moreover, farmers who benefit from ''poultry packages'' would become members of this Association, thus also benefitting from their marketing support.

The table on the next page illustrates some elements in the scaling-up pathways for these innovations.

Project feature to be scaled-up: decentralised multi-stakeholder collaborative platform	
Drivers	The driver of this element in SARP's scaling-up strategy will be the implementation partnership at Thi Qar, which is where the enabling conditions for its effectiveness are believed to be the most conducive
Institutional space	The institutional space for scaling up the implementation partnership exist, as with the implementation of the new laws on decentralization, Governorates are firmly in the driver's seat for agricultural rural development
Political space	Linked to the unfolding of decentralisation, the political space for scaling-up is expected to increase gradually over time as Directorates of Agriculture become more responsive to the local citizenry. SARP will contribute to activate and strengthen existing accountability mechanisms for this to occur, amongst other things, by actively involving the different committees for women, youth, and NGOs, on the Provincial Councils
Cultural space	The cultural space for successful scaling up will be carved out over time as implementation progresses and the partnership will show to stakeholders the many benefits of participatory methods, including the building up of much needed social capital. The ''early'' mid-term review will be the opportunity of an in-depth assessment of the performance of this element in SARP's implementation arrangements, and in case further fine-tune its scaling-up pathway
Project feature to be scaled-up: young agricultural entrepreneurs	
Drivers	The driver of this element in SARP's scaling-up strategy will be the strong market demand once the dynamic of high value crops plays itself out in underserved high agricultural potential areas
Institutional space	The institutional space for scaling up this innovation will be through enterprise development centers which enjoy a close and fruitful collaboration with Iraq's business community as well as the Chambers of Trade, Commerce and Industry
Political space	The political space for scaling-up is given by the increasing pressure on elected government representatives in the Governorates to engage in meaningful action to combat youth unemployment
Cultural space	The cultural space for successful scaling up is being supplied by a rapidly changing rural landscape and evolving lifestyles eager to tighten rural-urban linkages and diversify its economic activities
Project feature to be scaled-up: farmer organisations as value chain service providers	
Drivers	The driver of this element in SARP's scaling-up strategy will be the strong demand for more sophisticated value chain services which are not widely available, not least because of the bad shape of so much rural productive infrastructure
Institutional space	The institutional space for scaling up this innovation will be given by strong support from the Directorates of Agriculture and business development services providers working with larger farmer associations
Political space	The political space for scaling-up will be given by increasingly strong incentives to produce locally as GoI continues to tighten its controls and tariffs on imported products
Cultural space	The cultural space for successful scaling up of this innovation will continue to expand with the growing recognition that the government will not be able to return to providing most services to smallholder farmers, and that for the latter to become competitive it is indispensable that they get more sophisticated in their organisations and partnerships

Annex 2: Gender-sensitive design and implementation

Updated February2013

	Design
1. The project design report contains – and project implementation is based on - gender-disaggregated poverty data and an analysis of gender differences in the activities or sectors concerned, as well as an analysis of each project activity from the gender perspective to address any unintentional barriers to women's participation.	The design is based on a succinct analysis of gender issues in the sectors concerned, and on gender-disaggregated poverty data available at the time (from government, development agencies, and research institutions). Notwithstanding severe constraints, some attempts have been made to analyze gender differences through a few semi-structured interviews conducted in rural communities. NGOs will be recruited with ToRs that specify that they are expected to fine-tune this type of analysis on a continuous basis; they will be asked to keep field diaries to capture their learning as implementation experience accumulates and to highlight unintentional barriers to women's participation and possible solutions.
2. The project design report articulates – or the project implements – actions with aim to: • Expand women's economic empowerment through access to and control over productive and household assets;	The main livelihood supporting activity under SARP is to facilitate access to productive assets to project beneficiaries of whom 40 percent will be women. At least in agriculture, control over these assets by women will be more difficult to achieve given heavy socio-cultural constrictions. This situation is expected to be less pronounced (more empowering for women) in the case of small livestock, and off-farm activities.
• Strengthen women's decision-making role in the household and community, and their representation in membership and leadership of local institutions;	The economic empowerment of women will gradually increase both their weight in intra-household decision-making as well as their social status and prominence in community affairs.
• Achieve a reduced workload and an equitable workload balance between women and men.	The extent to which workload reduction for women can be promoted explicitly in the project area will need to be assessed during the MTR.
3. The project design report includes one paragraph in the targeting section that explains what the project will deliver from a gender perspective.	There is such a paragraph and it explains the SARP's gender perspective on a range of issues including awareness raising and men's evolving perceptions of gender roles in Iraq as a whole, and in the project area in particular.
4. The project design report describes the key elements for operationalizing the gender strategy, with respect to the relevant project components.	It does. Under Component 1, the selection of productive infrastructure will need to be endorsed – separately – by women. Component 2 is the main vehicle of implementing the SARP gender strategy as it is focused on the economic empowerment of women.
5. The design document describes - and the project implements - operational measures to ensure gender-equitable participation in, and benefit from, project activities. These will generally include**:**	
5.1 Allocating adequate human and financial resources to implement the gender strategy	The budget earmarks resources for activities specifically targeted at women.
5.2 Ensuring and supporting women's active participation in project-related activities, decision-making bodies and committees, including setting specific targets for participation	The specific target for women's participation is 40 percent. Most of the NGOs that will be recruited under SARP are likely to be coming from a humanitarian background and specializing in reaching out to women (especially female-headed households).
5.3 Ensuring that project/programme management arrangements (composition of the project management unit/programme coordination unit, project terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women's empowerment concerns	The strong role played by NGOs in project implementation is expected to ensure attention to gender equality and women's empowerment. These will also feature in the ToRs of all other staff hired by the project.

