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EMERGENCY PROJECT PAPER

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR 61.7 MILLION
(US$ 97.8 MILLION EQUIVALENT)

TO THE

ISLAMIC REPUBLIC OF AFGHANISTAN

FOR AN

IRRIGATION RESTORATION AND DEVELOPMENT PROJECT

April 8, 2011

Sustainable Development Department
Afghanistan Country Management Unit
South Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective March 31, 2011)

Currency Unit	=	Afghani (AFN)
AFN 45.5	=	US$1
US$ 1.5855	=	SDR 1

FISCAL YEAR

March 21 – March 20

ABBREVIATIONS AND ACRONYMS

ANDS	Afghanistan National Development Strategy
ARTF	Afghanistan Reconstruction Trust Fund
CAS	Country Assistance Strategy
CCA	Culturable Command Area
CDC	Community Development Council
DAB	Da Afghanistan Bank
EA	Environmental Assessment
EIRP	Emergency Irrigation Rehabilitation Project
EMF	Environmental Management Framework
EMP	Environmental Management Plan
ESMF	Environmental and Social Management Framework
FAO	Food and Agricultural Organization
FM	Financial Management
GDP	Gross Domestic Product
GDWAM	General Directorate of Water Affairs Management
GIS	Geographic Information System
GoA	Government of Afghanistan
GPS	Global Positioning System
IDA	International Development Association of the WBG
IRDP	Irrig. Restoration & Development Project
IRR	Internal Rate of Return
ISN	Interim Strategy Note
LARAP	Land Acquisition and Resettlement Plan
LARPF	Land Acquisition & Resettlement Policy Framework
M&E	Monitoring and Evaluation
MAIL	Ministry of Agriculture, Irrigation and Livestock
MEW	Ministry of Energy and Water
MIS	Management Information System
MOF	Ministry of Finance
MRRD	Ministry of Rural Rehabilitation and Development
NGO	Non-Governmental Organization
OFWM	On-Farm Water Management
O&M	Operation and Maintenance
PCU	Project Coordination Unit
PSC	Project Steering Committee
PWMD	Provincial Water Management Department
RPF	Resettlement Policy Framework
TA	Technical Assistance
TAT	Technical Assistance Team
TOR	Terms of Reference
UXO	Unexploded Ordnance
WBG	World Bank Group
WMD	Water Management Department
WUA	Water User Association

GLOSSARY

Mirab	A community appointed person who serves as the water manager responsible for operation and maintenance and distribution of water in accordance with traditional water shares
Karez	Traditional underground water channels that tap subsurface water streams in foothills. These channels connect with surface water channels that irrigate the command area
Tashkeel	Organizational chart showing key staff positions

Vice President:	Isabel M. Guerrero
Country Director:	Nicholas J. Krafft
Sector Director:	John Henry Stein
Sector Manager:	Simeon K. Ehui
Task Team Leader:	Usman Qamar

AFGHANISTAN
Irrigation Restoration and Development Project

CONTENTS

ISLAMIC REPUBLIC OF AFGHANISTAN
Irrigation Restoration and Development Project (IRDP)

PROJECT PAPER

SOUTH ASIA REGION

Basic Information	
Country Director: Nicholas J. Krafft Sector Manager/Director: Simeon K. Ehui / John Henry Stein Team Leader: Usman Qamar Project ID: P122235 Expected Effectiveness Date: August 15 2011 Lending Instrument: Emergency Recovery Grant	Sectors: Irrigation and drainage (75%); General water, sanitation and flood protection sector (10%); Central government administration (10%); Sub-national government administration (5%) Themes: Water Resources Environmental category: A Expected Closing Date: December 31, 2017 Joint IFC: No Joint Level: Not applicable

Project Financing Data

[ ] Loan [ ] Credit [X] Grant [ ] Guarantee [ ] Other:
Proposed terms: Standard IDA grant

Financing Plan (US$m)

Source	Total Amount (US $m)
Total Project Cost:	148.7
Cofinancing (ARTF):	48.4
Recipient:	2.5
Total Bank Financing:	97.8
IBRD	
IDA	
New	68.8
Recommitted	29.0

Client Information

Recipient: Islamic Republic of Afghanistan
Responsible Agency: Ministry of Energy and Water (MEW)
Contact Person: Alhaj M. Ismail Khan, Minister MEW
Telephone No.:
Fax No.:
Email:

Estimated disbursements (Bank FY/US$m)

FY	2012	2013	2014	2015	2016	2017	2018
Annual	8.9	15.1	21.7	19.6	16.9	10.7	4.9
Cumulative	8.9	24.0	45.7	65.3	82.2	92.9	97.8

Project Development Objective and Description

Project development objective: *To increase agriculture productivity and production in the project areas*.

Project description: The project would build upon and scale up activities supported under the Emergency Irrigation Rehabilitation (EIRP) Project (P078936), and support MEW in making a modest start towards developing Afghanistan's water resources for irrigation in closed river

basins. The project would provide support for: (a) rehabilitation of irrigation systems; (b) the design and construction of a limited number of multi-purpose small dams and appurtenances, and associated irrigation conveyance and distribution systems in closed river basins; (c) establishment of hydro-meteorological facilities and services; and (d) project management and capacity building of MEW and beneficiary communities.	
Safeguard and Exception to Policies	
Safeguard policies triggered: Environmental Assessment (OP/BP 4.01) Natural Habitats (OP/BP 4.04) Forests (OP/BP 4.36) Pest Management (OP 4.09) Physical Cultural Resources (OP/BP 4.11) Indigenous Peoples (OP/BP 4.10) Involuntary Resettlement (OP/BP 4.12) Safety of Dams (OP/BP 4.37) Projects on International Waters (OP/BP 7.50) Projects in Disputed Areas (OP/BP 7.60)	 [X] Yes [ ] No [ ] Yes [X] No [ ] Yes [X] No [ ] Yes [X] No [ ] Yes [X] No [ ] Yes [X] No [X] Yes [ ] No [X] Yes [ ] No [X] Yes [ ] No [ ] Yes [X] No
Does the project require any exceptions from Bank policies? Have these been approved by Bank management?	[ ]Yes [X] No [ ]Yes [ ] No

Conditions and Legal Covenants:

Financing Agreement Reference	Description of Condition/Covenant	Date Due
Schedule 2, Section I. A. 2. (a)	Employ and maintain throughout the period of Project implementation, qualified and experienced experts to provide support in: (i) overall project management, including procurement, financial management, M&E and capacity building; (ii) preparation of Sub-Projects, including survey and design work; (iii) supervision, contract management and quality control of works carried out under Parts A, C, and D of the Project.	January 1, 2012
Schedule 2, Section I. A. 2. (c)	Employ and maintain throughout the period of Project implementation, qualified and experienced experts to monitor compliance with the ESMF and LARPF under Sub-Projects under Part A of the Project.	January 1, 2012

Schedule 2, Section I. A. 2. (d)	Employ and maintain throughout the period of Project implementation, qualified and experienced experts to: (i) monitor resettlement in accordance with the LARAPs under Part B of the Project and communicate the monitoring results to the PCU and the Association; (ii) review delivery of compensation and related resettlement assistance to Project Affected Persons (PAPs); (iii) assess the impact of the Project on PAPs and Vulnerable Groups; and (iv) carry out a post-implementation evaluation of each LARAP and make recommendations to the Recipient aimed at improving assistance received by the PAPs.	June 30, 2013
Schedule 2, Section I. A. 2. (e)	Eemploy qualified and experienced auditors, under terms of reference satisfactory to the Association, to build capacity and provide support in financial management and internal controls to the Internal Audit Department of MEW	August 31, 2011
Schedule 2, Section I. A. 2. (f)	Employ qualified and experienced financial management staff, under terms of reference satisfactory to the Association, to strengthen the capacity of the Finance and Accounts Directorate within MEW	August 31, 2011
Schedule 2, Section I. B. (a)	Prepare and adopt a Project Operations Manual, in form and substance satisfactory to the Association, setting out the guidelines and procedures for the implementation and supervision of the Project, including the criteria for the payment of performance-based incentives to MEW staff	June 30, 2011
Schedule 2, Section I. B. (b)	Prepare and adopt, a Financial Management Manual, in form and substance satisfactory to the Association, setting out: (i) the roles and responsibilities of the PCU and MEW's Finance and Accounts Directorate staff; (ii) documentation and approval procedures for payments under the Project; (iii) Project reporting requirements; and (iv) measures to ensure that adequate internal controls and procedures are in place and are being followed	June 30, 2011

Schedule 2, Section I.F.	The Recipient shall make adequate yearly budgetary allocation (from its own resources) and make funds available to MEW in timely manner to meet the cost of operation and maintenance contracts under Part C of the Project.	Twenty five percent (25%) of the cost during the second Project Year 2, fifty percent (50%) of the cost in during the third Project Year, seventy five percent (75%) of the cost during the fourth Project Year and 100 percent (100%) of the cost during the fifth Project Year and beyond
Schedule 2, Section I.G.(a)	The Recipient shall carry out the Project in accordance with the ESMF and the LARPF	

A. Introduction

1. This Project Paper seeks the approval of the Executive Directors to provide a Grant in an amount of SDR 61.7 million (equivalent to US$97.8 million) to the Islamic Republic of Afghanistan for the proposed Irrigation Restoration and Development Project.

2. The proposed grant would support the Government of Afghanistan (GoA) with the continued implementation of the national priority irrigation rehabilitation program to rehabilitate irrigation systems that had become dilapidated as a result of the long conflict and insurgency. The program is a key thrust to support agriculture recovery and has achieved visible results on the ground.

3. The proposed Irrigation Restoration and Development Project (IRDP) would scale up the program's impact and will fund: (a) rehabilitation of irrigation systems covering about 300,000 ha of irrigated areas; (b) the design and construction of a limited number of multi-purpose small dams and appurtenances, and associated irrigation conveyance and distribution systems in closed river basins; (c) establishment of hydro-meteorological facilities and services; and (d) technical assistance for project management as well as capacity building of MEW and beneficiary communities. The key outcomes of IRDP would include: (a) about 15 percent increase in the irrigated area; (b) at least 20 percent increase in crop yields in rehabilitated schemes; (c) availability of improved hydro-meteorological data to support planning and preparation of irrigation and water resources development investments; and (d) improved capacity of MEW staff in various fields.

4. The project is slated for co-financing from the Afghanistan Reconstruction Trust Fund (ARTF) in accordance with the financing strategy endorsed by the GoA and ARTF donors.

B. Emergency Challenge: Country Context, Recovery Strategy, and Rationale for Proposed Bank Emergency Project

COUNTRY CONTEXT

5. Since 2002, the Government of Afghanistan (GOA) has been engaged in programs to build security, legitimacy, and economy in Afghanistan. The government has made remarkable progress in many areas such as primary education, basic health services, irrigation rehabilitation, and rural development. However, the country remains extremely fragile. Security remains a serious obstacle to the delivery of reconstruction assistance and implementation of reconstruction programs. Afghanistan's poverty and social indicators remain among the lowest in the world. Government capacity is weak despite improvements and the pace of implementation of reconstruction programs has been short of popular expectations. The combination of poverty, insecurity, a drug economy and poor governance means the GOA faces daunting challenges in taking the reconstruction agenda forward.

6. **Poverty Remains Persistent:** There has been strong, though slowing, economic growth in Afghanistan since 2002, with the GDP growth varying between 9 percent and 16.2 percent[1]. The

[1] World Bank World Development Indicators

per capita annual income has increased from US$ 189 in 2002/03 to US$ 426 in 2008/09. However, despite ongoing reconstruction efforts Afghanistan remains one of the poorest countries in the world. In 2007, Afghanistan ranked 174 out of 178 countries on the global Human Development Index (HDI). According to the 2008 National Risk and Vulnerability Assessment (NRVA), 36 percent of the population was below the poverty line (e.g., AFN 1,942 per person per month in urban areas of central Afghanistan). While 36 percent of the population were unable to meet their basic needs, many more people are susceptible to becoming poor. One small negative shock has the potential to move many individuals into poverty. Over 84 percent of poor and more than 70 percent of the overall population live in rural areas and are dependent on agriculture and livestock for livelihoods.

7. **Irrigation is the key to agriculture recovery:** With only 12 percent of the total land being arable[2] and the country's arid climate[3], irrigation is essential for reliable agricultural production in most parts of the country. Irrigated agriculture, which accounts for bulk of the total production of cereals and other crops[4], was the worst affected by the continuing insurgency, as maintenance was neglected leaving the irrigation systems in a state of disrepair. Irrigated area decreased by almost 70 percent and crop productivity fell below 50 percent of the pre-war levels. In 2008, the wheat crop failed because of delayed and low precipitation resulting in a wheat deficit of over two million tons, further highlighting the critical importance of irrigation for food security in the country.

Government Strategy for Agriculture and Water Resources, Recovery and Rural Livelihoods

8. Given the country's economic and poverty profile, support to agriculture recovery and rural livelihoods has been among the top priorities of the GoA's reconstruction agenda and has been reflected as such in a series of government strategy documents, culminating in the Afghanistan National Development Strategy (ANDS) for the period of 2008-2013. The ANDS assigns high priority to increasing agricultural productivity, combating food shortages, achieving self-sufficiency in food grains, promoting high value horticulture and value chains, and providing alternative livelihoods to poppy growing farmers. To implement the Strategy, GoA, with donor support, has formulated and successfully implemented a series of priority national programs, including the national irrigation rehabilitation program.

The Government's Irrigation Rehabilitation Program

9. While various bilateral and multilateral donors are supporting reconstruction /development of specific dams or river basins, the IDA-funded Emergency Irrigation Rehabilitation Project (EIRP) was instrumental to the GoA's launch of a national irrigation rehabilitation program in 2004. The EIRP has a national coverage and is designed to respond to requests and demands of local communities. The EIRP targets rehabilitation investments that yield quick and high returns. It follows a participatory approach. Local communities and *Mirabs* (community

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2 A major part of the country comprises of mountains and deserts.

3 The average annual precipitation (rain and snow) is approximately 250 mm and varies from 60 mm in the south western parts of the country to 1200 mm in the north eastern Hindu Kush Mountains. Evapo-transpiration (a proxy for plant water requirements) ranges between 1200 mm in the Hindu Kush to more than 1800 mm in the south west.

4 Yields in irrigated areas are manifold higher than rain fed areas.

appointed persons who serve as the water manager responsible for operation and maintenance and distribution of water in accordance with traditional water shares) participate fully in the decision making processes throughout the sub-project cycle, including identification, preparation, design, construction and operation and maintenance of sub-projects. Representatives of local communities, *Mirabs* and project supervisory and quality control staff sign off on the final payment requests by contractors at scheme completion. Operation and maintenance responsibility rests with local communities.

10. **EIRP has proved to be a successful model for rehabilitation:** The overall performance of this project has been satisfactory and its objectives have been largely achieved. As of December 31, 2010, nearly 669 irrigation schemes of varying sizes covering about 0.57 million ha have been rehabilitated (Table 1); 105 hydrological stations have been installed[5]; and there is an ongoing capacity building program in the Ministry of Energy and Water (MEW). Monitoring data indicate that the rehabilitation interventions have resulted in an increase of nearly 141,000 ha in irrigated area; substantial increases in crop yields (Table 2); and a significant reduction in water related disputes. So far about 700,000 households[6] have benefitted from the irrigation rehabilitation schemes completed so far. The economic rate of return of EIRP schemes is high, ranging from 15 percent to over 30 percent.

11. Under the ongoing EIRP, hydro-met facilities, including 105 hydrological stations, 40 river flow measurement stations, and 56 meteorological stations are being established. A start has been made in building capacity for hydro-met data collection and analysis. Data collection has started at the completed stations. The first Hydrological Yearbook of Afghanistan is expected to be published in December 2011 after a gap of 30 years.

Table B. 1: EIRP Implementation Progress as of December 31, 2010

	Number	Value (US$ Million)
Sub-project proposals submitted	775	89.9
Sub-project proposals approved	774	89.4
Sub-projects with contracts awarded	766	75.2
Sub-projects completed	669	55.5
Irrigated area rehabilitated (hectares)	570,075	571,050 ha is the end-of-project target
Incremental area irrigated yielded by completed sub-projects (hectares)	141,194	145,000 ha is the end-of-project target

[5] Contracts for establishing 40 river flow measurement stations and 56 snow gauging and weather stations are ongoing.
[6] Approximately 5.6 million people.

Table B. 2: Comparative crop yield data for 2008, 2009 and 2010

Crops	2008 Survey results (Kg/ha)			2009 Survey results (Kg/ha)			2010 Survey results (Kg/ha)		
	Control Group Schemes	EIRP Sub-projects	Difference (in %)	Control Group	EIRP Sub-projects	Difference (in %)	Control Group Schemes	EIRP Sub-projects	Difference (in %)
Wheat	1679	2568	53	2355	3029	29	2044	2845	39
Maize	1101	1698	54	1475	2210	50	1812	2561	41
Rice	2071	3053	47	2800	4601	64	2921	4518	55
Onion	6871	10569	54	10150	14755	45	9743	13845	42
Potato	3208	12412	287	8533	10909	28	8818	10632	21
Cotton	1167	1563	34	NA	1335	_	763	1421	86

12. Notwithstanding the achievements of EIRP, there is a huge unmet demand for irrigation rehabilitation. The total irrigated area in the country prior to 1979 (the year of USSR invasion) was about 3.2 million ha but in 2007 it was only 1.8 million ha. To date, irrigation systems serving an irrigated area of about 0.9 million ha have been rehabilitated; irrigation systems covering about one million ha remain to be rehabilitated. The need to scale up the interventions of EIRP is self-evident and urgent.

13. The GoA appreciates the role of the IDA in assisting MEW in the development of the national irrigation rehabilitation program and in mainstreaming the community participatory approach in the decision making process throughout the entire sub-project cycle from identification to O & M. There is now a consensus among GoA and ARTF donors that continued IDA support through a follow-on lending operation is crucial to scale up the program's impact. Given the current low utilization of available water resources in the country, the need for expanding the irrigated area, developing hydro-power, and meeting other water demands, the government also wishes to: (i) make a modest start in developing water resources by starting a small dams program, initially focused in closed river basins that are free of trans-boundary riparian issues; (ii) build upon the investments made under the EIRP on the hydro-met stations, to put in place a functional hydro-met service in the country to not only support water resources management and development in the future but also to build a hydro-met database and related analytical capacity that would be vital for the country in supporting negotiations with neighboring countries on sharing waters of rivers that cross international boundaries[7]. The proposed follow-on project would thus include a provision for small dam development.

[7] The major rivers in Afghanistan (Amu Darya, Kabul, Harirud/Murghab, Helmand) cross international boundaries. Formal water sharing agreement exists for the Helmand River only. The lack of up to date hydrological data and low capacity in MEW for negotiating agreements with neighboring countries is one the main impediments in moving forward with water sharing agreements with other riparian countries.

Rationale for Proposed Bank Emergency Project

14. The IDA-supported EIRP is the only nation-wide project supporting the government's program for irrigation rehabilitation. Continued Bank support under the proposed IRDP is crucial for maintaining the momentum. Bank support would also be essential for GOA to develop its water resources in an environmentally and socially sustainable manner.

C. Bank Response: The Project

15. Given the magnitude of the needs of the rural population and the overall importance of the rural recovery for poverty reduction, support for rural economy and livelihoods is one of the three pillars of the Bank Group's assistance strategy for Afghanistan. The proposed IRDP is closely aligned with the Bank Group's Interim Strategy. Support to rehabilitation of irrigation systems is highlighted under the second pillar of the Interim Strategy of May 5, 2009.

Project Development Objective (PDO)

16. The proposed PDO is *to increase agriculture productivity and production in the project areas*.

Summary of Project Components

17. The project would have the following four components.

18. **Component A: Rehabilitation of Irrigation Systems (US$ 70.0 M):** This component would support the rehabilitation of irrigation schemes[8] covering total irrigated area of about 300,000 ha that would benefit approximately 230,000 households and increase irrigated area by about 15 percent. This component will be designed and implemented using the successful model[9] that is being followed under the EIRP. Typical rehabilitation works would include improving canal intake structures, conveyance channels, wash structures (water bridges to allow safe passage of hill torrents over canals), siphons, aqua ducts and other river crossing structures, culverts, and control structures. Mini/micro-hydro-electric generation, drinking water supply and small roads needed for construction and operation and maintenance would be considered where feasible. Irrigation scheme designs would be closely coordinated with on-farm development works that would be implemented by the Ministry of Agriculture Irrigation and Livestock (MAIL) under the ARTF supported On-farm Water Management (OFWM) Project[10].

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8 Including completion of contracts started under the EIRP.

9 The EIRP responds to requests from local communities for rehabilitation of community managed irrigation schemes all over the country. Communities are closely involved in design, implementation and quality control.

10 The Afghanistan water law assigns responsibility for on-farm water management interventions to MAIL, while interventions in the upstream parts of the irrigation system (canal intakes, main canals and associated structures) are the responsibility of MEW.

19. **Component B: Small Dam Development[11] (US$ 31.3 M):** This component would support the design and construction of about three multi-purpose small dams and appurtenances, and associated irrigation conveyance and distribution systems. The selected dams would be located in closed river basins that are free of trans-boundary riparian issues. Twenty two potential sites have been identified in the northern closed river basins and preparation of feasibility studies[12] is expected to be completed by June 2012. Subsequently detailed designs would be prepared under a design and construction supervision consultancy contract. As per requirements of OP/BP 4.37, generic safety measures for small dams would be assessed as part of preparation of environmental and social assessments and ESMPs and reflected in the engineering design and operation of small dams. An independent organization would monitor compliance with the provisions of the ESMF, and LARAPs (where applicable). Actual construction would commence in 2013/14 utilizing three full construction seasons before the project closing date. The project would also support under Component D the development of the capacity in MEW and local institutions [*Mirabs*, CDCs and clusters of CDCs] to carry out operation and maintenance.

20. **Component C: Establishment of Hydro-Meteorological Facilities and Services (US$ 8.2M):** This component would build upon the work done under the EIRP and support the establishment of an efficient and effective hydro-meteorological service, including the provision of: (i) hardware[13] and software, field equipment and transport facilities; (ii) operation and maintenance cost of the hydro-met network on a declining basis; and (iii) capacity building of MEW's General Directorate of Water Affairs Management (GDWAFM)/ hydro-meteorological department in data collection, analysis and dissemination. Twinning arrangements are being pursued with countries with well developed hydro-meteorological services to help develop capacity of MEW's hydro-meteorological department.

21. **Component D: Project Management and Capacity Building (US$39.2 M):** This component would include the following four sub-components:

> ***Sub-component D1: Project management and construction supervision (US$ 17.9 million):*** This would include support for: (i) overall project management, including procurement, financial management and capacity building; (ii) preparation of irrigation rehabilitation sub-projects, including survey and design work; (iii) supervision[14] of contracts for irrigation rehabilitation and hydro-met facilities, including contract management and quality control; (iv) consultancy services for preparation of sub-project specific ESMPs in accordance with the provisions of the ESMF; and (v) independent monitoring of compliance with the project's ESMF. A team supplied by the FAO has been successfully providing technical assistance under the EIRP. Based on this good experience and to maintain continuity, MEW has proposed, and IDA has agreed[15] the selection of FAO on a single source basis to provide technical assistance services for

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11 The government assigns high priority to building capacity in MEW for developing Afghanistan's water resources. Experience of building small dams would be highly beneficial for the future development of Afghanistan's under-utilized water resources.

12 Including detailed social and environmental assessments.

13 Including completion of contracts started under the EIRP.

14 The primary responsibility for supervision would be with the staff of PCU while the consultant/TAT would carry out periodic spot-checks and report back on any deviations from the specifications or other quality issues.

15 See Annex 6.

activities number (i), (ii) and (iii) under this sub-component. Until December 31, 2011 these services would be provided under the existing technical assistance contract between MEW and FAO for EIRP[16]. For activity number (iv), the project will hire short term consultancy services to prepare sub-project specific ESMPs. Finally, for activity number (v), an independent organization or local NGO would be engaged to monitor compliance with the ESMF for sub-projects under Component A.

Sub-component D2: Support for capacity building (US$ 9.4 million): This would include: (i) training of MEW and PCU staff in various fields as wells as training of *Mirabs*, CDCs and farmers in operation and maintenance (O&M) of completed sub-projects; (ii) provision of the services of an international financial management specialist for building capacity of MEW's Finance and Administration Directorate; (iii) performance based incentives/training allowances for Project staff; (iv) rehabilitation of office buildings; (v) establishing a web-based MIS for the Project; and (vi) acquisition of office and field equipment and vehicles required for project implementation.

Sub-component D3: Incremental contract staff (US$ 3.4 million): This sub-component would finance the cost of existing and additional contract staff. Additional staff would include: surveyors, works supervisors, quality controllers, community water assistants (social mobilization), hydro-meteorologists, social and environmental officers, contract management officers, procurement officers, financial management officers, IT staff, M&E, enumerators, etc.

Sub-component D4: Recurring/incremental operating costs (US$ 8.5 million): This sub-component would finance the recurring costs of the PCU and its six regional offices, including office rentals, utilities, communication and IT costs, office maintenance cost, salaries of support staff (e.g. vehicle drivers), staff travel and per diem, vehicle O&M costs as well as the cost of monitoring and evaluation activities.

Eligibility for Processing under OP/BP 8.0

22. Given the country circumstances, all operations for Afghanistan continue to be processed under OP/BP 8.0. The proposed project interventions are key to restoring irrigations systems in the country that are crucial for agriculture recovery and food security.

Expected Outcomes

23. The expected outcomes of the project include:

(a) About 15 percent increase in irrigated area;
(b) At least 20 percent increase in crop yields in rehabilitated schemes;
(c) At least 30 percent decrease in water related disputes in rehabilitated schemes;
(d) Planners/designers use improved hydro-meteorological data to prepare more cost-effective designs for rehabilitation and development works; and

[16] The closing date of EIRP has been extended from March 31, 2001 to December 31, 2011 and the current FAO contract is also being extended to the same date with TOR covering IRDP activities as well.

(e) Improved capacity in MEW with staff able to use the skills and knowledge acquired during formal and on-the-job training/capacity building in various fields.

D. Appraisal of Project Activities

Economic and financial Analysis

24. Investment in rehabilitation of irrigation systems generally yields high economic returns. In Afghanistan, where the irrigations systems are in a severely dilapidated state, the returns are even higher. Relatively small investments targeted at critical constraints increase system efficiency and yield quick and high returns. The direct project benefits would come from: (i) improved and more reliable supply of irrigation water to agricultural areas that currently receive unreliable water supply; and (ii) increase in irrigated area that would lead to increased area under cultivation.

25. The ERR is estimated at about 28 percent. The ERR is robust. A 20 percent reduction in benefits reduces the ERR to about 26 percent while a 20 percent increase in cost results in an ERR of about 27 percent. A combination of 20 percent increase in cost and 20 percent reduction in benefits reduces the ERR to 23 percent. Based on market or financial prices the financial internal rate of return (FRR) is estimated at 20 percent.

26. The ERR estimates are based on conservative assumptions of increases in irrigated area and crop yields. Benefits of small dams and hydro-power generation have not been taken into account. Similarly, high value crops have not been taken into account although many of the schemes areas have orchards and there could be some shift towards higher value crops. Details of the economic analysis are presented in Annex 8.

Technical Aspects

27. *Component A: Rehabilitation of Irrigation Systems*. The works to be implemented under this project component are similar to those under EIRP and are not overly complex. The PCU and regional staff are well familiar with technical aspects of irrigation scheme identification, preparation and quality control during construction. The EIRP uses scheme selection and screening criteria (both negative and positive). A simple template is used for preparation and appraisal, which facilitates planning and design work. The PCU is also equipped with necessary quality control equipment. The Technical Assistance Team provides oversight and guidance. For the IRDP, the selection and screening criteria have been modified based on the experience from EIRP. For example, the upper limits of investment cost per hectare and per beneficiary family have been adjusted to take into account inflation since the start of EIRP. Also, IRDP would go beyond rehabilitation and allow for up-gradation and improvement of irrigation systems to increase efficiency, provided the investment is economically viable (ERR > 15 percent). Scheme preparation would also consider opportunities for investments in mini/micro hydro-power generation and drinking water supply as well as small access roads where required for scheme construction and operation and maintenance. Greater attention would be given to better estimating the existing command area and the expected incremental area. The use of *GPS-enabled cameras and mobile phones* (smart phones) would be expanded, and the use of *Total*

Stations and satellite imagery would be introduced for carrying out surveys. The Project will also place greater emphasis on consultations with *Mirabs*, CDCs (including women CDCs) to address issues of water distribution to the tail-ends of canals.

28. The Project also emphasizes estimation of realistic scheme preparation, design, procurement and construction schedules. Slack periods reflecting winter and irrigation seasons have been explicitly taken into account in the implementation schedule. Scheme designs and costs will explicitly provide for diversion channels (to maintain irrigation flows during construction) as well as for flood protection and dewatering. Similarly, contract documents will incorporate safeguard provisions included in the environmental and social management framework (ESMF). Contractor workshops will be organized periodically to identify bottlenecks and find solutions jointly. Contractors will be encouraged to take out and maintain insurance coverage for works under construction against damage by floods.

29. *Component B: Small Dam Development*. The IRDP will engage specialized consulting firms for the preparation, design and construction supervision of the small dams, including related environmental and social management plans and land acquisition and resettlement action plans (ESMPs/LARAPs). As per requirements of OP/BP 4.37, generic safety measures for small dams would be assessed as part of preparation of environmental and social assessments and ESMPs and reflected in the engineering design and operation of small dams.

30. *Component C: Establishment of Hydro-meteorological Facilities and Services*. Although progress has been made on staff training in data collation and analysis the overall institutional setup and management is weak. Maintenance has been inadequate due to weak management as well as non-allocation of maintenance funds in MEW's recurrent budget.

31. The IRDP would provide funding for operation and maintenance of completed facilities under performance based contracts. However, to ensure sustainability, funding for O&M would be provided on a declining basis starting with 100 percent in project year 1 (PY1) with GOA financing 100 percent of O&M costs from its own sources from PY5 onwards. To ensure adequate capacity building and to make the hydro-met services fully operational, twinning arrangements with well established institutions /agencies in other countries[17] are being pursued to help develop MEW's capacity (see Annex 1 for more details).

Institutional Aspects

32. While the project is operating in an overall weak capacity country environment, ownership and commitment by MEW and MoF of the irrigation rehabilitation program is strong on account of the program having delivered visible results. The implementation arrangements for the EIRP have worked well and the same would be maintained and further strengthened for IRDP. These arrangements include a project coordination unit (PCU) in MEW, assisted by a technical assistance team that provides day-to-day support for overall project implementation, including procurement and financial management. The PCU and its six regional offices, assisted by a technical assistance team, will also manage the implementation of IRDP. The staff of the PCU and GDWAM are civil servants with salaries much lower than in the open market for equivalent

[17] Contacts have been established with the USGS and relevant organizations in Japan, Philippines and Thailand.

professionals. As a result there has been considerable turn-over of staff and about thirty percent staff have left the project and joined better paying jobs. To help motivate and retain qualified and experienced project staff, a system of performance-based incentives[18] was introduced under the EIRP that proved successful and cost effective[19]. The project performance improved visibly. The incentives program would be reviewed and made more effective. As was the case under the EIRP, the incentives package would be administered by the technical assistance team.

33. The program's participatory approach of involving local communities and *Mirabs* in the decision making process throughout the scheme/subproject cycle and empowering them for monitoring quality of works and undertaking operation and maintenance of completed schemes has proved effective to cement ownership of beneficiary communities and sustain program benefits.

Environmental Aspects

34. The IRDP would scale up the activities supported under the on-going EIRP. In addition, it would also support MEW in making a start towards developing Afghanistan's water resources for irrigation through a small dam development program in closed river basins that are free of trans-boundary riparian issues. While bulk of the project investment will be in rehabilitation of existing irrigation systems the small dam component and large rehabilitation schemes may involve land acquisition and resettlement. The project has, therefore, been placed in Environmental Category "A". Given that the IRDP follows a program approach, an Environmental and Social Management Framework (ESMF) has been prepared to guide environmental and social impact assessment of project schemes and preparation of environmental and social management plans. Baseline surveys of 10 potential dam sites, which are representative of the 22 sites identified, have been carried out through remote sensing using Google Earth Imagery and digital elevation models to make a preliminary assessment of the social and environmental impact. Preliminary consultations with local communities have also been carried out. The findings are summarized in the ESMF (see summary in Annex 10).

35. An international consulting firm will be employed to prepare prefeasibility studies of 22 potential small dam sites that have been proposed by local communities. Based on these studies the sites would be ranked and the top ten sites would be selected for preparing detailed feasibility studies (including full environment and social management plans (ESMPs). Subsequently preparation of detailed designs would be undertaken for a few small dams selected for construction. Requirments of OP/BP 4.37 (Dam Safety) for small dams would apply.

36. *International Waterways (OP 7.50):* Since most of the rivers in Afghanistan, on which the sub-projects supported under the IRDP would be located, are international waterways, this policy is triggered. However, the IRDP involves rehabilitation of existing irrigation systems. It does not involve works and activities that would exceed the original scheme, change its nature, or so alter or expand its scope and extent as to make it appear a new or different scheme. The

[18] Incentives were disbursed against performance and tangible outputs (e.g. number of schemes prepared).

[19] The total emoluments of the staff receiving the performance-based incentives are still lower than the open market salaries of equivalent professionals.

rehabilitation works will: (a) not adversely change the quantity and quality of water flows to the other riparians; and (b) not be adversely affected by the other riparians' possible water use.

37. The project team has also reviewed the Afghan-Iranian Helmand River Water Treaty signed by Afghanistan and Iran on March 13, 1973. The Treaty comprises 12 Articles and two Protocols. Under the Treaty, Afghanistan is to provide Iran, in a regular Water Year, an average flow of 22 m^3/second. The monthly flows allowed for Iran are set forth in the table to Article 3. Article 5 stipulates that Afghanistan will not take any action to deprive Iran, fully or partially, from receiving its legal share of water. As regards rights to water over and above the amount of water to be made available to Iran, Afghanistan retains its full rights to the rest of the Helmand River waters and for using it in any manner desired. Under the Treaty, Iran has renounced rights to the Helmand River waters exceeding the amounts granted to it. The Treaty has no provision requiring notification by Afghanistan for any rehabilitation works on the River. However, it is important to note that given the strictly rehabilitation nature of the project, its implementation would not impact the quantity and quality of water to be provided by Afghanistan to Iran under the Treaty.

38. Based on the above, the Bank task team has determined the Project qualifies for exception to the notification requirement as provided under paragraph 7 of OP 7.50. The RVP's approval was received on January 25, 2011.

Social Aspects

39. The ESMF outlines the major impacts of the project on local communities along with mitigation strategies for the identified impacts. The project includes small dams, which may necessitate land acquisition. The ESMF includes a LARPF that would be applied to preparation of site/scheme specific land acquisition and resettlement action plan (LARAPs) where land acquisition and/or resettlement are involved. The LARPF defines the land acquisition principles and procedures to be followed as well as eligibility criteria for different categories of project affected peoples, and consultation and compensation procedures, and requirements for preparation of sub-project specific LARAPs, in accordance with the Afghan legal framework for land acquisition and OP 4.12. The ESMF forms an integral part of the Project Operations Manual.

40. *Positive impacts:* It is expected that the Project will have significant positive social impact for beneficiary communities. Review of EIRP confirmed substantive increases both in crop yield and cultivated land as reported in the annual impact assessment reports of EIRP. Farmers report that apart from increasing yield of staples such as wheat, the project has enabled some crop diversification with increasing emphasis placed on vegetable production (onions, tomatoes and carrots). This has meant more nutritious food available within the households with more money available to purchase goods for the household, and more families are able to educate their children. Beneficiary communities' participation in decision making relating to water resource management, operation and maintenance of irrigations systems and agreeing water use allocations has led to a significant reduction in water-related disputes and social capital formation at the community level.

41. *Gender:* As in many other countries irrigation governance in Afghanistan is an almost exclusive preserve of men. Special attention needs to be paid to female-headed households, both those with and without land, as they are generally amongst the most vulnerable in communities and risk having their rights ignored. Although women's ownership of land is not widespread it is important to ensure that their land rights and water rights, receive equal recognition. Using established community structures to involve women meaningfully will be a challenge as only female staff can do this. The PCU would explore Women CDCs as a vehicle for increasing women's participation in the project.

42. *Disclosure:* The draft LARPF and the Executive Summary of ESMF were disclosed in-country on December 27, 2010 and January 9, 2011 respectively. These documents were also disclosed at the InfoShop on January 5, and January 10, 2011 respectively. The Executive Summary of the ESMF was distributed to the Board on January 13, 2011.

Lessons Learned and Reflected in Project Design

43. The project design draws on lessons learned from operations both inside and outside Afghanistan, particularly post-conflict countries. The overarching lessons learned and applied to the project design are (a) project development objectives should be realistic, focused and achievable in the country, sector and implementing agency context; (b) project design should be brutally simple and project components closely aligned with the PDOs; (c) to address the capacity, accountability and governance risks in a weak capacity and poor governance environment, the need for implementation support technical assistance should be carefully assessed, and the terms of references clearly defined and agreed with implementing agency, and advance procurement action taken so that technical assistance teams can be mobilized by project approval; (d) motivation and sensitization of staff of implementing agencies in a gainful participation in project activities is one of the key ingredients for successful project performance and sustainable capacity building; (e) a combination of performance –based financial incentives and effective on-the job training should be factored into the project design; and (f) in a post-conflict environment, re-construction effort should target interventions that yield quick returns, with appropriate attention to putting in place basic building blocks to support transition from emergency recovery to medium to long term reconstruction and development.

E. Implementation Arrangements and Financing Plan

44. The implementation arrangements for EIRP described earlier will continue under the IRDP with some adjustments. The PCU in Kabul with its six regional offices, assisted by a technical assistance team will manage project implementation. The Mazar-e-Sharif Regional office will be appropriately staffed to deal with the work load relating to the small dams[20]. Performance-based incentives would continue for project staff. To promote coordination with on-farm interventions to be implemented by MAIL under the OFWM, the PCU will designate a focal person who will help ensure preparation of coordinated designs. The role of local communities and *Mirabs* in decision making processes throughout the sub-project cycle (identification, preparation, design, construction and operation and maintenance of sub-projects) would be further strengthened

[20] The potential sites for small dams in closed river basins, that are currently been studied, are located in areas that fall within the jurisdiction of the PCU's Mazar regional office.

through the participation of CDCs. Possible role of CDCs in the project would include: participation in walk-through/transect surveys during identification and design stages; facilitating consultation with women; safeguarding water rights; providing construction supervision oversight through the *Mirabs*; sign-off on contractor's final bills; oversight of compliance with provisions of ESMF (including LARAPs); oversight of O&M; and safeguarding project facilities, including the hydrological stations.

45. *Construction Supervision:* Learning from the experience under the EIRP, the responsibility for supervision has been clarified[21]. MEW/PCU will have the primary responsibility for supervision of rehabilitation schemes. The Technical Assistance Team (TAT) will periodically carry out spot checks, certify quality and report back to PCU. The design and construction supervision responsibility for small dams would be entrusted to a consulting firm selected through international competition following Bank guidelines. The Director of the PCU will serve as the *Employer*, and the consulting firm will serve as *the Engineer* for construction supervision. The firm will appoint a *Resident Engineer* at the construction sites assisted by a team of specialists and inspectors to supervise the work of contractors.

46. *Project Coordination and Steering Arrangements:* The EIRP Project Steering Committee (PSC), headed by the Minister of MEW and with members from MAIL and MOF, and the Regional Coordination Committees (RCCs) chaired by the Directors of PWMDs would be maintained for project oversight and coordination.

47. *Project Reporting:* The PCU will be responsible for monitoring physical progress and collation of progress reports. The PCU will: (i) collaborate with its regional offices and the M&E unit; (ii) maintain the overall project management information system (PMIS); (iii) monitor and evaluate progress in the provision of critical project inputs and activities; and (iv) submit periodic (monthly and quarterly) progress reports to MEW and the World Bank. These reports would include, *inter alia*: (a) up-to-date physical and financial progress compared to annual and end-of-project targets; (b) updated indicators of project performance compared to annual and end-of-project targets; and (c) successes and problems encountered during the reporting period with suggested remedial actions. An independent organization (e.g. NGO(s)) would be hired to monitor compliance with the provisions of the ESMF during project implementation. Similarly an independent organization would be hired to monitor implementation of LARAPs for specific sub-projects that involve land acquisition and re-settlement.