5.4 Ensuring direct project/programme outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited	In some Governorates female public extension workers constitute half of the total number of public extension workers; female NGO staff vastly outnumber male NGO staff.
5.5 Identifying opportunities to support strategic partnerships with government and others development organizations for networking and policy dialogue	Elected female Provincial Councilors may sit on the project committee. Both directorate of agriculture staff and NGO staff involved in the implementation of SARP will liaise with the Committee for Women of the Provincial Councils. UNIDO targets women entrepreneurs and the project will partner with these activities.
6. The project's logical framework, M&E, MIS and learning systems specify in design – and project M&E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women's empowerment.	It does. Sex- and age-disaggregated performance and impact data will be collected, analysed and interpreted; specific indicators on gender equality and women's empowerment will be developed before the MTR.

NB. This checklist should be completed and included in Annex XII of PDR.

Annex 3: Targeting policy - checklist for design

Updated January 2013

	Design
1. Does the main target group - those expected to benefit most- correspond to IFAD's target group as defined by the Targeting Policy (poorer households and food insecure)?	It does. The vast majority of households targeted by the project correspond to IFAD's definition. Rather, given the dismal situation of so many, the challenge will be to not target those who are too poor and should be supported with humanitarian support.
2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with attention to gender and youth differences? (matrix on target group characteristics completed?)	Yes, this has been done to the extent that information and data was available. Gender and youth are treated separately, not least because they face very different constraints. Both are affected by insecurity, but women are more affected by lack of physical mobility. Female-headed households are briefly described.
3. Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups? What is the evidence? (matrix on analysis of project components and activities by principal beneficiary groups completed?)	Evidence has been collected from other donors' interventions (which have sometimes failed not because they were not targeted well or unprofitable, but because support measure were too thin and brief), and from interviews with IFAD target groups in the field.
4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, involving some or all of the following measures and methods:	
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	Poverty data was used to select target Governorates; intra-Governorate targeting is based on overlaying land use/comparative advantage maps with poverty maps for clustering and targeting poor individuals and groups within these clusters.
4.2 Direct targeting - when services or resources are to be channelled to specific individuals or households	This will be done by NGOs which will draw on their experience and knowledge of the rural poor.
4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups	The activities being promoted will for the most part only attract 'active rural poor' individuals and groups because they are too small-scale to be attractive to those who are relatively wealthier; also, the latter are expected to be unwilling to commit time and energy to the rather intense training will be a prerequisite for support from the project.
4.4 Empowering 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	Local facilitators will take the necessary time to discuss options for support with the potential beneficiaries themselves by following an iterative approach. This is usually in itself an empowering process as target groups become more sharply aware of their constraints and opportunities, and – especially – their own (often "dormant") potential as farmers or entrepreneurs. Once agreement on how to proceed is reached, beneficiaries will need to undergo there will be extensive capacity building before any equipment is provided.
4.5 Enabling measures –to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment, including policy dialogue, awareness-raising and capacity-building	SARP will not reach out to target groups with a pre-determined "menu" of livelihood activities but use participatory methodologies to enable stakeholders to become aware of and seize the livelihood opportunities being promoted. NGOs partnering with the project will sign performance-based contracts that will include expected results with respect to poverty targeting, gender equality and women's empowerment.
4.6 Attention to procedural measures - that could militate against participation by the intended target groups	The implementation arrangements outlined in sections 4.2 – 4.5 should allow the project to avoid élite capture and/or "political targeting". Although the partner directorates of agriculture are rather used to working in top-down fashion it is expected that their exposure to "doing things differently" will convince them of the merits of participatory approaches to agricultural development.
4.7 Operational measures - appropriate project/programme management arrangements, staffing, selection of implementation partners and	"Pro-poor" NGOs will form small consortia at governorate level, will be trained by IFAD and possibly mentored by international NGOs, and will work in collaboration with the departments of planning of

service providers	the directorates of agriculture. This arrangement seems the most appropriate for ensuring that targeting conforms to IFAD standards.
5. Monitoring targeting performance. Does the design document specify that targeting performance will be monitored using participatory M&E, and also be assessed at mid-term review? Does the M&E framework allow for the collection/analysis of sex-disaggregated data and are there gender-sensitive indicators against which to monitor/evaluate outputs, outcomes and impacts?	It does. See M&E section of the PDR, which specifies gender-sensitive indicators against which to monitor/evaluate outputs, outcomes and impacts, and that sex-disaggregated data will be collected.

NB. This checklist should be completed and included in Annex XII of PDR and ideally should be accompanied by key file on target group characteristics.