48. *Monitoring and Evaluation:* A Monitoring and Evaluation (M&E) Unit will be responsible for project monitoring and evaluation. The M&E Unit will: (i) conduct the Baseline Survey for project; (ii) analyze project-level M&E information and generate regular M&E reports; (iii) evaluate the project's impact at key junctures during the project period to assess progress towards achieving project's objectives; (iv) provide a yearly seasonal assessment to the PCU summarizing the impact and achievements of the preceding growing season, cross-cutting issues and recommendations, and updated project indicators; (v) conduct special studies as needed; (vi) document success stories; (vii) report regularly to PCU, the Project Steering Committee, and the World Bank; and (viii) prepare the Recipient's contribution to the implementation completion report (ICR).

[21] Under the EIRP the responsibility for supervision was somewhat diffused among PCU, PWMDs and the TAT.

49. *Governance and accountability action plan:* The IRDP would be implemented in a high risk environment. However, the GoA is fully committed to the Project and its effective implementation considering that improvement in water resources management is crucial for the economy and development of Afghanistan. To mitigate and guard against governance, corruption and fraud risks and improve transparency and accountability in implementation of project activities, several measures have been incorporated in the IRDP. These include: (i) improved implementation arrangements that build upon the lessons learnt from EIRP; (ii) improved fiduciary arrangements including FM and Procurement; (iii) enhanced construction supervision with additional spot checks by the TAT to ensure improved quality control oversight; and (iv) enhanced monitoring and evaluation arrangements. See Annex 8 for the Governance and Accountability Action Plan.

Project Costs and Financing Plan

50. The cost of the six-year project is estimated at US$ 148.70 million including physical and price contingencies. The project financing plan would be as follows:

US$ Million

Government	2.5
IDA Grant	97.8
ARTF Grant	48.4
Total	148.7

The Government will finance 25 percent of the operation and maintenance cost of hydro-met stations in project year 2 (PY2); 50 percent in PY3; 75 percent in PY4; and 100 percent in PY5 and thereafter.

Financial Management, Disbursement and Audit Arrangements

51. A PFM performance rating system has been recently developed for Afghanistan by the Public Expenditure and Financial Accountability (PEFA) multi-agency partnership program, which includes the World Bank, IMF, EC, and other agencies. Afghanistan's ratings against the PFM performance indicators portray a public sector where financial resources are, by and large, being used for their intended purposes as authorized by a budget that is processed with transparency and has contributed to aggregate fiscal discipline.

52. Financial management and audit functions for the proposed project will be undertaken through the agents contracted under the Public Administration Capacity Building project and the Public Financial Management Reform project. These are the primary instruments for continuing to strengthen the fiduciary measures put in place for ensuring transparency and accountability of funds provided by the Bank and other donors. Under these contracts, two advisers—Financial Management and Audit—are responsible for working with the government and line ministries to carry out these core functions. The Financial Management Agent (FMA) is responsible for helping the MoF maintain the accounts for all public expenditures, including IDA-financed projects and for building capacity within the government offices for these functions.

53. At the project level, the Finance and Accounts Directorate of MEW with support from the Financial Management unit of the Project Coordination Unit (PCU) will take responsibility for the financial management of the project. The financial management (FM) capacity of the F&A Directorate will be strengthened from project inception, by the recruitment of relevant international and national FM professionals, regular training and provision of required FM system. The F&A Directorate and the PCU FM unit will utilize computerized accounting systems, satisfactory to IDA, to maintain relevant accounting records and generate required periodic reports on the project activities.

54. Quarterly Interim Unaudited Financial Reports (IUFRs – formerly FMRs) will be prepared by the F&A Directorate of MEW with technical assistance from the PCU Financial management unit. Consolidated IUFRs will be prepared and submitted by F&A Directorate (with technical assistance from the PCU FM unit) to the World Bank. Annual consolidated project reports will be prepared, reviewed, and approved by the MoF, supported by the FMA.

55. A single, segregated Designated Account (DA) at Da Afghanistan Bank (DAB, Central Bank) in the name of the project on terms and conditions satisfactory to IDA, will also be opened and maintained by the MoF to faciliate payment of project expenditures. Expenditure reporting will be submitted monthly.

Fund Flows

56. Fund management for the project will follow existing procedures. The DA will be operated by the Special Disbursement Unit (SDU) in the Treasury Department of MoF. As with all public expenditure, all payments from the Grant will be routed through MoF. All project expenditures will be made from the DA. In addition to payments from DA funds, MEW can also request the SDU to make direct payments to consultants or consulting firms, and request special commitments for contracts covered by letters of credit. All withdrawal applications to IDA, including advances, reimbursements and direct payments, will be prepared and submitted by MoF. The FM Adviser will assist the MoF in executing and recording project payments.

Accounting and Reporting

57. The F&A Directorate with assistance from the PCU FM unit will maintain essential project transaction records using computerized accounting system/ Excel spreadsheets and generate required consolidated monthly, quarterly, and annual reports.

58. The FM Manual, that will be prepared by the F&A Directorate with assistance from the PCU FM unit, and to be approved by the Bank, will include: (i) roles and responsibilities of the PCU and F&A Directorate staff, (ii) linkages between the PCU and F&A Directorate staff; (iii) documentation and approval procedures for payments; (iv) measures to ensure that duplicated and fraudulent claim, where an activity could be financed from both sources (i.e. IDA and ARTF grants) do not arise, (v) project reporting requirements, and (v) quality assurance measures to help ensure that adequate internal controls and procedures are in place and are being followed. The FM Manual will be prepared by April 30, 2011.

59. The FM Manual will also establish project financial management in accordance with standard Afghan government policies and procedures including use of the government Chart of Accounts to record project expenditures. The use of these procedures will enable adequate recording and reporting of project expenditures. Overall project accounts will be maintained centrally in SDU, which will be ultimately responsible for recording of all project expenditures and receipts in the Government's accounting system. Reconciliation of project expenditure records with MoF records will be carried out monthly by the F&A Directorate with support from the PCU FM unit.

Disbursement Arrangements

60. Disbursements from the Grant will use advances, reimbursement, direct payment, and payments under Special Commitments, including full documentation or against statements of expenditures, as appropriate.

Audit of Project Funds

61. The Auditor General, supported by the Audit Agent, is responsible for auditing the accounts of all IDA and ARTF-financed projects. Annual audited project consolidated financial statements will be submitted within six months of the close of GOA's fiscal year.

62. The Bank-funded projects already or currently being implemented by MEW (EIRP, EPRP, KAMSPP, APSPD and TA for Water Sector) have no overdue audit reports. The key issues raised in these projects' previous years audit reports up to Solar Year 1388 have been resolved satisfactorily.

Audit – Responsible Entity

63. The responsible entity for the audit report is the Ministry of Energy and Water.

64. Financial management arrangements for the project are detailed in Annex 5.

Procurement Arrangements

65. Procurement for the project will be administrated in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated Janury 2011, and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated January 2011 and the provisions stipulated in the Financing Agreement. In addition, the World Bank's "Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants" dated October 15, 2006 have been shared with the recipient. The World Bank's Standard Bidding Documents, Requests for Proposals, and Forms of Consultant Contract will be used. Civil works and goods following National Competitive Bidding (NCB) procedures shall be procured using the agreed Standard Bidding Documents (SBDs) for Afghanistan. In case of conflict/contradiction between the World Bank's procurement procedures and any national rules and regulations, the World Bank's procurement procedures will take precedence as per the Article 4(2) of the Procurement Law July 2008

(Amendments in January 2009 incorporated) of the GOA, the IDA Procurement/Consultant Guidelines shall prevail.

66. With donor assistance, Afghanistan has made considerable efforts to establish the Legal and Regulatory Framework for public procurement over the last five years. A Procurement Law, reflecting international best practice in public procurement was enacted in November 2005 replacing the earlier procurement regulations. While the law provides a very modern legal system for procurement, effective implementation of the law may encounter difficulties in the current weak institutional structure and capacity of the Government. A Procurement Policy Unit (PPU) has now been established under MOF to ensure implementation through the creation of secondary legislation, standard bidding documents, provision of advice, creation of the necessary information systems for advertising and data collection. "Rules of Procedure for Public Procurement," which details the better implementation of the Procurement Law, has been issued by MOF as circular number PPU/C005/1386 dated April 12, 2007. The Procurement Appeal and Review mechanism is in place and the Manual of Procedures for "Procurement Appeal and Review" has been issued by MOF as circular number PPU/N001/1385 on March 18, 2007. The Procurement Law has been revised in July 2008 and amended in January 2009 and issued as a new Law by the Ministry of Justice and was published in the Official Gazette Number 957, 29.10.1387 (18 January 2009). The revised "Rules of Procedures for Public Procurement" has been issued as circular PPU/C027/1387 of November 18, 2009.

67. The Special Procurement Commission (SPC) comprised of the Ministry of Justice and Ministry of Economy (MOE), under the chairmanship of MOF approves high-value contracts. These approvals will be done according to Article 91 of the Afghan Public Procurement Law.

68. In the absence of adequate capacity to manage procurement activities effectively, some interim arrangements have been put in place to improve Afghanistan's procurement management. A central procurement facilitation service, the Afghanistan Reconstruction and Development Services Procurement Unit (ARDS PU), has been established under the supervision of MOE.

69. MEW has limited experience in handling procurement under Bank Guidelines. Considering this the EIRP PCU has been equipped with two national procurement officers who are assisted by an international procurement specialist, provided under the TAT contract. This arrangement has generally worked well and will continue under the IRDP with increased emphasis on continuous on-the-job as well as formal training in procurement to address concerns of staff turn-over. The general description of various procurements under different expenditure categories are described in Annex 6: Procurement Arrangements. A detailed procurement plan has been prepared for the project.

70. ***Closing Date:*** December 31, 2017 would be the closing date of the IDA and ARTF grants. The project implementation period is about six years to provide sufficient time for Component B (Small Dams) as it involves preparation of feasibility studies, detailed design, and at least three construction seasons for the actual construction. The implementation of Component A (Rehabilitation of Infrastructure), Component C (Hydro-met Services) and Component D

(construction supervision, capacity building, M&E) will commence in project year one and continue till the end of the project.

Bank Implementation Support and Supervision Arrangements

71. Given the unique challenges facing the Bank and the rest of the international community to deliver development assistance to Afghanistan, the Bank has developed and implemented a strategic approach to addressing the governance, accountability, and weak capacity issues while assisting the government in managing development aid for results on the ground. The results and risk management frameworks for the Bank's activities in Afghanistan comprise three prongs:

(a) Help the government establish and operate appropriate systems for public financial management, public procurement, and internal and external audit;
(b) Ensure "smart" project design to address the capacity and Governance and accountability (GAC) risks in the operating environment; and
(c) Pursue a new paradigm for portfolio supervision that focuses on providing greater implementation support to clients for getting results on the ground and risk-based fiduciary oversight arrangements.

72. Overall, the Bank's results and risk management frameworks are working and these frameworks will guide the Bank's supervision of the IRDP.

73. As security in large parts of Afghanistan is volatile, IDA's ability to supervise the project in large parts of the country is limited. To deal with this constraint, the project task team will adopt the following approach: (i) the Kabul–based TTL will maintain a continuous proactive dialogue with the project counterpart to help the client address implementation issues, quickly resolve problems and build capacity; (ii) the Bank task team will have proper skill mix and specialized expertise to provide effective implementation support; (iii) the Bank task team will carry out field visits whenever possible; (iv) the Kabul-based fiduciary staff will provide regular fiduciary oversight and capacity building support; and (v) full project supervision will be carried out every six months with reporting to the MEW/MoF and Bank management.

F. Project Risks and Mitigating Measures

74. Based on the experience of ongoing IDA projects in Afghanistan, the major challenges that the project will face are related to security, contractor capacity, and fiduciary management in remote areas. Security in large parts of Afghanistan is still volatile, and the presence of anti-government insurgencies in an area can pose an immediate threat to community members, project staff, consultants and contractors. Large parts of the country are inaccessible to government staff and an even larger area is unsafe for the international development community. IDA's ability to supervise the project in large parts of the country is thus limited. In addition, weak government institutions in Kabul and at the provincial level, combined with Bank staff's limited outreach, means the task team expects to face fiduciary management challenges. Deteriorating security may slow down implementation and discourage contractors from bidding. The overall risk rating for IRDP is assessed to be "Medium driven by Impact". The following table summarizes some of key risks, mitigation measures and the corresponding ratings before

mitigation. Details are provided in the Operational Risk Assessment Framework (ORAF) in Annex 4.

Risks	Risk Mitigation Measures	Risk Rating before Mitigation
Project Stakeholder Risks:		
Reduced ownership resulting from the perception among some stakeholders that Afghanistan should give priority to new water resources development rather than rehabilitation.	• Highlighting the positive outcomes of EIRP from the M&E results. • Encouraging field visits by important stakeholders to see the results and hear from beneficiaries directly.	Medium-L
Operating Environment Risks:		
Country Environment Risk: Escalation in insurgency-related violence and its impact on the project implementation and supervision.	• The Bank will continue to monitor developments closely and will modify programs, if necessary. • Independent monitoring and remote sensing/GPS would be used increasingly for monitoring & supervision.	High
Capacity Risk: Low capacity in MEW for contract management and assuming ownership of all activities including the setting up and operationalization of its hydro-met services.	• The project would adopt and further improve the organizational arrangements used under the EIRP i.e. a PCU supported by a strong technical assistance team. • Contract Management specialists will be added to PCU headquarter and regional offices.	Medium-I
Implementing Agency Risks:		
FM Risks: Weak internal controls at MEW with a risk of misappropriation of funds and delay in preparation and submission of acceptable financial reports.	• Minimize use of Designated Account, maximize direct payments to consultants. • Presence of FM Agent at the Treasury of Ministry of Finance, responsible for processing payments, transaction recording and reporting. Presence of Audit Agent at the Control and Audit Office, responsible for external audit of the project.	Medium-I
Procurement Risks: MEW is weak in terms of implementation capacity and ability of timely decision making.	• The project will have a substantial component on building the capacity of implementation agencies in procurement, and contract management. • In addition, training and technical assistance will be provided by hiring an international procurement specialist. • Greater delegation of decision making power to the PCU. • Continuous training of staff would be provided to handle staff turn-over.	Medium-I

Risks	Risk Mitigation Measures	Risk Rating before Mitigation
Governance Risks: Insufficient transparency in personnel management and accountability in procurement and contract management	• A Project website will be established for wider and transparent dissemination of procurement processes. • Additionally, a grievance redress mechanism will be developed. Details are included in the GAAP.	Medium-I
Fraud and Corruption Risks: MEW lacks arrangements for accountability and controls for fraud and corruption. While there have been no officially reported instances of fraud and corruption under the ongoing EIRP, there have been instances of long delays in bid evaluation and contract award which may be indications of fraudulent and/or corrupt practices. .	• Use of PCU assisted by a strong and empowered technical assistance team with a clear role in procurement and processing of payments to contractors. • A grievance redress mechanism will be developed in line with a Procurement Appeal and Review mechanism. • Workshops for contractors would be held frequently to create awareness regarding Bank procurement guidelines and steps open to them to report any mishandling of procurements. • Ministry staff would be trained in procurement processes and trained procurement staff would be posted at the regional offices in addition to the central office of the PCU.	Medium-I
Project Risks:		
Design Risks: • While the project design is essentially similar to the ongoing EIRP project MEW has little past experience of small dams • Limited capacity of local construction industry and reluctance of international contractors to bid because of security considerations.	• MEW staff will be trained in all aspects of small dam planning, construction and O&M, including LARAPs. • MEW would seek security arrangement with PRTs, local communities and CDCs. • Where feasible, small scale electricity generation would be considered at small dams and canals, thereby increasing the impact of the project and allowing local farmers to produce and process their outputs. • Workshops would be held to attract international contractors and promote joint ventures with local firms.	Medium-I
Social and Environmental Risks: Social and environmental impacts of small dams component including involuntary land acquisition and displacement of people may be hampered by lacking or faulty land registration, competing claims and unclear procedures	• Small dam sites would be carefully selected (where there is a keen demand from local communities) and designed to avoid or minimize adverse impacts. • In addition, the Social Assessment will include detailed riparian assessment for the small dam component. • The PCU and the technical assistance team would be trained to deal with social and environmental issues. • A LARPF has been agreed with the government.	Medium-I

G. Terms and Conditions for Project Financing

75. The proposed IDA financing would be provided on Standard IDA grant terms. At the request of the Government retroactive financing of US$ 5.0 million (SDR 3.16 million) has been included for eligible expenditures incurred after February 1, 2011. The IDA grant would finance project expenditures, including taxes. Communities would contribute in kind a minimum of 10 percent of the cost of rehabilitation schemes. There are no project specific conditions of effectiveness.

Annex 1: Detailed Description of Project Components

Afghanistan: Irrigation Restoration and Development Project

76. The objective of the proposed Irrigation Restoration and Development Project (IRDP) is to increase agriculture productivity and production in the project areas. The strategy for achieving the objective includes: (i) assisting local communities/farmers to rehabilitate irrigation schemes; (ii) reestablishing hydro-meteorological services in the country to provide improved access to hydro-met data to enable preparation of improved and more cost effective designs of rehabilitation and development works; and (iii) continuing capacity building in MEW for preparing and implementing irrigation/water resource development projects.

77. The project would build upon and scale up activities supported under the ongoing EIRP. In addition, it would also support MEW in making a modest start towards developing Afghanistan's water resources for irrigation comprising a small dam development program in closed river basins that are free of trans-boundary riparian issues. The project would have the following components.

Component A: Rehabilitation of Irrigation Systems (US$70.0 M)

78. This component would support country wide the rehabilitation of medium and large irrigation schemes[22] covering a total irrigated area of about 300,000 ha that would benefit approximately 230,000 households and increase irrigated area by about 15 percent. This component will be designed and implemented using the successful model[23] that is being followed under the EIRP all over the country. However, greater involvement of existing institutions (e.g. CDCs or clusters of CDCs) will be sought to facilitate project activities. Typical rehabilitation works would include improving canal intake structures, conveyance channels (main canals), wash structures (water bridges/super passages to allow safe passage of hill torrents over canals), siphons, aqua ducts and other river crossing structures, culverts, and control structures. Mini/micro-hydro-electric generation, drinking water supply and small roads needed for construction and operation and maintenance would be considered where feasible. Irrigation scheme designs would be closely coordinated with on-farm development works that would be implemented by the Ministry of Agriculture Irrigation and Livestock (MAIL) under the OFWM Project[24].

79. **Identification of schemes to be rehabilitated:** The project would support rehabilitation of irrigation schemes country wide operating through the six regional offices of the PCU located at Kabul, Mazar-e-Sharif, Herat, Jalalabad, Kunduz and Kandahar. Each regional office covers several provinces. In accordance with existing procedures under the EIRP, irrigation schemes are identified based on community requests received through the respective offices of the Provincial Water Management Departments (PWMDs). A list of potential 219 medium schemes and 22 large scheme has been identified for further processing. The selection has been made based on an analysis of security situation on the ground; social criteria (number of beneficiaries; potential improvement in water supply to tail end farmers, agreement to assume responsibility of O&M; agreement not to grow poppy; willingness of beneficiary communities to pay 10 percent of the rehabilitation cost in kind); economic criteria (the potential increase in irrigated area resulting from a higher efficiency); and a uniform geographical spread in the six project regions across the country. The sub-project screening and the eligibility criteria are described below. This list of sub-projects would be modified if the security situation at some of the

[22] Including completion of contracts started under the EIRP.

[23] The EIRP responds to requests from local communities for rehabilitation of community managed irrigation schemes all over the country. Communities are closely involved in design, implementation and quality control.

[24] The Afghanistan water law assigns responsibility for on-farm water management interventions to MAIL, while interventions in the upstream parts of the irrigation system (canal intakes, main canals and associated structures) are the responsibility of MEW.

selected sites deteriorates or if the schemes are dropped for any other reason during further scrutiny. A pipeline of an additional 60 medium schemes and 31 large schemes has been identified to replace any schemes that may be dropped.

80. **Objective and outcome of rehabilitation:** The main objective of rehabilitation is to address key constraints to efficient and reliable delivery of water to farmers and other water users without exceeding the historical water rights and affecting downstream users. The key outcome is improved efficiency and reliability of water delivery. The experience under the EIRP has shown that carefully targeted rehabilitation investments increase efficiency and result in substantial benefits to water users in terms of: reduced expenditure of resources (time, labor, money) on O&M and repair work; water losses avoided; reduced damages to canals and crops from hill torrents; better water deliveries to tail enders and reduction in water related disputes; and increase in irrigated area and crop yields.

81. **Scheme selection and eligibility criteria:** For the IRDP the selection and screening criteria have been modified based on the experience from EIRP. For example, the upper limits of investment cost per hectare and per beneficiary family have been raised to take into account inflation since the start of EIRP. Also, the project would support investments that improve the efficiency of the irrigation systems where necessary, provided the investment is economically viable. Scheme preparation would also consider opportunities for investments in mini/micro hydro-power generation (on canals) and drinking water supply as well as small access roads required for scheme construction and operation and maintenance. Greater attention would be given to better estimating the existing command area and the expected incremental area. The use of *GPS-enabled cameras and mobile phones* (smart phones) would be expanded, and the use of *Total Stations* and *satellite imagery* would be introduced for carrying out surveys. The project will also place greater emphasis on consultations with *Mirabs*, CDCs (including women CDCs) to address issues of water distribution to the tail-ends of canals and women's concens. The following criteria would apply for schemes to be eligible for funding under the project:

Cost per ha: < US$ 450 (constant May 2011 prices)
Cost per beneficiary household (HH): < US$ 300 (constant May 2011 prices)
Internal Economic Rate of Return (ERR): > 15%

82. **Attributes of ineligible sub-projects:** Schemes/Sub-projects with any of the attributes listed below will be ineligible for support under the IRDP.

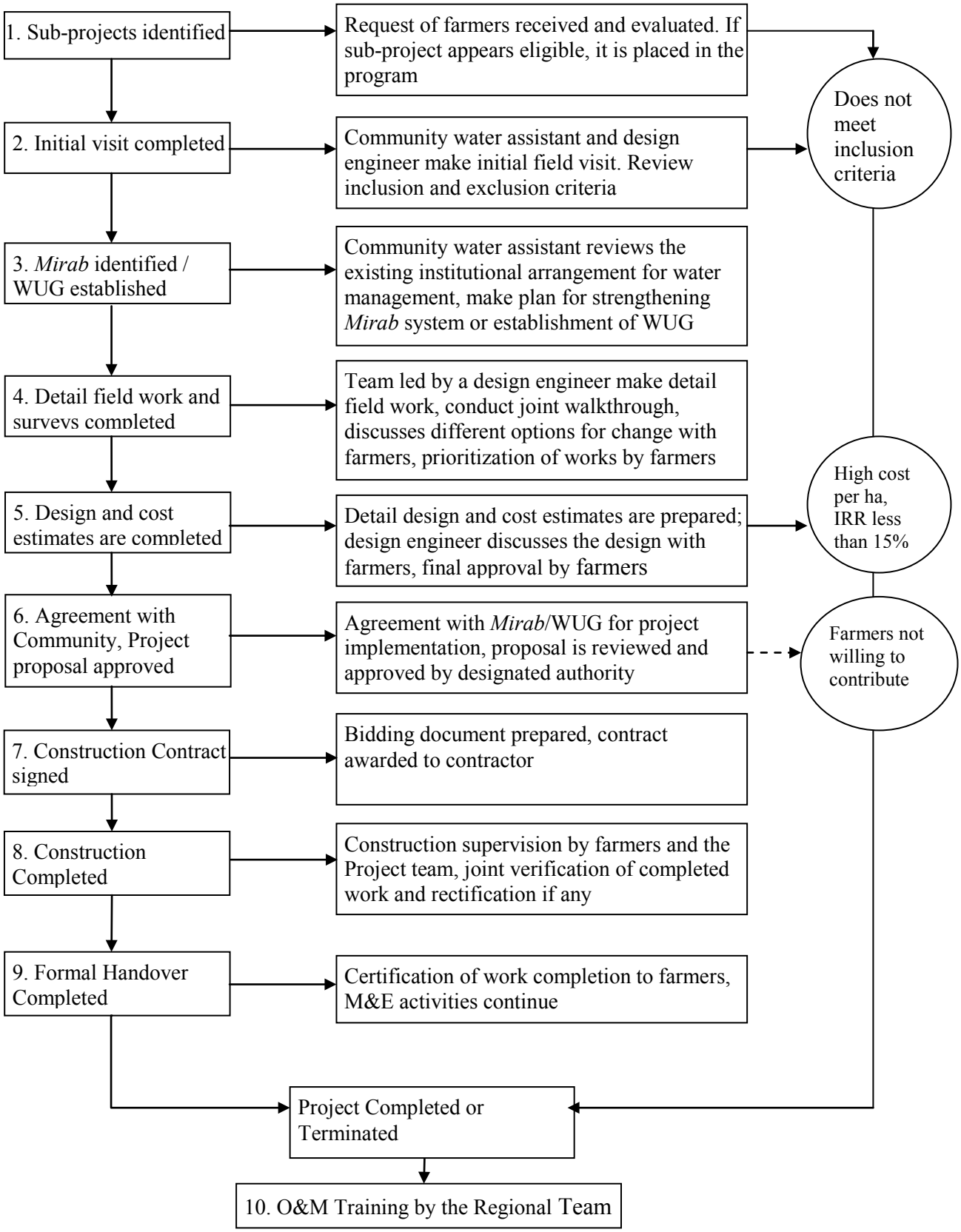
83.

Attributes of Ineligible Sub-projects
Involves the significant conversion or degradation of critical natural habitats. Including, but not limited to, any activity within: • Ab-i-Estada Waterfowl Sanctuary; • Ajar Valley (Proposed) Wildlife Reserve; • Dashte-Nawar Waterfowl Sanctuary; • Pamir-Buzurg (Proposed) Wildlife Sanctuary; • Bande Amir National Park; • Kole Hashmat Khan (Proposed) Waterfowl Sanctuary; • Shewa lake in Badakhshan
Will significantly damage non-replicable cultural property, including but not limited to, any activities that affect the following sites: • Monuments of Herat (including the Friday Mosque, ceramic tile workshop, Musallah complex,

Attributes of Ineligible Sub-projects
Fifth Minaret, Gawhar Shah mausoleum, mausoleum of Ali Sher Navaii, and the Shah Zadehah mausoleum complex); • Monuments of Bamiyan Valley (including Fuladi, Kakrak, Shar-I Ghulghular and Shahr-i Zuhak); • Archaeological site of Ai Khanum; • Site and monuments of Ghazni; • Minaret of Jam; • Mosque of Haji Piyada/Nu Gunbad, Balkh province; • Stupa and monastry of Guldarra; • Site and monuments of Lashkar-i Bazar, Bost; and • Archaeological site of Surkh Kotal. • Other conservation hot spots
Requires pesticides that fall in WHO classes IA, IB, or II.
Supports commercial logging or plantations in forested areas.
Increases water diversion from the river beyond historical water rights

84. **Scheme/sub-project cycle:** Broadly, the scheme cycle consists of identification of scope of work jointly with the communities; screening based on various criteria; engineering surveys; preparation of detailed design; preparation of bid documents; procurement and award of contracts; construction supervision; and training of *Mirabs*/communities in O&M. In general, the complexity of the work increases with the size of the schemes both in terms of engineering inputs and mobilization of the communities involved as the focus moves from the watershed to the sub-basin level. The flow chart below shows the various stages of the scheme cycle under the EIRP, which will be also adopted under the IRDP.

Sub Project Development: Steps Flow Chart



Sub-Project Proposal Preparation

85. **Summary of the process:** Once a scheme/sub-project is selected for further preparation, the PCU staff carry out a full walk-through survey, from head to tail of the system, together with the community members and the concerned *Mirab*. Staff who participate in the walk-through include the Design Engineer, Surveyor, Community Water Development Assistant (CWDA)/Social Organizer, and Environment and Social Officers. During the walk-through survey the problems identified by the community are thoroughly reviewed and any additional works required for the sub-project are also identified. In parallel the CWDA collects information on the existing water management system and O&M practices, agriculture data, beneficiary community, local water disputes, the community's willingness to contribute to the rehabilitation cost and take on the responsibility of O&M on completion. At the conclusion of the walk-through survey, discussions are held with the representatives of the community regarding their suggested solution to their irrigation system problem. After a review of these, the team provides the community a preliminary design of the rehabilitation works together with its preliminary cost to get their consent. The community can suggest changes/improvements. Once agreement is reached, work on a detailed survey design and proposal preparation starts. Upon approval of the proposal, the works are awarded as per the agreed procedures. Further details of the process are presented below.

Initial Visit

86. Each potentially eligible scheme is visited by a team from the regional PCU office comprising the CWDA and an Irrigation Engineer. Prior to the visit the team collects available data of the area, including maps, and takes along a GPS-enabled camera. The objectives of the initial visit are to:

(i) Understand the irrigation-related problems of the community and rationale for the proposed work(s).
(ii) Verify the location of the proposed sub-project (through recording of GPS coordinates of several key points), its approximate size, current status and the nature and feasibility of the works proposed by the community.
(iii) Confirm or initiate the formation of a formal or informal community water user group (WUG) or organization that can represent the community for discussions / transactions. Under the IRDP consultation would also be carried out with the relevant CDCs or CDC clusters where they exist.

87. The field team takes all necessary measures against potential risks, such as mine risk, during the field visit, keeping in view that floods can wash mines from mountainous areas into watercourses and canals. The mine risk classification is obtained from MACA.

88. After the initial site visit a preliminary estimate of the cost is prepared, based on the initial information. The eligibility of the sub-project is assessed in order to determine whether additional information obtained (e.g. high cost, poor economic viability, mine risk) warrant continued consideration of the scheme. If the information warrants dropping of the scheme another discussion takes place with the community to explain the reasons.

89. Before the sub-project can proceed further it is essential that there is an organization to represent the community for discussions / transactions with IRDP. Under EIRP the traditional *Mirab*, supplemented by at least two representatives elected or nominated by the community represent the community. Under the IRDP consultations will also be carried out with the community development councils (CDCs) or cluster of CDCs. Representation of women will be sought through women CDCs.

90. The IRDP would make sure that the representatives selected indeed represent the majority of the communities involved with adequate representation of those located at the tail end of the irrigation system. This would be done by conducting an open meeting in which the objectives and procedures of IRDP will be explained to all present. A separate visit would be conducted to facilitate the establishment of a suitable WUG/organization as per requirement.

Detailed Field Work and Surveys

91. When the preceding steps have been completed, a further field trip is made to collect all information needed for the detailed designs and other studies (e.g. technical, economic, social and environmental) needed for the project proposal.

92. During this visit, a draft memorandum of understanding (MOU), based on the preliminary cost estimate, would be discussed with the beneficiaries. Alternative modes of implementation would also be discussed to determine the community preference. Depending on their location, several sub-projects would be grouped in order to make the survey, design and construction processes efficient.

Preparation of design and Cost Estimates

93. Detailed designs and cost estimates would be prepared in accordance with internationally accepted design criteria and procedures. Standard designs would be used where appropriate.

Sub-project Agreements

94. The MOU between the project and the beneficiaries represents the final requirement for project preparation. The format used under the ongoing EIRP would be followed to maintain continuity and the MOU would be prepared in both English and the locally preferred language (*Dari* or *Pashto*). *The MOU includes the community's commitment to pay ten percent of the sub-project cost in kind and an undertaking not to plant poppy in the command area.* Implementation issues are also discussed during sub-project preparation so that the proposed arrangements for implementation are known to the community before the sub-project agreement is signed.

95. After agreement has been reached with the community and the sub-project report has been completed, the sub-project proposal would be checked by the TAT and approved by the PCU deputy director. Once approved, the report would be submitted to the PCU director for allocation of funds.

Construction Stage

96. Once a sub-project is approved for implementation and bid documents are ready, the procurement process would start and a contract would be awarded. To the extent possible, construction works would be clustered so that supervision staff can monitor work on a number of sites that are reasonably close. Scheduling of construction works would take account of seasonal and climate constraints. The risk of frost damage may prevent construction in areas above 1500 m during the winter months while construction during the spring and early summer may be impeded by high flows and the need for not disrupting irrigation requirements. However, these considerations should not prevent the award of contract, subject to a deferred start of construction. The IRDP also emphasizes estimation of realistic scheme preparation, design, procurement and construction schedules. Slack periods reflecting winter and irrigation seasons have been explicitly taken into account. Scheme designs and costs will provide for diversion channels (to maintain irrigation flows during construction) as well as flood protection and dewatering explicitly. Similarly, contract documents will incorporate provisions in the ESMF relating to

the construction. Contractor workshops will be organized periodically to identify bottlenecks and find solutions jointly. Contractors will be encouraged to take out and maintain insurance coverage against damage by floods for works under construction.

97. **Detailed work plan:** A work plan has been prepared for the implementation of 219 medium size and 22 large size schemes in 6 years with all surveys, designs, bidding documents prepared and contract awards completed by the end of the fourth year of implementation. A slack period of 3 months each year has been considered to take account of slowing down of work in the winter and irrigation seasons. Reasonable construction period have been assigned for each sub-project based on the experience in the completed sub-projects under EIRP.

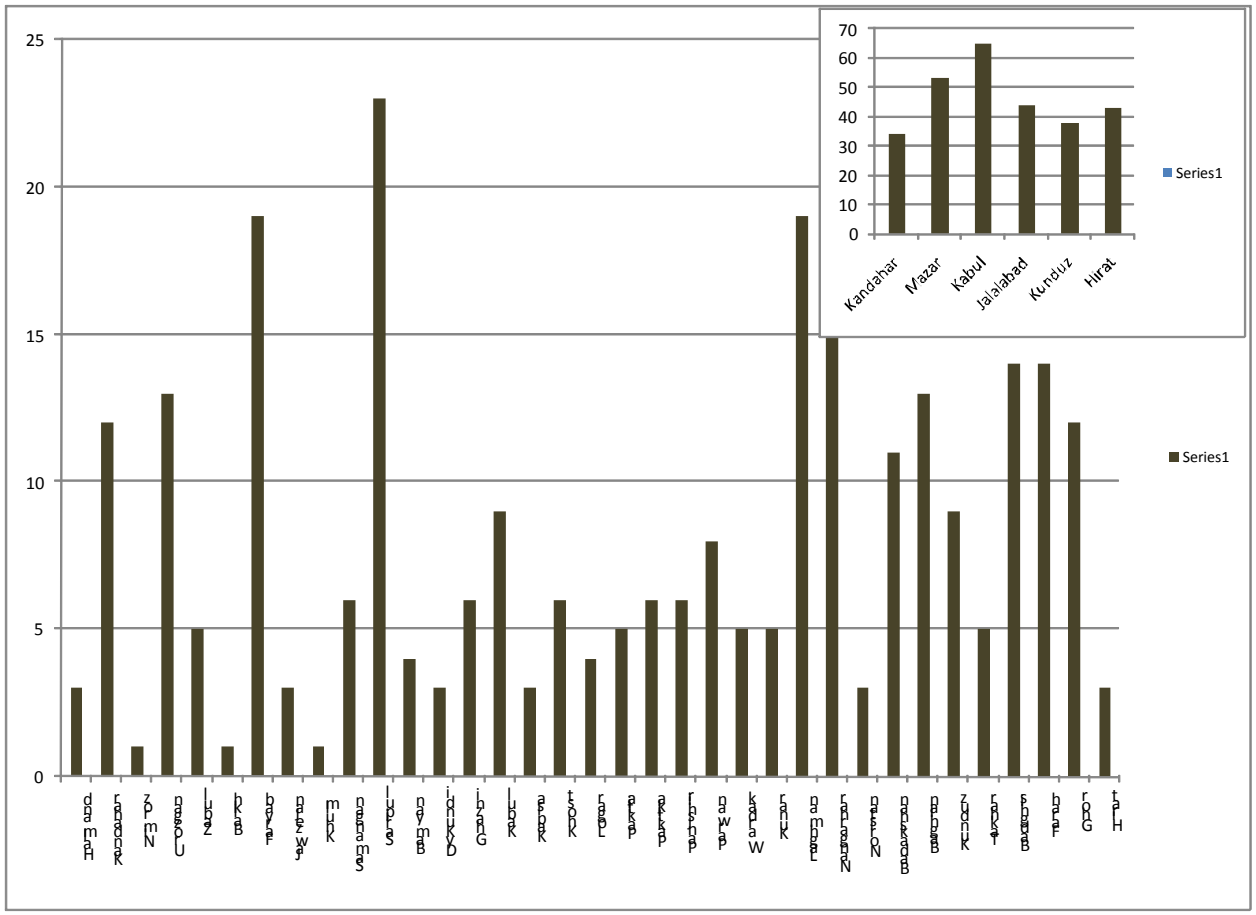
98. **Additional staffing:** Factors which delayed EIRP implementation have been addressed under the IRDP. Additional staff positions of regional Contract Managers, Quality Control Engineers, Environmental and Social Safeguard officers and Construction Supervisors have been provided in each regional office of the PCU (see Annex 7).

99. **Operation & maintenance arrangements:** On completion and handover of the schemes to the community, the project would mobilize O&M trainers in the field to train the community representative designated by the community for O&M (*Mirabs* and others).

List of Medium and Large Schemes Identified

100. The charts and table below show the list of schemes identified by region and province. Design and construction of the schemes would take into account the provincial as well as regional distribution. It would be possible to cluster several schemes within a province or all schemes in a province (where there are less than five schemes). The large schemes are located in 16 provinces. Hence there would be a minimum of 16 procurement packages or a maximum 22 packages, in order to attract large contractors. This aspect would be considered in developing the implementation arrangements and procurement plan.

Distribution of Medium Irrigation Schemes by Province and Region



Distribution of Large Schemes by Province and Region

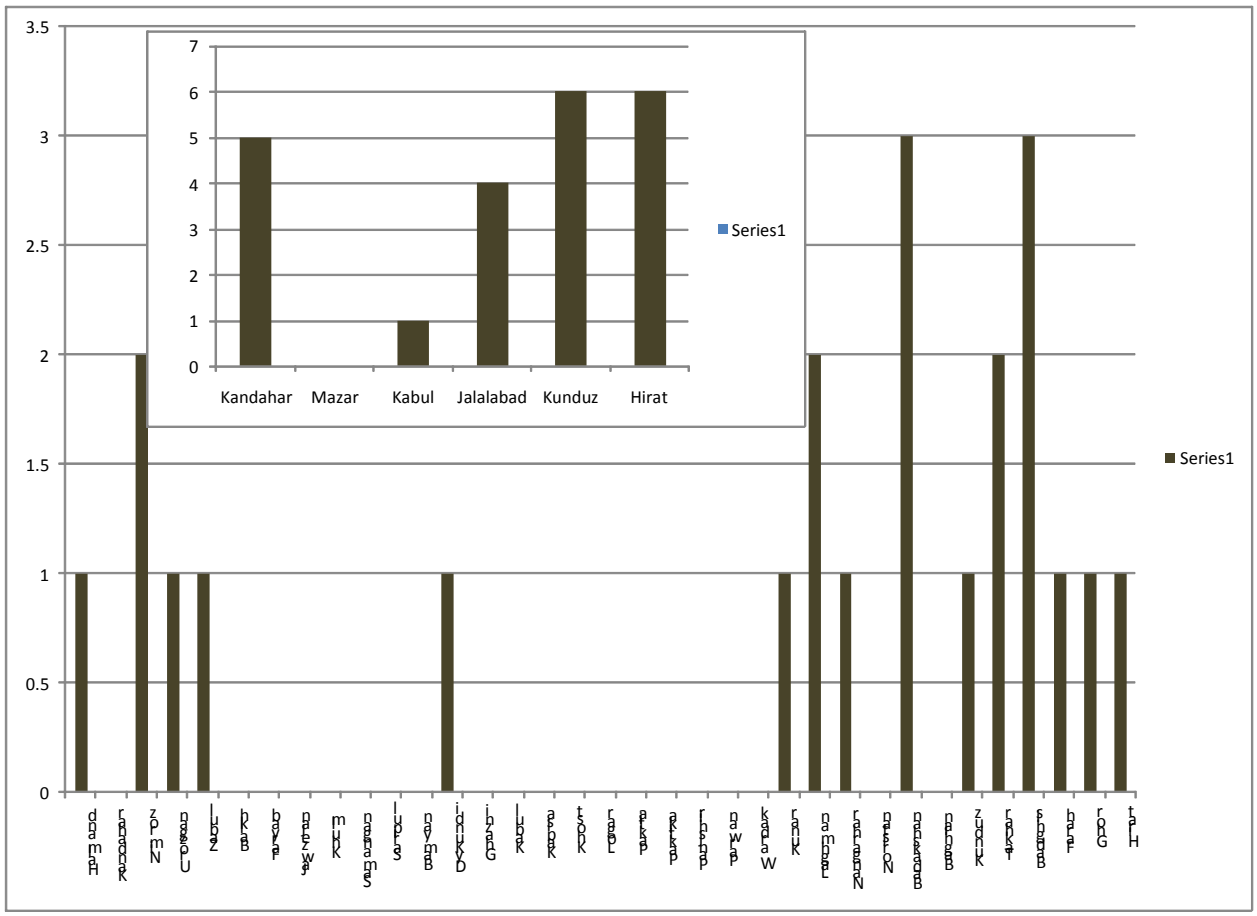


Table 1.1: Component A: Rehabilitation of Irrigation Infrastructure
Region Wise Summary of Medium and Large Schemes

	Region	Medium Sub-Projects				Large Sub-projects			
		Number	Cost (USD million)	Area (ha)	Beneficiary (Households)	Number	Cost (USD million)	Area (ha)	Beneficiary (Households)
1	**Mazar**	37	5.39	30,752	22,437	0	0	0	**0**
2	**Kabul**	44	9.24	58,220	51,699	1	0.6	950	**1,450**
3	**Herat**	42	7.26	37,828	26,408	6	3.95	12,194	**4,050**
4	**Kandahar**	29	5.6	35,770	39,220	5	9.0	16,400	**15,443**
5	**Jalalabad**	32	7.15	19,430	13,400	4	5.86	4,109	**9,400**
6	**Kunduz**	35	5.56	47,930	19,186	6	10.6	36,650	**73,750**
	Grand Total	**219**	**40.2**	**229,930**	**172,350**	**22**	**30.01**	**73,303**	**104,093**

Component B: Small Dam Development[25] (US$ 31.3 M)

101. **The need for storage dams:** One of the major constraints to increasing sustainable agricultural production in Afghanistan is the unreliable and untimely supply of water for irrigation even though total water availability during a year is substantial, and in most cases even in excess of actual needs. Most rivers and streams in the country have their peak flow in the spring and early summer, but reduce to a trickle or dry-up completely during late summer and early autumn. Consequently, the regulation and control of rivers and streams is essential to ensure optimum use of available water resources for agriculture as well as hydropower and to minimize recurrent flood damages.

102. The development of infrastructure required for river and stream regulation and control is beyond the technical and financial resources of local farming communities and thus there is an urgent need for the MEW to step in and support such development initiatives.

103. The Government's priority is to develop a long-term strategy to manage water resources and reduce vulnerability to drought. The strategy focuses on increasing the availability and reliability of water supplies, and improving water use efficiency. Specifically, the strategy includes: (i) water harvesting and watershed management, including water storage structures both small and large; (ii) effective control of groundwater use; (iii) better information systems on water availability, (iv) eliminating unsustainable land use practices; (v) improved intakes and other water conveyance structures and on-farm water management; and (vi) expanding the irrigated area.

104. **Activities to be funded under Component B:** The small dams component would support (i) the completion of prefeasibility/feasibility studies for 22 dam sites started under the EIRP[26] (US$ 2.0 million); (ii) consulting services for the preparation of detailed designs[27] and construction supervision of a few multi-purpose dams (US$ 3.0 million); (iii) construction of 2 or 3 small dams and appurtenances, and associated irrigation conveyance and distribution systems (US$ 24 million); and (iv) independent monitoring of land acquisition and resettlement plans (US$ 0.5 million). An independent agency/NGO would be appointed to monitor the implementation of ESMF (including land acquisition and resettlement). Site specific LARAPs would be prepared in accordance with the agreed LARPF.

105. **Current status:** Twenty two potential sites have been identified (see table below) in the northern closed river basins located in Faryab (5), Jawzjan (3), Samangan (9), Sari-Pul (3) and Balkh (2) provinces of the Mazar region. A preliminary assessment of potential environmental and social impacts was carried out using Google Earth Imageries (December, 2007) supplemented by tools from Arc MAP Geographic Information System (GIS). Land Use and Land Cover (LU/LC) classification was carried out based on visual interpretation of the imageries for 10 km radius (buffer) around each of the 22 dam locations. It has been observed that the most dominant land cover across all the 22 dams is the barren and fallow lands. Contributions from land use such as settlement and agriculture are far less and so also the vegetation. Dense vegetation is virtually absent in all buffer areas. Settlement areas are prominent in the buffer areas around Pasha and Bato Baba dams. Digital Elevation Model (DEM) was sourced from Shuttle Radar Topography Mission (SRTM) with 90 m resolution[28]. A 90 m spatial resolution gives elevation information (elevation in meters) for area 90 m x 90 m. For each dam location, DEM was generated at one m interval by interpolation algorithms available in Arc MAP. Watersheds were generated for 17 of

[25] The government assigns high priority to building capacity in MEW for developing Afghanistan's water resources. Experience of building small dams would be highly beneficial for the future development of Afghanistan's under-utilized water resources.

[26] The list and particulars of the 22 dams sites is available in project files

[27] Including preparation of related land acquisition and resettlement plans

[28] http://glcfapp.glcf.umd.edu:8080/esdi/index.jsp

the 22 dams based on DEM and locations of small dams. Estimation of submergence area was done for 10 of the 22 dams assuming 10 m of impoundment using tools available in Arc MAP. It has been observed that for the 10 dam sites analyzed, environmental and social impacts due to submergence may be considered as nil or negligible, except for one dam site Masjet Sabz dam. This work will help rank sites based on potential impacts to human settlements and vegetation due to submergence upstream and water use downstream and will complement the field data to be obtained during the preparation of prefeasibility/feasibility studies on socio-economic and environmental aspects.

106. Selection of international consultants for the preparation of pre-feasibility studies for these 22 sites followed by feasibility studies for ten top-ranked sites based on technical, economic, social and environmental sustainability criteria is under process. Award of contract and mobilization of consultants is expected to be completed by the start of the project in July 2011. These feasibility studies would be completed by June 2012.

107. Subsequently international consultants would be selected following Bank guidelines for selection of consultants to prepare detailed designs for about two or three top-ranked sites based on agreed multiple selection criteria under a separate design and construction supervision contract. Technical criteria would include water availability/ hydrological condition of the proposed site; topographical suitability of dam site and reservoir; geological/geotechnical condition; low sediment load condition; accessibility to the site, increase in the irrigated area (and yield); and suitable dam height. Similarly minimal negative social and environmental impact in the catchment area upstream and the command area downstream would be ensured by using criteria related to impact on forests, grazing land and biodiversity including endangered species; cultural property, historical sites and monuments of national and international importance; water quality and siltation; location of habitats and villages in the catchment area and possibility of submergence; landscape degradation; soil erosion; and air/noise pollution. Criteria for minimal negative social impact would include displacement of population; adverse effect on people's access to existing services; and unequal distribution of benefits. Security related criteria such as non-existence of mines and absence of insurgency activities would be foremost in selection of sites for dam construction.

108. As per requirements of OP/BP 4.37, generic safety measures for small dams would be assessed as part of preparation of environmental and social assessments and ESMPs and reflected in the engineering design and operation of small dams.

109. Actual construction of small dams would commence in 2013/14 allowing three full construction seasons before the project closing date. Contractors for the construction activities will be selected through ICB.

110. Component D of the project would develop the capacity of MEW's Survey and Design Department to manage the Ministry's overall small dam development program both at the Kabul office and the Mazar regional Office, including operation and maintenance and dam safety aspects.

Component C: Establishment of Hydro-Meteorological Facilities and Services (US$ 8.2 M)

Background

111. Under the ongoing EIRP hydro-met facilities, including 105 hydrological stations, 60 river flow measurement stations, and 56 meteorological stations are being established, and a start has been made in building capacity for hydro-met data collection and collation. This component of the IRDP would build upon the work done under the EIRP and support the establishment of an efficient and effective hydro-meteorological service, including the provision of hardware[29] and software, field equipment and transport facilities, as well as training of MEW staff in data collection, analysis and dissemination. Twinning arrangements are being pursued with countries with well developed hydro-meteorological services to help develop capacity of MEW's hydro-meteorological department.

112. **Hydrological observation in Afghanistan:** In order to make the best use of the country's water resources and ensure their sustainable development and management, it is important to collect and analyze accurate hydro-met data. Data collected from the hydro-met stations are the most important input for accurate water resources planning. Unfortunately, after the USSR invasion in 1979 hydrological data observation ceased and existing hydrological stations were destroyed or rendered non-operational.

113. **Hydro-Meteorological facilities supported under the EIRP:** In order to overcome this situation, 105 hydrological stations have been installed under the EIRP and hydrological data observation has started after a gap of 30 years. In addition, meteorological stations, snow gauging stations and bank-operated cableways for flow measurements are being installed. The hydrological facilities installed (or being installed) are summarized below by river basin:

Number of hydro-meteorological stations installed under EIRP

River Basin Office	Hydrological	Meteorological a/	Snow a/	Cableways a/
Kabul River	38	6	10	11
Kunduz River	28	7	9	17
Harirud River	17	4	2	2
North River	15	6	4	6
Helmand River	7	3	5	4
Total	**105**	**26**	**30**	**40**

a/ Under installation

114. **Hydrological Stations:** These Stations would observe water levels (gauge), precipitation, temperature and relative humidity. At twenty stations water quality will also be observed. At the time of appraisal, installation was completed for 105 stations and an additional 22 stations were under construction. The remaining 47 stations could not be installed so far due to the prevailing security situation at the proposed sites. These are expected to be installed under the IRDP when the security situation permits.

115. **Meteorological and snow stations:** This includes establishment of 30 snow gauging stations and 26 automatic weather stations (AWS) to observe meteorological elements, including precipitation, temperature, relative humidity, wind speed, barometric pressure and solar radiation and

[29] Including completion of contracts started under the EIRP.

evaporation. Satellite based telemetry for transmittal of data to a receiving station at Kabul is envisaged. To start with only one of the 56 stations would have telemetry capability.

116. **Bank-operated cableways at 40 Hydrological Stations[30]:** These cableways would supplement the hydrological stations already installed by enabling flow measurement and sampling for sediment analysis. Construction activities are in progress.

117. **Installation of silt measurement laboratories:** This includes construction of silt laboratories in 6 regional offices suitable for the analysis of sediment samples for the purpose of quantifying the suspended slit content. At the time of appraisal, construction works have been completed and laboratory equipment is being procured.

Activities to be Supported under IRDP Component C

118. This component would build on the work done under the EIRP for the establishment of efficient and effective hydro-meteorological services, including the provision of hardware and software, field equipment and transport facilities, and training of MEW staff in data collection, analysis and dissemination. Twinning arrangements are being pursued with suitable institutions in other countries. This component would include the following sub-components:

119. **Operation and maintenance of hydro-met facilities (US$ 5.2 Million):** Operation and maintenance (O&M) of the hydro-meteorological stations installed under the EIRP is weak. This is due to various reasons, including inadequate staffing, weak management and non-provision of budget for O&M. Consequently, about 30 percent of the installed hydrological stations are not fully functional. Although procurement of performance based O&M contracts was already completed as part of the supply and installation contracts awarded under EIRP, the O&M contracts could not commence because of non-provision of required budget by GoA. *Funds would be provided under the Project to finance these contracts on a declining basis for the first four years of the project, with 100 percent financing in project year 1 (PY1); 75 percent in PY2; 50 percent in PY3 and 25 percent in PY4. The Government will allocate the budget for meeting the balance cost and take over the full O&M responsibility starting from PY5*.

120. **Installation of remaining hydro-met stations (US$ 2.0 Million):** Installation of hydro-met facilities started under EIRP will continue under the IRDP. This would comprise: (i) installation of the remaining 47 hydrological stations, for which the equipment has already been procured; and (ii) adding telemetry capability to the remaining 55 AWS to transmit data to the receiving station at Kabul.

121. **Capacity development (US$ 0.5 Million):** Based on the experience under the EIRP, it is clear that strengthening of the General Directorate of Water Affairs Management (GDWAM) is vital for the success of hydrological and meteorological services in Afghanistan. Under the IRDP, the technical capabilities of staff at national, regional and provincial level will be strengthened. Capacity development activities would include: (i) in-country training; and ii) twinning arrangements with overseas institutions. Incentives for retaining qualified and trained staff and incremental operating costs of GDWAM are included under Component D.

122. **In-country training in basic Hydrology/Water Resources:** Besides on the job training by the International Hydrologist of the project's technical assistance team, formal training in data collection and analysis, and hydrology and water resources planning and management will be organized. The

[30] 20 additional cableways are planned but a contract has yet to be awarded under the EIRP.

trainings will target technical staff at headquarters, regional/provincial offices. A detailed trainings program will be prepared by the international hydrologist who would be posted at the GDWAM office in Kabul. To make this training more effective the project will establish linkages with other departments within MEW, including the *Water Resources Planning Unit* and the *Project Planning Unit* supported by the Afghanistan Water Resources Development Technical Assistance Project (AWARD) funded by an ARTF grant.

123. **Twinning with overseas institutions:** Twining with overseas research organizations and academic institutions is being pursued for short and long-term training in hydrology, meteorology, hydrological data management, water resources planning and management and other related fields. It is expected that trainers from overseas organizations would visit Afghanistan to conduct the formal training courses. Similarly, trainees would be sent to these institutions to get on-the-job experience. Twinning arrangements are being pursued with: (i) the International Center for Water Hazard and Risk Management (I-CHARM) jointly established by the Ministry of Infrastructure, Land and Transport (MILT) Japan and UNESCO; (ii) the Philippines Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Flood Forecasting Bureau, on basin hydrology forecasts; flood warning system for river basins; and dam warning system; and (iii) the Asian Institute of Technology in Thailand, which runs a master's program in Agricultural Water Management (AWM) for Enhanced Land and Water Productivity in cooperation with UNESCO-IHE Institute for Water Education in the Netherlands. Contacts are also being established with semi arid countries in central Asia.

124. **Procurement of hydrological equipment (US$ 0.5 Million):** This sub-compoent will finance office equipment and facilities (e.g. broad band internet) and field equipment, and software packages to improve hydrological data collection and analysis. Software packages would include: Statistical, Hydraulic/ Hydrological and GPS-related software; and equipment would include taglines for measuring river width; inflatable rubber boats, life jackets, etc.

Expected Outcomes

125. The following outputs and outcomes are expected at project completion:

(i) 174 hydrological stations installed and operational with rating curves available for all stations;
(ii) 60 bank-operated cableways installed with flow measurement carried out, including peak discharges;
(iii) 26 AWS and 30 snow stations installed and operational with satellite communication system;
(iv) MEW/WMD technical staff trained and capable of performing technical analysis in hydrology, meteorology and water resources management;
(v) Hydrological Yearbook and/or Annual Report published annually by Water Resources Department/MEW; and
(vi) In cooperation with other relevant government agencies, data on precipitation, river discharges including flood forecasts made available to the general public and interested parties.

Component D: Project Management and Capacity Building (US$ 39.2 M)

126. This component would include the following sub-components:

127. **Sub-component D1: Project management and construction supervision (US$ 17.9 million):** This would include support for: (i) overall project management, including procurement, contract management, financial management and capacity building; (ii) preparation of irrigation

rehabilitation sub-projects, including survey and design work; (iii) *supervision*[31] of contracts for irrigation rehabilitation and hydro-met facilities, including contract management and quality control; (vi) consultancy services for preparation of sub-project specific ESMPs in accordance with the provisions of the ESMF and (v) independent monitoring of compliance with the project's ESMF. FAO has been successfully providing technical assistance under the EIRP. Based on this good experience and to maintain continuity, FAO would provide technical assistance services for activities (i), (ii) and (iii) under this sub-component. The current FAO team for EIRP will be suitably strengthened by adding specialists and field staff for contract management, social and environmental aspects, as well as short term inputs of an Agricultural Economist and other disciplines to meet the project requirements. *The FAO technical assistance contract for EIRP is being extended till December 31, 2011 and will cover the requirements of both EIRP and IRDP up to this date. MEW will also negotiate a new contract with FAO to cover the technical assistance needs of IRDP from January 1, 2012 onwards.* It is expected that sufficient capacity would be created in MEW/PCU during the first four years of the project and FAO technical assistance inputs would be phased out. After project year four PCU staff will fully take over most of the responsibilities. *Terms of reference for technical assistance are available in the project files*. One of the weak areas in the EIRP was the inadequate attention to preparation of ESMPs and monitoring compliance with the provisions of the ESMF at various stages of the sub-project cycle. To address this weakness, for activity (iv), the project will hire short term consultancy services to prepare sub-project specific ESMPs. Finally, for activity (v), an independent organization or local NGOs would be engaged to monitor compliance with the ESMF. In addition, the involvement of CDCs in providing oversight for this important aspect as well as to promote women's participation in project activities.

128. **Sub-component D2: Support for capacity building (US$ 9.4 million**): This would include: (i) training of MEW and PCU staff in various fields as wells as training of *Mirabs,* CDCs and farmers in O&M; (ii) provision of an international Management Specialist for building capacity of MEW's Finance and Administration Directorate; (iii) performance based incentives/training allowance for PCU and Hydrology staff; (iv) rehabilitation of office buildings of MEW; (v) establishment of a web-based MIS for the project; and (vi) acquisition of office and field equipment and vehicles required for project implementation.

129. *Training (US$ 0.8 million)*. The project would support both on-the-job and formal training inside as well as outside the country. Keeping in view the experience under the EIRP and possible turnover of staff, training would be on a recurring basis. Special focus of the training would be on the core skills required for project implementation, including procurement, financial management; internal audit; construction supervision and quality control; operation and maintenance; project management; social and environmental safeguards; gender issues; and M&E. In addition training would be provided in various technical fields including small dams development, operation and maintenance and safety aspects. Training for *Mirabs,* CDCs and farmers would focus on O&M of rehabilitated schemes as well as small dam operation.

130. *Financial Management Capacity of MEW (US$ 0.9 million).* An international FM specialist would be recruited by the project to work in the Finance and Administration Directorate of MEW to help establish internal FM systems and to train MEW staff.

131. *Performance-based Incentives/Training Allowance (US$ 6.7 million)*. PCU and PWMD staff working on EIRP are regular civil servants with salaries much lower than in the open market for equivalent professionals. As a result there has been considerable attrition of staff and about thirty

[31] The primary responsibility for supervision would be with the staff of PCU and provincial water management department while the consultant/TAT would carry out periodic sample checks and report back on any deviations from the specification or other quality issues.

percent staff have left the project and joined better paying jobs. To help motivate and retain qualified and experienced project staff, a package of performance-based incentives[32] was introduced under the EIRP that proved successful and cost effective[33] and the project performance improved visibly. The incentives program would be reviewed and made more effective. The incentives package would be administered by the TAT.

132. *Rehabilitation of office buildings (US$ 0.5 million)*. Several office buildings of MEW have been rehabilitated under the EIRP. However, some of the provincial water management department buildings remain to be rehabilitated. These would be supported under the project.

133. *Establishing an MIS (US$ 0.1 million)*. Under the EIRP an MIS was established. Under the IRDP this MIS would be upgraded to a web based system that would allow the regional offices to make entries in the system directly.

134. *Office and field equipment and vehicles (US$ 0.5 million)*. Much of the office and field equipment and vehicles procured under the EIRP are now old or outdated. The IRDP will finance required office and field equipment for the PCU and TAT, including computers/laptops, printers, copiers, UPSs, portable generators, GPS-enabled cameras or smart mobile phones, GPS devices, survey equipment (including Total Stations), motor cycles for field staff, 4x4 field vehicles, furniture and fixtures.

135. **Sub-component D3: Incremental Staff (US$ 3.4 million):** Because of staff attrition several staff position in the PCU and its regional offices are vacant and need to be filled for effective implementation. In addition, under the IRDP greater emphasis is placed on more effective supervision, quality control and contract management as well as on social and environmental issues. This sub-component would finance the cost of existing and additional contract staff for the PCU and its regional offices, the GDWAM and the M&E unit. Additional staff would include: surveyors, works supervisors, quality controllers, community water assistants (social mobilization), hydro-meteorologist, social and environmental officers, contract management officers, procurement officers, financial management officers, IT, M&E, enumerators, etc.

136. **Sub-component D4: Recurring/incremental operating costs (US$ 8.5 million)**: This sub-component would finance the recurring costs the of PCU and its six regional offices, M&E unit, and the hydrology/GDWAM, including office rentals, utilities, communication and IT costs, office maintenance cost, salaries of support staff (e.g. vehicle drivers), staff travel and per diem, vehicle O&M costs, as well as the cost of *monitoring and evaluation* activities.

[32] Incentives were disbursed against performance and tangible outputs (e.g. number of schemes prepared).

[33] The total emoluments of the staff receiving the performance-based incentives were still lower than the open market salaries of equivalent professionals.

Annex 2: Results Framework and Monitoring

Afghanistan: Irrigation Restoration And Development Project

Results Framework

PDO	Outcome Indicators	Use of Outcome Information
Increase agriculture productivity and production in the project areas	• Increase in irrigated area • Increase in agricultural productivity	• Improved management of project activities • Strengthening dialogue with GoA on key issues • Improved design of future interventions
Intermediate Outcomes	**Intermediate Outcome Indicators**	**Use of Intermediate Outcome Monitoring**
Component A. Rehabilitation of Irrigation Systems		
Farmers increase production with better access to water from rehabilitated irrigation schemes	• Reduction in water related disputes	• Adaptive project design and management
Component B. Small Dam Development		
Farmers increase production with better access to water from small dams	• Number of small dams completed	• Adaptive project design and management
Component C. Establishment of Hydro-Meteorological Facilities and Services		
Cost effective sub-projects are designed with better data availability from established hydro-meteorological facilities	• Percentage of sub-projects designed using data from the established hydro-meteorological facilities and services	• Adequate dissemination of meteorological information
Component D. Project Management and Capacity Building		
Government and local institutions are more effective due to capacity building	• Percentage of trainees who agree that the training has helped them to do their job better	• Planning effective institutional capacity building

Arrangements for Results Monitoring

Project Outcome Indicators	Baseline[34]	Target Values						Data Collection and Reporting		
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Increase in irrigated area	300,000 ha	3%	5%	8%	10%	12%	15%	Annual Seasonal Report	MIS and Impact Evaluation	M&E Unit
Increase in agricultural productivity[35]	Wheat 1915 kg/ha	3%	6%	10/%	15%	18%	20%	Annual Seasonal Report	MIS and Impact Evaluation	M&E Unit
Intermediate Outcome Indicators										
Component A: Rehabilitation of Irrigation Systems										
Reduction in water related disputes	90 disputes per scehme per year[36]	10%	15%	20%	30%	40%	50%	Annual Seasonal Report	MIS and Impact Evaluation	M&E Unit
Component B. Small Dam Development										
Number of small dams completed	0	0	0	0	0	2	3	Annual Seasonal Report	MIS and Impact Evaluation	M&E Unit
Component C. Establishment of Hydro-Meteorological Facilities and Services										
% of sub-projects designed using data from the established hydro-meteorological facilities and services	0	-	20%	50%	60%	80%	100%	Annual Seasonal Report	MIS and Impact Evaluation	M&E Unit
Component D. Project Management and Capacity Building										
% of trainees who agree that the training has helped them to do their job better	0 (New initiative)	50%	60%	70%	70%	70%	70%	Biannual Reports	Training Evaluations	M&E Unit

[34] Marach 31, 2011

[35] Wheat is used as a proxy for this indicator. However, the project expects increases in productivity for other crops (i.e. maize, rice, onion, potato)

[36] Weighted average of 56 schemes included in M&E sample

Annex 3: Summary of Estimated Project Costs

Afghanistan: Irrigation Restoration And Development Project

Project Cost Summary - Component wise

(US$ Million)

Sr	Component	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Total
A.	Rehabilitation of Irrigation Systems	6.5	7.8	15.0	14.8	14.0	11.9	70.0
B.	Small Dam Development	-	3.8	8.6	6.6	6.2	6.2	31.3
C.	Establishment of Hydro-Meteorological Facilities and Services	2.1	3.0	1.1	0.6	0.6	0.6	8.2
D.	Project Management and Capacity Building	5.1	8.5	8.6	8.0	5.1	4.0	39.2
	Total Project Costs	**13.7**	**23.1**	**33.3**	**30.0**	**25.9**	**22.7**	**148.7**

Financing Plan

(US$ Million)

Sr	Source of Financing	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Total
1	IDA	9.0	15.2	21.9	19.8	17.0	14.9	97.8
2	ARTF	4.7	7.6	10.9	9.8	8.3	7.2	48.4
3	Govt. of Afghanistan	-	0.4	0.5	0.4	0.6	0.6	2.5
	Total Project Financing	**13.7**	**23.1**	**33.3**	**30.0**	**25.9**	**22.7**	**148.7**

Annex 4: Operational Risk Assessment Framework (ORAF)

Afghanistan: Irrigation Restoration And Development Project

Project Development Objective(s)

To increase agriculture productivity and production in the project areas.

PDO Level Results Indicators:	**KEY RESULTS:**
	a) About 15 percent increase in irrigated area b) At least 20 percent increase in crop yields in rehabilitated schemes. c) At least 30 percent decrease in water related disputes in rehabilitated schemes. d) Planners/designers use improved hydro-meteorological data to prepare more cost-effective designs for rehabilitation and development works. e) Improved capacity in MEW with staff able to use the skills and knowledge acquired during formal and on-the-job training/capacity building in various fields

Risk Category	Risk Rating	Risk Description	Proposed Mitigation Measures
Project Stakeholder Risks			
1. Project Stakeholders	Medium-L	Although most stakeholders support the project concept some believe that the government should go for large water resources development projects that would increase water availability. This may reduce ownership and focus during implementation.	Highlighting the positive outcomes of EIRP from the M&E results. Encouraging field visits by important stakeholders to see the results and hear from beneficiaries directly. Moreover, the project will also support a few small dams and associated irrigation development.
Implementing Agency Risks			

Risk Category	Risk Rating	Risk Description	Proposed Mitigation Measures
1. Capacity	Medium-I	MEW has a reasonably good track record under the ongoing EIRP with regard to preparation and implementation of civil works. Substantial improvement is required in its capacity to manage contracts and assume ownership of all activities including the setting up and operationalization of its hydro-met services. Although EIRP has helped to build capacity, MEW is still weak in terms of implementation capacity (procurement, contract management, and FM) and ability of timely decision making. There is a general lack of technical and managerial capacities in MEW at the Central, Regional and Provincial levels.	The project would adopt and improve the organizational arrangements used under the EIRP (a PCU supported by strong technical assistance team). A high level project steering committee would be established to provide policy guidance and oversight. The project will have a substantial component on building the capacity of implementation agencies in procurement, contract management, FM and technical and managerial issues. In addition, an appropriately empowered technical assistance team would support the staff of the MEW and PCU in procurement, contract management, and FM as well as day to day management of project activities. Greater delegation of decision making power to the PCU will be encouraged by the Bank team. Continuous training of staff would be provided for to handle staff turn-over. In addition, performance based incentives for staff would help retain good staff.
1.1. Financial management		Weak internal controls may lead to misappropriation of funds and delay in preparation and submission of acceptable financial reports and disbursements.	Minimize use of Designated Account, maximize direct payments to consultants. Presence of FM Agent at the Treasury of Ministry of Finance, responsible for processing payments, transaction recording and reporting. Presence of Audit Agent at the Control and Audit Office, responsible for external audit of the project.
1.2. Procurement		MEW is weak in terms of implementation capacity and ability of timely decision making.	The project will have a substantial component on building the capacity of implementation agencies in procurement, and contract management. In addition, an international procurement specialists would support the staff of MEW and PCU in procurement and contract management, Greater delegation of decision making power to the PCU will be encouraged by the Bank team. Continuous training of staff would be provided to handle staff turn-over.
2. Governance	Medium-I	Insufficient transparency in personnel management and insufficient accountability in procurement and contract management.	Project website will be established for wider and transparent dissemination of procurement processes. A grievance redressal mechanism will be developed.

Risk Category	Risk Rating	Risk Description	Proposed Mitigation Measures
			Details are provided in the GAAP.
3. Fraud & Corruption	Medium-I	MEW lacks arrangements for accountability and controls for fraud and corruption. While there have been no officially reported instances of fraud and corruption under the ongoing EIRP, there have been instances of long delays in bid evaluation and contract award which may be indications of fraudulent and/or corrupt practices.	Use of PCU assisted by a strong and empowered technical assistance team with a clear role in procurement and processing of payments to contractors. Construction supervision will be enhanced by assigning a clear role for the TAT in sport checks, certification of quality, quantity and final payments. Workshops for Contractors would be held frequently to create awareness regarding Bank procurement guidelines and steps open to them to report any mishandling of procurements.
Project Risks			
1. Design	Medium-I	While the project design is essentially similar to the ongoing EIRP project MEW has little past experience of small dams. The local construction industry has limited capacity and international contractors may be reluctant to bid because of security considerations.	Location of small dams would be carefully selected in relatively accessible and secure areas and which can be completed within the project period. MEW would seek security arrangement with PRTs and local communities. Where feasible, small scale electricity generation would be considered at small dams and canals, thereby increasing the impact of the project and allowing local farmers to produce and process their outputs. Workshops would be held to attract international contractors and promote joint ventures with better local firms. Fiduciary ring-fencing would be used for the project.
2. Social and Environmental	Medium-I	The ongoing EIRP has demonstrated that irrigation rehabilitation has limited social and environmental risks. However, small dams may involve involuntary land acquisition and displacement of people and legal land acquisition is hampered by lacking or faulty land registration, competing claims and unclear procedures.	A Resettlement Policy Framework has been developed and approved by the Afghanistan Land Authority that is consistent with OP 4.12. In addition, an Environment and Social Management Framework has also been prepared and that will guide the development of detailed ESMPs at the time of selection of potential dam sites. Small dam sites would be carefully selected (where there is a keen demand from local communities) and designed to avoid or minimize adverse impacts. In addition, the Social Assessment will include detailed riparian assessment for the small dam component. The PCU

Risk Category	Risk Rating	Risk Description	Proposed Mitigation Measures
			and the technical assistance team would be equipped with required skills for dealing with social and environmental issues. To reduce the risk of malaria and water borne diseases a small health awareness activity would be added to the project.
3. Program and Donor	Low	While the project is accorded high priority by Government and other donors there may be lack of cooperation and coordination between MEW and MAIL in designing and implementing rehabilitation and on-farm interventions. Achievement of PDO does not depend on actions by other donors.	To promote coordination with on-farm interventions to be implemented by MAIL under the On-Farm Water Management Project, MEW/TAT will appoint a focal person in the PCU who will ensure preparation of coordinated designs and establish synergies. Also, the Project Steering Committee would include Deputy Minister MAIL as a member to promote coordination between MEW and MAIL.
4. Delivery Quality	Medium-I	Inadequate capacity for preparation of appropriate work plans, construction supervision and contract management coupled with increasing insecurity and mixed contractor performance could result in implementation delays and poor delivery quality. O&M of rehabilitated schemes are entirely the responsibility of water users with no responsibility of the government. Although local communities are generally able to cope with routine O&M they are unable to deal with major damages (e.g. caused by floods). The hydro-met stations are not well maintained because of lack of O&M funding and trained staff in MEW. Some stations have also been vandalized. Capacity for construction supervision of widely dispersed works in remote locations is low.	High quality performance by the TAT is a must and would be closely scrutinized by Bank team. In addition capacity-building in the areas mentioned under the risk description column would minimize the impact of this risk. Contractors and communities would be encouraged to take out and maintain insurance for ongoing and completed works. O&M of hydro-met stations would be carried out under outsourced performance contracts. At the same time, MEW staff will be trained in O&M and gradually take over responsibility of O&M. Local communities, including CDCs will be involved in keeping watch and ward against theft and vandalism. Greater role and involvement of TAT/consultants and local communities, CDCs in implementation oversight and security; greater attention to encouraging good contractors to participate; and use of technology in ground truthing.

Risk Category	Risk Rating	Risk Description	Proposed Mitigation Measures
		The operation and maintenance and safety of small dams in remote areas would pose challenges in an insecure environment.	Day to day operations (gate opening) would be the responsibility of local communities and CDCs. MEW staff will be responsible for safety aspects and will receive extensive training in this area.
5. Others	Medium-L	There is a risk that irrigation could be used for growing poppy, particularly in the remote project areas.	Prior to approval of schemes the project would require an undertaking from farmers/local communities that they would not grow poppy. The project would also collaborate with UNODC to monitor compliance. The project M&E would also use remote sensing for monitoring. In addition, local communities/CDCs will be involved in montoring and expected to report to provincial management any cases of growing poppy.

Overall Risk Rating at Preparation	Overall Risk Rating During Implementation	Comments
Medium – I	Medium – I	The overall rating takes in to account the risk identified above as well as experience under the EIRP and the team's knowledge of capacity of MEW.

Annex 5: Financial Management and Disbursement Arrangements

Afghanistan: Irrigation Restoration And Development Project

Country Issues

137. The Bank has gained substantial experience and understanding of the financial management environment in Afghanistan through the large number of projects under implementation over the past years. The Public Administration Capacity Building Project (PACBP) and the Public Financial Management Reform Project (PFMRP) are the primary instruments to continue and enhance the fiduciary measures put in place during the past years to help ensure transparency and accountability for the funding provided by the Bank and other donors.

138. A PFM performance rating system using 28 high-level indicators that was developed by the Public Expenditure and Financial Accountability (PEFA) multi-agency partnership program was applied in Afghanistan in June 2005. PEFA is comprised of the World Bank, IMF, EC, and several other agencies. The system is structured around six core dimensions of PFM performance: i) budget credibility, ii) comprehensiveness and transparency, iii) policy-based budgeting, iv) predictability and control in budget execution, v) accounting, recording, and reporting, and vi) external scrutiny and audit. Afghanistan's ratings against the PFM performance indicators generally portray a public sector where financial resources are, by and large, being used for their intended purposes. This has been accomplished with very high levels of support from international firms; this assistance will continue to be needed over the medium term if these ratings are to be maintained. There is also much room for improvement.

139. In spite of undeniable gains made in reconstruction since the end of 2001, the challenges facing Afghanistan remain immense; not least because of the tenuous security situation in the region and continued prevalence of a large illegal and illicit economy. The policy framework benchmarks have not yet been fully costed so various priorities are funded through the annual budgeting process. The rising costs of the security sector constitute the major constraint on attainment of fiscal sustainability. With regard to executive oversight, the national assembly will play an increasingly active role. All in all, the new national strategy has created high expectations of the executive which could prove to be quite difficult to meet.

140. The public sector, in spite of considerable efforts to reform its core functions, remains extremely weak outside of Kabul. The lack of qualified staff in the civil service and the absence of qualified counterparts in the government after 30 years of war and conflicts is a binding constraint. Delays in reforming the pay structure and grading of civil servants have severely crippled the public administration of the country. Domestic revenues lag behind expenditures by a factor of ten to one. Large-scale corruption could emerge to undermine the government's efforts to enhance aid flows through national accounts. Capacities to track expenditures and monitor expenditure outcomes have improved, but they need rapid and substantial strengthening if progress toward the attainment of national development targets is to be monitored. Currently, 75% of external revenues bypass government appropriation systems.

141. The World Bank is financing a Financial Management Advisor to assist the Ministry of Finance, an Audit Advisor to assist the Control and Audit Office, and a Procurement Advisor to assist in Procurement-related activities. Also an Internal Audit function is being developed within the Ministry of Finance with World Bank financing. USAID, and earlier the Indian Aid Assistance Program, is financing a team of consultants and advisors to assist the Da Afghanistan Bank in local as well as foreign currency operations. The activities carried out under the existing Public Administration projects

have helped the Government to ensure that appropriate fiduciary standards are maintained for public expenditures, including those supported by the Bank and the donor community.

142. Progress has been slower than expected in shifting from operations support provided by the three Advisors to capacity development and knowledge transfer to the civil servants. Given that, it is expected that the Advisors will continue to be required for the medium term. Challenges still remain in attaining the agreed upon fiduciary standards and also to further enhance them. And to make matters more complex, the regulatory environment in Afghanistan has advanced significantly in the past three years. Unfortunately, even mastery of basic skills in the early environment does not fully qualify the civil servants to work effectively in the new emerging environment.

Risk Assessment and Mitigation

143. The table below identifies the key risks that the project may face and indicates how these risks are to be addressed. The overall FM risk rating is high but the residual risk rating after application of the mitigating measures is substantial.

Risk	***Risk Rating***	**Risk Mitigation Measures**	**Residual Risk**	**Condition of negotiations, Board or Effectiveness (Y/N)**
1. INHERENT RISK				
Country Inherent Risk	M	Source - PFM study	M	N
Project Financial Management Risk	H	Ensure Designated Account remains active with regular expenditure reporting, maximize usage of direct payment method for expenditures; key FM functions to be performed by the technical assistance team along with the F&A Directorate of the implementing line ministry	S	N
Perceived Corruption	H	Government commitment, internal controls and internal audit will help to reduce the high level of perceived corruption.	S	N
Overall Inherent Risk	H		S	
2. CONTROL RISK				
1. Weak Implementing Entity	S	Utilization of the services of a technical assistance team to assist the Project Coordination Unit (PCU). The PCU will be staffed with international and national FM staff. Recruitment of international and national FM staff in the F&A Directorate, who will also be supported by the PCU FM unit. Oversight functions will be performed by the project Steering Committee	M	N

Risk	*Risk Rating*	Risk Mitigation Measures	Residual Risk	Condition of negotiations, Board or Effectiveness (Y/N)
		(PSC) headed by the Minister of MEW and with members from MAIL and MoF. The PSC will also have responsibility to approve the project budget.		
2. Funds Flow	S	Project expenditures will be paid from the Designated Account (DA) by SDU-MoF. In addition to payments out of DA funds, MEW can also request the SDU to make i) direct payments from the Grant Account to consultants or consulting firms, and ii) special commitments for contracts covered by letters of credit. These payments would only be made by SDU after due processes and proper authorization from MEW	M	N
3. Budgeting	S	Ensure that project funds are allocated in the annual Government Development Budget. In addition, project should ensure that it seeks MoF's approval of unutilized budget amount at each year end, as carried forward budget. Approved carried forward budget are used at the beginning of the new year, and ensure disbursements are made while waiting for the Parliament's approval of the new year's budget. There will be a Budget Committee comprised of representatives from the Project Coordination Unit (PCU), F&A Directorate and other relevant units of MEW, which will coordinate the budget process. This Committee will report to the Steering Committee, who will have responsibility to approve the budget. The composition of the Budget Committee will be detailed in the FM Manual.	M	N
4. Accounting Policies and Procedures	S	Will follow international standards. Project accounting procedures and details of the FM arrangements will be documented in an FM Manual to be prepared by the F&A Directorate with	M	N

Risk	*Risk Rating*	**Risk Mitigation Measures**	**Residual Risk**	**Condition of negotiations, Board or Effectiveness (Y/N)**
		assistance from the PCU FM unit, and approved by the Bank		
5. Internal Audit	H	Internal audit department of MEW will review project internal control systems. Internal audit TOR will be included in the project's FM manual. Given the inadequate capacity of MEW's Internal Audit, additional staff will be funded from the project to strengthen its capacity. Relevant training support will also be provided to the staff.	S	N
6. External Audit	H	Will be audited by CAO with support from Audit Advisor	S	N
7. Reporting and Monitoring	H	Strengthening the SDU is a priority under the FM Advisor contract, to provide information that will comply with agreed format of financial reports. This will be facilitated by the computerized accounting system that will be utilized by the F&A Directorate and the PCU FM unit to maintain records and generate required reports.	S	N
OVERALL CONTROL RISK	H		S	
DETECTION RISK	S	Adequate accounting, recording, and oversight will be provided in project procedures. Accounting/Recording/oversight by SDU – MOF of all advances/M-16 supported by Financial Management Advisor.	M	N
RISK RATING: H=HIGH RISK; S=SUBSTANTIAL RISK; M=MODEST RISK; L-LOW RISK				

Strengths and Weaknesses

Strengths

144. The Government provides assurance to the Bank and other donors that the measures in place to ensure appropriate utilization of funds will not be circumvented. The Government support for PACBP and PFMRP is strength in itself to enhance financial management in Treasury operations, public procurement, internal audit in the public sector, and external audit by the Auditor General. The

implementing line ministry, MEW has implemented and is implementing Bank funded projects, so the agency has experience in implementing Bank projects and following Bank procedures.

145. A specific strength of the project is that it is a follow-up project, and that it already has a number of mechanisms in place that will significantly reduce the financial risks associated with this kind of a project. In addition, the TAT to be engaged by the PCU will also provide assistance to F&A Directorate of MEW on the project's financial management.

Weaknesses and Action Plan

146. The main weakness in this project, as in many others in Afghanistan, is the ability to attract suitably qualified and experienced counterpart staff especially for Financial Management. The utilization of a firm to provide technical assistance, recruitment of international and national FM staff for the PCU, F&A Directorate and internal audit staff for the Internal Audit department to be funded by the project, together with training of F&A Directorate and Internal Audit department national staff, is expected to strengthen the fiduciary arrangements.

147. Action Plan – To be reviewed during Supervision.

Significant Weaknesses	**Action**	**Responsable Agent**	**Completion Date**
Project internal controls and procedures need to be defined	Financial Management Manual developed	F&A Directorate with assistance from the PCU FM unit	By June 30, 2011
Lack of qualified and experienced finance staff at the project level	Appointment of a firm to provide technical assistance Recruitment of FM staff in the F&A Directorate	MEW MEW	Before January 1, 2012 By August 31, 2011
Lack of qualified and experienced staff in the Internal Audit department of MEW	Recruitment of internal auditors	MEW	By August 31, 2011
Interim reports need to include required information	Un-audited interim financial report formats confirmed	IDA/MEW	Before negotiations

Implementing Entity

148. At the project level, the Finance and Accounts Directorate of MEW with support from the Financial Management Unit of the Project Coordination Unit (PCU) will take responsibility for the financial management of the project. The financial management (FM) capacity of the F&A Directorate will be strengthened from project inception, by the recruitment of relevant international and national FM professionals, regular training and provision of required FM system. Detailed working relationships between the PCU and F&A Directorate FM staff, PCU's and F&A Directorate's FM reporting requirements, staffing, systems and other FM arrangements will be included in the Financial Management Manual.

149. *Project oversight* – A Steering Committee headed by the Minister of MEW and with members from MAIL and MOF would provide high level oversight and policy guidance. The Project Steering Committee will also have responsibility to approve the project's annual budget.

150. *Project coordination and monitoring* – The PCU has responsibility for the overall project implementation, coordination and monitoring, it will be supported by the technical assistance team to be engaged. The TA team will report to the PCU on the consolidated progress of the project. It is also responsible for (a) assuring steady progress of execution in accordance with an implementation schedule reviewed and approved by the World Bank, (b) regular reporting to the Project Director, (c) ensuring adequate and smooth transfer of skills to the national staff, and (d) ensuring maintenance of high ethical standard and transparency throughout the process.

Budgeting

151. A budget committee will be formed in MEW to coordinate the preparation of annual work plan and the derivation of annual budget. This committee will include members from the PCU, F&A Directorate and other relevant units of MEW and shall report to the project Steering Committee. The Steering Committee will also have responsibility to approve the project's annual budget. The budget committee will coordinate quarterly budget reviews to ensure adequate budget discipline and control. The committee will be responsible for ensuring that project expenditures for each fiscal year are captured in the Governmental Development budget of that fiscal year. In addition, project should also ensure that it seeks for MoF's approval of unutilized budget amount at each year end, as carried forward budget. Approved carried forward budget are used at the beginning of the new year, and ensure disbursements are made while waiting for the Parliament's approval of the new year's budget. Project should seek for approval of carried forward budget forty-five (45) days before the end of the fiscal year end.

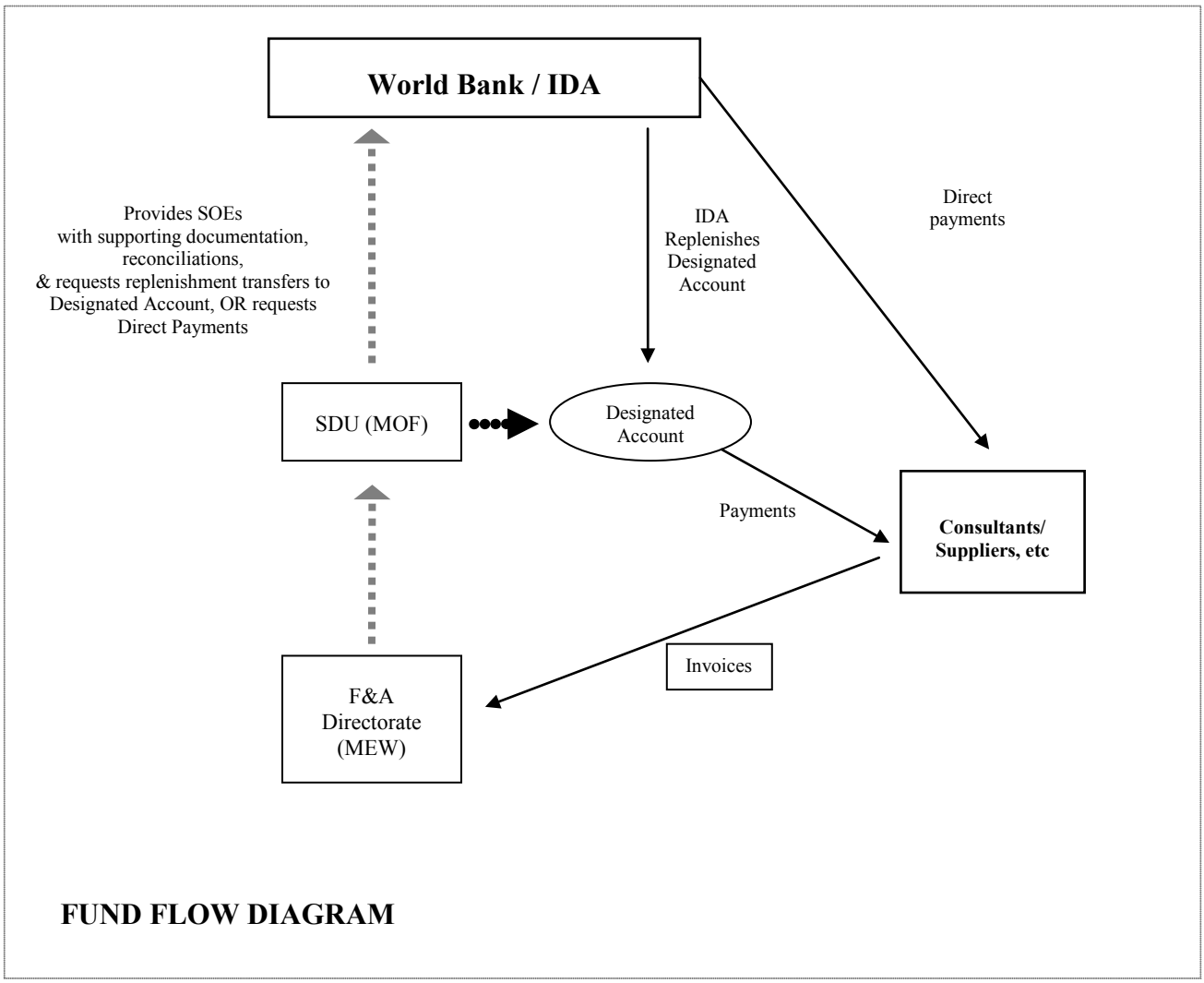
152. The composition of the Budget Committee, budgeting process and the key role of periodic budget reviews will be detailed in the FM Manual. The annual work plans and the annual budgets will be submitted to the Bank for review and approval, not later than three months before the end of the fiscal year (i.e. December 20th).

Funds Flow

153. The standard funds flow mechanism in Afghanistan will be followed in this project. Existing procedures will be followed. As with all public expenditure, all payments from the Grant will be routed through MoF. A single, segregated Designated Account (DA) will be opened at Da Afghanistan Bank (DAB, Central Bank) in the name of the project to facilitate payment of project expenditures. The DA, in keeping with current practices for other projects in Afghanistan, will be operated by the Special Disbursement Unit (SDU) in the Treasury Department of MoF. Requests for payments from the DA will be made to the SDU by the project when needed.

154. In addition to payments out of DA funds, the project can also request the SDU to make i) direct payments from the Grant Account to consultants, consulting firms or suppliers, and ii) special commitments for contracts covered by letters of credit. These payments will follow World Bank procedures. All project payments will be made to either international firms or local firms that have bank accounts in DAB, a local commercial bank, or an overseas bank. All payments will be made either through bank transfers into the account of such firms or by check. The payment and approval mechanisms will be detailed in the FM Manual.

Funds Flow Chart



Legal Requirements for Authorized Signature

155. Ministry of Finance has authorization to disburse funds from the Grant. Specimen signatures of authorized signatories in MoF are already on file with the Bank.

Accounting

156. The SDU will maintain a proper accounting system for all payments made from the Grant along with supporting documents to enable IDA to verify these expenditures. The Finance and Accounts Directorate of MEW with support from the PCU FM unit will handle the key financial management functions. The F&A directorate and the PCU FM unit will maintain computerized systems to record project expenditures, and will maintain all relevant supporting documents for project expenditures.

157. For project expenditures, the F&A Directorate FM staff with assistance from PCU FM unit will: i) supervise preparation of supporting documents for expenditures, ii) prepare payment orders (Form M16), iii) obtain approval for M-16s from the relevant authority depending on the payment amount, and

iv) submit them to the Treasury Department in MoF for verification and payment. Whilst original copies of required supporting documents are attached to the Form M16, F&A Directorate and PCU FM unit are required to make and keep photocopies of these documents for records retention purposes.

158. The FM Advisor in the MoF/SDU will use the government's computerized accounting system, AFMIS, for reporting, generating relevant financial statements, and exercising controls. The F&A Directorate staff with support from the PCU FM unit will also generate required consolidated (ARTF/IDA) monthly, quarterly, and annual reports.

159. The FM Manual, to be prepared by the F&A Directorate with assistance from the PCU FM unit by April 30, 2011, and to be approved by the Bank, will include: (i) roles and responsibilities for the PCU and F&A Directorate FM staff, ii) linkages between the PCU and F&A Directorate staff; (iii) documentation and approval procedures for payments, (iv) measures to ensure that duplicated and fraudulent claim, where an activity could be financed from both sources do not arise, (v) project reporting requirements, and (vi) quality assurance measures to help ensure that adequate internal controls and procedures are in place and are being followed.

160. The FM Manual will also establish project financial management in accordance with standard Afghan government policies and procedures including use of the government Chart of Accounts to record project expenditures. The use of these procedures will enable adequate recording and reporting of project expenditures. Overall project accounts will be maintained centrally in SDU, which will be ultimately responsible for recording of all project expenditures and receipts in the Government's accounting system. Reconciliation of project expenditure records with MoF records will be carried out monthly by the F&A Directorate with support from the PCU FM staff.

Internal Control and Internal Auditing

161. Project–specific internal control procedures for requests and approval of funds will be described in the FM Manual including segregation of duties, documentation reviews, physical asset control, and cash handling and management.

162. The F&A Directorate with support from the PCU FM unit will be responsible for the key FM activities of the project, and will report to the Project Director.

163. Consolidated annual project financial statements will be prepared by SDU/MoF detailing activities pertaining to the project as separate line items with adequate details to reflect the details of expenditures within each component.

164. The project financial management systems will be subject to review by the internal audit department of MEW. Given the inadequate capacity of MEW's Internal Audit, additional staff will be funded from the project to strengthen its capacity. Relevant training support will also be provided to the staff. The internal audit to be conducted by internal audit department will be according to programs to be determined by the MEW's Director General of Internal Audit using a risk-based approach. Internal audit TORs will be included in the project's FM manual, required to be reviewed and approved by the Bank. The internal Audit department of MEW has been assessed and found incapable of meeting the needs of this project; hence the mitigating measure of strengthening its capacity was adopted.

165. The frequency of the internal audit exercise should be at least every six months, and a copy of the report should be in English. A copy of each internal audit report should be provided to the World Bank once completed.

External Audit

166. The consolidated project accounts will be audited by the Auditor General, with the support of the Audit Advisor, with terms of reference satisfactory to the Association. The audit of the consolidated project accounts will include an assessment of the: (a) adequacy of the accounting and internal control systems; (b) ability to maintain adequate documentation for transactions; and (c) eligibility of incurred expenditures for Association financing. The audited annual consolidated project financial statements will be submitted within six months of the close of fiscal year. All agencies involved in implementation and maintaining records of expenditures would need to retain these as per the IDA records retention policy.

167. The following audit reports will be monitored each year in the Audit Reports Compliance System (ARCS):

Responsible Agency	Audit	Auditors	Date
MEW	SOE, Consolidated Project Accounts and Designated Account	Auditor General	September 22

168. The Bank-funded projects already or currently being implemented by MEW (EIRP, EPRP, KAMSPP, APSPD and TA for Water Sector) have no overdue audit reports. The key issues raised in these projects' audit reports up to Solar Year 1388 have been resolved satisfactorily.

Financial Reporting

169. Consolidated Financial Statements and Project Reports will be used for project monitoring and supervision. Based upon the FM arrangements of this project consolidated Financial Statements and Project Reports will be prepared monthly, quarterly, and annually by the F&A Directorate with assistance from the PCU FM unit. These reports will be produced based on the books of records maintained by the F&A Directorate and the PCU FM unit after due reconciliation to expenditure statements from SDU (as recorded in AFMIS) and bank statements from DAB.

170. The quarterly Project Reports will show: (i) sources and uses of funds by project component, and (ii) expenditures consolidated and compared to governmental budget heads of accounts, the project will forward the relevant details to SDU/DBER with a copy to IDA within 45 days of the end of each quarter. The government and IDA have agreed on a pro forma report format for all Bank projects; a final customized format for IRDP will be provided after project effectiveness.

171. The annual project accounts to be prepared by SDU from AFMIS after due reconciliation to records maintained at the project, will form part of the consolidated Afghanistan Government Accounts for all development projects. This is done centrally in the Ministry of Finance Treasury Department, supported by the Financial Management Advisor.

Disbursement Arrangements

172. Disbursements procedures will follow the World Bank procedures described in the *World Bank Disbursement Guidelines and the Disbursement Handbook for World Bank Clients (May 2006)*.

173. Table 5.1 below shows the allocation of IDA proceeds under two expenditure categories. The two categories are defined in the Financing Agreement to facilitate preparation of withdrawal applications and record-keeping.

Table 5.1: IDA Financing by Category of Expenditure (US$ million)

Expenditure Category	Amount of the Grant Allocations	Financing Percentage
(1) Goods, works, non-consultants services, consultants' services, Training, Resettlement Costs (including reasonable costs of land and assets of Affected Persons, cash and other relocation payments to Affected Persons and cash and other payments for livelihood resettlement all as identified in the LARAPs), and Incremental Operating Costs[37], other than the operation and maintenance contracts under Component C of the project (Hydro-metereology)	95.1	100%
(2) Operation and maintenance under Component C of the project (Hydro-metereology)	2.7	100% in PY1, 75% in PY2, 50% in PY3, 25% in PY 4, 0% in PY5 and beyond
Total	**97.8**	

174. Table 2 below presents the expected co-financing arrangements.

Table 5.2: Estimated Co-financing (US$ million)

IDA	ARTF	GoA	Total
97.8	**48.4**	**2.5**	**148.7**

175. The ARTF Grant will co-finance the expenditures under Category 1. To avoid double financing of the same expenditures from IDA and ARTF grant proceeds, separate contracts would be earmarked for financing from each source of financing. The Government counter-part funds will meet part of the operation and maintenance cost of hydro-met stations under Component C.

176. A final disbursement deadline six months after the closing date will be granted. During this additional 6-month grace period, project-related expenditures incurred prior to the closing date would be eligible for disbursement and documentation.

177. **Summary Reports:** Summary reports in the form of Statements of Expenditure will be used for expenditures against contracts for (i) goods valued at less than US$200,000 per contract; (ii) works valued at less than US$300,000 per contract; (iii) consulting firms valued at less than US$100,000 per contract; and (iv) individual consultants valued at less than US$50,000 per contract; all land acquisition

[37] Incremental Operating Costs as defined in the Financing Agreement.

and resettlement costs; all training programs, incremental operating costs and operation/maintenance contracts. Full documentation will be required for payments for contracts against goods, works and consultants' services with values above the aforementioned respective thresholds.

178. **Designated Account:** A single segregated designated account will be opened at DAB in US dollars for a ceiling of advance up to 4 months' worth of project eligible expenditures to be paid out of the funds in the designagted account. The SDU in MoF will manage payments from and new advances to and reporting on this account. Cash advances may be taken from the Designated Account, and held and managed by the F&A Directorate for small day to day operating expenditures. This agency's controls, holding, accounting, and preparation of Statements of Expenses (SOEs) have been satisfactorily assessed. New cash advances will only be made when all other prior cash advances have been justified through submission of SOEs to the SDU. Expenditure reporting will be submitted on a monthly basis. Requests for advances can be submitted as often as needed.

179. **Advance to Technical Assistance Firm:** To facilitate supervision and project management tasks, advance payments will be made to the Technical Assistance firm from the Grant as per the terms of the contract. Conditions for the advance and the reporting requirements will be spelt in the contract and the FM Manual.

180. **Direct Payments:** Third-party payments (direct) and Special Commitments will be permitted for amounts of US$500, 000 or more. All such payments require supporting documentation in the form of records (copies of invoices, bills, purchase orders, etc).

181. **Preparation of Withdrawal Applications:** The F&A Directorate together with the PCU FM unit will prepare Summary Reports and forward those reports to the SDU for further processing into withdrawal applications. The SDU will review withdrawal applications for quality and conformity to Treasury procedures, and then obtain signature. Selected F&A Directorate, PCU and SDU finance staff will be registered as users of the World Bank Web-based Client Connection system, and take an active hand in managing the flow of disbursements.

Financial Management Covenants

- MEW shall submit audited financial statements for the project within six months of the end of each fiscal year. The Project's audit report will cover the financial statements, the Designated Account, and SOEs, in accordance with terms of reference agreed with the Association.
- Un-audited project interim financial reports will be submitted by F&A Directorate/ PCU FM unit on a quarterly basis to the World Bank and a copy to SDU-MoF within 45 days after the end of each quarter.
- MEW will ensure that key FM staffs of the F&A Directorate and PCU FM unit are retained throughout the duration of the project in order to ensure sustainability.

Regular Supervision Plan

182. During project implementation, the Bank will supervise the project's financial management arrangements. The frequency will be bi-annual at a minimum and may be increased based on the needs of the project and the risk assessment. The team will:

- Review the project's quarterly un-audited consolidated interim financial reports as well as the project's annual audited financial statements and auditor's management letter.

- Review the project's financial management and disbursement arrangements (including a review of a sample of SOEs, movements on the Designated Account, bank reconciliations and reporting requirements) to ensure compliance with the Bank's minimum requirements.

- Review agency' performance in managing project funds to ensure that it is timely, accurate, and accountable. Particular supervision emphasis will be placed on asset management and supplies.

- Review of financial management risk rating and compliance with all covenants.

Conclusion

183. The FM arrangements, including the systems, processes, procedures, and staffing are adequate to support this project - subject to implementation of the items listed in the action plan.

Annex 6: Procurement Arrangements

Afghanistan: Irrigation Restoration And Development Project

Country Context

184. The Bank has gained substantial experience and understanding of the procurement environment in Afghanistan through its involvement in the interim procurement arrangements put in place under the Emergency Public Administration Project (2002) and through working with the institutions currently responsible for procurement functions, including the Afghanistan Reconstruction and Development Services. As part of the broader review of Afghanistan's Public Finance Management (PFM) system, the Bank carried out two assessments, in June 2005 and September 2007, of the procurement environment in the country based on baseline and performance indicators developed by a group of institutions led by the World Bank and OECD/DAC.

185. The first key issue identified through the procurement assessments was lack of ownership and lack of a procurement champion in the Government, which is a serious impediment to reform and to inter-ministerial dialogue. A second, related issue is the lack of capacity in the line ministries, as evidenced by their inability to define and communicate effectively their desired functional specifications/terms of reference in their procurements. The lack of capacity is also evident in the local private sector—while the number of bids is reasonably high, there is a lack of understanding about how to apply public procurement rules.

Government Reforms

186. A new Procurement Law (PL) was adopted in November 2005 that radically transforms the legal and regulatory framework. In accordance with the law, GoIRA established a Procurement Policy Unit (PPU) under the Ministry of Finance to provide oversight for the PL's implementation. PPU has issued several circulars regarding implementation of the PL including "Rules of Procedures for Public Procurement" (Circular: PPU/C005/1386 of April 12, 2007) and "Procurement Appeal and Review Mechanism" (Circular: PPU/N001/1385 of March 18, 2007). PPU and MOF have developed several standard bidding documents (SBDs), standard requests for proposal (SRFPs), standard requests for quotation (RFQs) for national and international procurement of goods/works and consulting services following national procedures as per the PL's Glossary of Procurement Terms in English and Dari. MOF has now mandated the use of: (i) SBDs for Goods and Works (Circular PPU/C024/1388 of June 10, 2009); (ii) SRFQs (Circular PP/C026/1388); and (iii) SRFPs (Circular PPU/C029/1388 of January 13, 2010). A Procurement Management Information System (PMIS) has been developed and is being piloted in three line ministries. In addition, a PPU Web site will facilitate publication of procurement notices and contract awards in addition to similar action being done under the ARDS-Web site and the Web sites of the line ministries, as applicable.

187. In the absence of adequate capacity to manage procurement activities effectively, a central procurement facilitation unit (ARDS–PU) has been established under Ministry of Economy to support line ministries and project implementing agencies. The Bank and the Government have agreed on a program for country-wide procurement reform and capacity building, leading to the transition from centralized to decentralized procurement services. The above was implemented by an international consultant under the supervision of PPU/MOF and financed under the Public Administration Capacity Building Project (PACBP) and the Public Finance Management Reform Project (PFMRP). The consultant has conducted several basic, intermediate, and advanced level training programs. The implementation of the procurement reform component of the PACBP/PFMRP should be considered with

due priority to ensure that fiduciary standards are further enhanced and that capacity is developed in the Government to maintain these standards.

188. The Procurement Law has been revised in July 2008 and amended in January 2009 and issued as a new Law by the Ministry of Justice and was published in the Official Gazette Number 957, 29.10.1387 (18 January 2009). The revised "Rules of Procedures for Public Procurement" have been issued as circular PPU/C027/1387 of November 18, 2009.

General Procurement for IRDP

189. Procurement for the project will be administered in accordance with the World Bank's Guidelines: Procurement under IBRD Loans and IDA Credits dated January 2011, Guidelines: Selection and Employment of Consultants by World Bank Borrowers dated January 2011, and the provisions stipulated in the Financing Agreement. In addition, the World Bank's Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants dated October 15, 2006 and revised Janury 2011 have been shared with the recipient. The World Bank's Standard Bidding Documents, Requests for Proposals, and Forms of Consultant Contract will be used. Civil works and goods following National Competitive Bidding (NCB) procedures shall be procured using the agreed Standard Bidding Documents (SBDs) for Afghanistan. It has been agreed by both parties that in the event of a conflict between IDA Procurement/Consultant Guidelines, as per Article 4 (2) of the Procurement Law July 2008 (Amendments in January 2009 incorporated) of the GoIRA, the IDA Procurement/Consultant Guidelines shall prevail.

Procurement of Works

190. The proposed grant would finance about 219 medium and 22 large schemes, and two or three small dams. The project will also finance construction and renovation of office building under the project.

191. The procurement will be done using the Bank's Standard Bidding Documents (SBD) for all ICB and National SBD agreed with (or satisfactory to) the Bank. The threshold for ICB civil works will be US$ 5,000,000 equivalent and above per contract. The threshold for NCB works will also be US$5,000,000 equivalent and less per contract.

Procurement of Goods and Non Consulting Services

192. Goods to be procured under this project will include procurement of equipment for hydro-met faciltities, (hydro-met stations and allied equipments, O&M contracts for Hyro-met stations, hydrological services), hardware and software for offices (servers, work stations, computers, printers, etc.), MIS, M&E and vehicles.

193. Procurement of the goods will be done using Bank's SBD for Goods for all contracts following International Competitive Bidding (ICB) procedures. National SBDs agreed with IDA, or satisfactory to IDA, will be used for the procurement of goods following National Competitive Bidding (NCB) procedures. Shopping shall be in accordance with paragraph 3.5 of the Bank's Guidelines. Any contract estimated costing more than US$200,000 shall be procured following ICB procedures. Any contract estimated to cost more than US$50,000 equivalent and less than US$200,000 shall be procured following NCB procedures. Any contract estimated to cost less than US$50,000 equivalent shall be procured following shopping procedures. Goods that meet the requirements of paragraph 3.7 of the

World Bank Procurement Guidelines may be procured following direct contracting procedures with prior agreement with IDA.

Selection of Consultants

194. The proposed grant would finance several consultancy assignments.

Firms

195. Consultancy firms will be hired under the project for the following:
(i) Technical Assistance for project management and implementation;
(ii) Consultancy services for developing an MIS for the project;
(iii) Preparation of feasibility studies for small dams;
(iv) Preparation of detailed design and supervision of small dams;
(v) Consultancy services for Independent 3rd Party Monitoring of ESMF;
(vi) Individual consultancy services for preparation of ESMPs; and
(vii) Several consultancy packages for training in different fields.

196. *Technical assistance for project management and implementation*. FAO has been satisfactorily providing technical assistance to MEW for the management and implementation of EIRP. Based on FAO's satisfactory performance and given that the proposed IRDP is essentially similar to EIRP, MEW requested IDA's concurrence to continue using the services of FAO for the IRDP as well. IDA has agreed to this request based on the following considerations: (i) the proposed consultancy assignment is a natural continuation of the work already being carried out by the FAO team for the EIRP, (ii) FAO has the necessary outreach and arrangements in place to provide nationwide services, including rural areas in an increasingly insecure environment; (iii) FAO has world-wide knowledge of irrigated agriculture, as well long experience in, and deep knowledge of, the irrigation sector in Afghanistan; and (iv) MEW's request is consistent with Bank guidelines paragraph 3.8 to 3.10 and OP/BP 8.0 and paragraph 29 of Rapid Response to Crises and Emergencies: Streamlined Procurement Procedure dated June 2009. The estimated cost of the assignment is around USD 16 m, excluding pass-through funds for PCU operating expenditures.

Individual consultants

197. The project will finance hiring of several individual consultants to work as additional staff at the PCU and its regional offices. Individual consultants would also be hired for the preparation of ESMPs for specific sub-projects and independent monitoring of compliance with the ESMF.

198. Short lists of consultants for services estimated to cost less than US$100,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. The selection methods applicable for consultants are QCBS, QBS, CQS, LCS, FBS, and SSS for firms as per Section V of the Bank's Guidelines for Individuals. The threshold for CQS will be less than US$200,000 equivalent per contract.

Operating Costs

199. The cost which would be financed by the project would be procured using the implementing agency's administrative procedures, such as the Procurement Law, which were reviewed and found acceptable to the Bank. The operating costs will include operations and maintenance of equipment and

vehicles, hiring of vehicles, office rent, costs of consumable, fuel, office utilities and supplies, Bank charges, and advertising expenses but exclude any salaries and allowances of civil servants.

ASSESSMENT OF THE AGENCY'S CAPACITY TO IMPLEMENT PROCUREMENT

200. MEW will have the overall responsibility for all procurement under the project.

201. An assessment of the capacity of MEW to implement procurement actions for the project has been carried out by Rahimullah Wardak Procurement Specialist in December 2010. The assessment reviewed the organizational structure for implementing the project and interactions.

202. During the procurement capacity review it was revealed that the procurement department of MEW does not have enough capacity to handle procurement under the project. The department has 49 staff has little experience in the procurement of civil work no experience of handling procurement of consultancy firms. The procurement risk is assessed as "high".

203. To mitigate the risk the following measures are under process by MEW.

204. The technical assistance team for project management and implementation will have a qualified international procurement specialist. The procurement specialist will be based in the procurement directorate of the MEW but will be working soley on the IRDP procurement activites. At the same time the specialist will provide on the job training to the national procurement staff. MEW will further enhance the quality of the operational manual which defines the different steps involved in procurement and the responsibility of each staff/department.

205. MEW is also planning to centralize and enhance its procurement capacity by hiring national and international procurement specialists. The procurement specialists will be responsible for procurement under projects funded by various donors. The international procurement specialist will also provide on-the-job training to the national procurement staff.

Implementation/Contract Management

206. The project will recruit contract management specialists for the PCU and its regional offices. This will also help buildcapacity at the national and regional levels in contract management. The PCU procurement staff will also (i) conduct a study to develop a detailed inventory of construction industry in Afghanistan; and (ii) arrange workshops for contractors to create awareness of the Bank's procurement guidelines and the steps open to them to report any mishandling of procurements.

207. The above measure will help to avoid mismanagement of procurement under the project as well as enhance the capacity of the procurement department of the MEW.

208. With the above arrangements in place, the risk is rated as **"Medium"**.

Table 1 Procurement Risk Mitigation and Monitoring Plan

S No	Procurement Process/step	Process Indicator	Sources of Information and means of verification	Use of information for risk mitigation	Performance target to be achieved
1	General Procurement Notice	GPN Published	Documentary evidence filled in MEW/PCU	To ensure GPN is widely published to increase transparency	100%
		Number of responses received against GPN	Existence of updated responses registration file in MEW/PCU	To increase competition.	100%
2	REOI/Invitation for Bids and Bidding process	REO/IFB Published	Copy to be available in the file. 10% of the procurement files will be verified	To ensure SPN/REOI is widely published to increase transparency	100%
		Minimum bidding time provided [4 weeks in NCB and RFP and 6 weeks in ICB and RFP with complex assignments]	Deviations to be collected from procurement files	To ensure competition	100%
		Attention of the firms/individuals who expressed interest against GPN while issuing REOI/SPN was called	Copy to be available in the file. 10% of the procurement files will be verified	To ensure competition	100%
		Number of Bid Documents sold and Number of firms confirmed participation against RFP issued	Sale of bid documents register and confirmation from consultants about receipt of RFP. 10% procurement files will be verified	To ensure competition	100%
		Clarifications/addendums issued	Copy to be available in the file. 10% of the procurement files will be verified	To ensure transparency	100 %
3	Preparation of Bid Documents/RFPs	Cleared by IDA without seeking clarifications/comments	Number of cases to be collected from procurement files	Capacity building measures initiated by international procurement specialist	Continued progress
4	Bid Submission	Bid opening minutes sent to all bidders	Timeliness to be verified from procurement files 10% of the procurement files will be verified	To ensure transparency	100%

S No	Procurement Process/step	Process Indicator	Sources of Information and means of verification	Use of information for risk mitigation	Performance target to be achieved
5	Bid Evaluation/REOI and proposal evaluation	Formation of bid evaluation committee before bid closing.	Deviations to be collected from procurement files	To expedite finalizing of bids/proposal evaluation.	100%
		Timeliness of Evaluation: (a) 15 working days following shopping procedure; (b) 30 working days following NCB/ICB procedures; (c) 30 working days for individual consultants; and (d) 30 working days for firms for REOI evaluation, 30 working days for TER and 20 working days to conclude the contract negotiations after commencement of contract negotiations.	Deviations to be collected from Procurement Activity Schedule	Finalizing of bids/proposal evaluation in timely manner.	Compliance and continuous improvement for reduction in timelines for all activities
		Number of Re-bids	Procurement files		continuous improvement for reduction in number of re-biddings
6	Bid Evaluation Report and Technical Evaluation Report	Cleared by IDA without seeking clarifications/comments	Data to be collected from procurement files	To improve procurement process.	
7	Contract Award	Contract award within the original bid validity	Deviations to be collected from Procurement Activity Schedule	To improve procurement process.	100%
		(a) Contract award published within 14 days of NOA (b) Average time taken for publication of award (c) Number of cases award not published	Data to be collected from procurement files	To ensure transparency	100%
8	Delivery/ Completion	Delivery time: Percentage of Contracts completed/ delivered within the original schedule as mentioned in Contract	Data to be collected from procurement files	To improve procurement process.	
		Liquidated damage: Percentage of Contracts having liquidated damage imposed for delayed delivery/completion	Data to be collected from procurement files	To improve procurement process.	60%

S No	Procurement Process/step	Process Indicator	Sources of Information and means of verification	Use of information for risk mitigation	Performance target to be achieved
		Completion rate: Percentage of Contracts fully completed and accepted	Data to be collected from procurement files	To improve procurement process.	90%
9	Payment	Average number of days taken to release payment	Data to be collected from procurement files	To improve procurement process.	15 days
		Late payment: Percentage of cases (considering each installment as a case) with delayed payment	Data to be collected from procurement files	To improve procurement process.	20%
10	Complaints	Procurement complaints pending over 60 days	Complaint register	To ensure transparency	90%
		Resolution of complaints resulted in modification of contract award	Complaint register and Procurement files	To ensure transparency	0%
		Resolution of complaints within 15 working days	Complaint register	To ensure transparency	70%
		Complaints forwarded to MOF for independent review	Complaint register	To ensure transparency	100%
11	Contract dispute resolution	Unresolved Disputes over 60 days	Procurement files	To ensure transparency	10%
12	Procurement Capacity Building	Number of procurement staff trained in Civil Service Institute	Procurement training plan	To improve procurement process.	80% staff to be trained during first year and 100% by second year.
		Number of staff trained outside Afghanistan		To improve procurement process.	One staff during first 18

209. **Governance and Accountability agenda:** All the contract opportunities and contract awards will be widely published in the internet, ARDS website, PPU/MOF website and when required in the UNDB. MEW/PCU will set up a system to ensure that the staff/consultants who handled the procurement process/contract management/contract execution do not join the consultants/contractors. This will be reviewed during supervision missions.

Procurement Plan

210. The Borrower, at appraisal, developed a Procurement Plan for project implementation that provides the basis for the procurement methods. This Plan has been agreed between the client and the IDA Task Team on April 4, 2011 and is *available* at the MEW offices. It will also be available in the Project's database and on the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

FREQUENCY OF PROCUREMENT SUPERVISION

211. In addition to the prior review functions the Bank's procurement specialists will carry out two supervision/implementation support missions per annum.

212. **Procurement Audit:** Bank staff or Bank appointed consultant will carryout post procurement audits once a year.

Attachment 1 – Details of Procurement Arrangements Involving International Competition
Goods and Non Consulting Services

213. List of contract packages which will be procured following ICB and Direct Contracting procedures:

Table 2 Procurement Packages with Methods and Time Schedule

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualification	Dom. Prefer.	WB Review	Likely Date of finalization of Specs	Expected Bid Opening Dt	Award Dt	Delivery Pd (in Months)	Slack Period (in Months)	Completion Dt	Present Status
1	G-222	6	Procurement of Hydrological equipments /softwares	300,000	HQ	NA	NA	ICB	No	Yes	Prior	01-Aug-11	17-Oct-11	23-Jan-12	4	0	22-May-12	
Total				**300,000**														

Table 3 List of Consulting Assignments with Shortlist of International Firms or Individuals

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
Component B - Consultancy Services for Small Dam											
1	C-601	Feasibility Studies	2,000,000	QCBS	Prior	1-Jul-11	15-Nov-11	29-Jan-12	14-Mar-12	8-Jan-13	
2	C-602	Detailed design and Supervision	3,000,000	QCBS	Prior	2-Oct-11	16-Nov-11	30-Jan-12	15-Mar-12	9-Jan-13	
3	C-603 to C-611	Hiring of International Panel of Experts for Small dam (List of Experts to be finalized later)*	250,000	IC	Post	30-Jun-11	25-Aug-11	NA	6-Oct-11	31-Dec-12	
		* Tentatively Dam design Engineer, Irrigation Engineer, Agriculturist,									

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
		Hydrologist, Economist, Environmentalist, Geodesist, Geologist, Sociologist									
		Sub Total	**5,250,000**								
Component D - Other Consultancy Services											
(i) Consultancy Services through Firms											
1	C-621	Techncial assistance for project management/implementation	17,200,000	SSS/QBS	Prior	28-Feb-11		15-May-11	01-July-11	30-June-17	
2	C-622	Consultancy Services for strengthening of MIS	100,000	QCBS	Prior	31-Mar-11	26-May-11	25-Jul-11	23-Sep-11		
3	C-623	Consultancy services for Independent 3rd Party Monitoring of ESMF compliance	200,000	QCBS	Prior	30-Jun-11	25-Aug-11	24-Nov-11	23-Mar-12	12-Nov-13	
		Sub Total (Consultancies -Firms)	**17,500,000**								

PROCUREMENT PLAN

General

214. Project Information:

- **Country/Borrower**: Islamic Republic of Afghanistan
- **Project Name**: Irrigation Restoration and Development Project
- Implementing Agency: PCU/MEW
- Grant No: H681-AF
- Bank's approval Date of the Procurement Plan (Original): April 4, 2011
- Date of General Procurement Notice: January 11, 2011
- Period covered by this procurement plan: 18 months

A. Goods and Works and Non-Consulting Services

(a) List of contract Packages that will be procured following ICB, NCB and direct contracting:

Table 4 Procurement Method and Threshold

	Procurement Method	Threshold for Methods (US$)	Comment
1.	ICB (Works)	5,000,000	Equivalent or more
2.	ICB (Goods)	200,000	Equivalent or more
3.	NCB (Works)	5,000,000	Equivalent or less
4.	NCB (Goods)	200,000	Equivalent or less
5.	Shopping (Goods)	50,000	Equivalent or less
6.	Shopping (Works)	100,000	Equivalent or less
7.	ICB (Non-Consultant Services)	200,000	Equivalent or more

215. **Prior Review Threshold:** Procurement Decisions subject to Prior Review by the Bank as stated in Appendix 1 to the Guidelines for Procurement:

216.

	Procurement Method	Prior Review Threshold US$	Comments
1.	ICB (Goods & Works/non consulting services)	All Contracts	
2.	NCB (Goods)	200,000	Equivalent or more
3.	NCB (Works)	1,000,000	Equivalent or more
4.	Direct Contracting (Goods/Works/Non-consulting services)	All regardless of value	

Prequalification: NIL

Procurement Packages with Methods and Time Schedule

Goods, Works and Non Consulting Services:

Table 5 Procurement Packages with Methods and Time Schedule

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualificn.	Dom. Prefer.	WB Review	Actual/Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Expected Award Dt	Construction Period (in days)	Slack Period (in days)	Expected Completion Dt	Present Status
1	B101	1	Surkh Canal	250,000	Bamyan	Parwan	Surkh-e-Parsa	NCB	No	No	Post	31-Dec-11	14-Feb-12	24-Apr-12	542	180	30-Apr-14	
2	B102	1	Tawakh Sufla Canal	280,000	Bamyan	Panjshir	Unaba	NCB	No	No	Post	31-Mar-12	15-May-12	24-Jul-12	646	150	12-Oct-14	
3	K186	1	Tawakh Olya Canal	185,298	Bamyan	Panjshir	Unaba	NCB	No	No	Post	30-Jun-11	14-Aug-11	23-Oct-11	453	180	31-Jul-13	
4	K193	1	Lazeer Ghiro Canal	288,600	Bamiyan	Dykundi	Centre	NCB	No	No	Post	31-Aug-11	15-Oct-11	24-Dec-11	725	180	30-Jun-14	
5	H113	1	Abdullah Khan Canal	273,300	Herat	Baghdis	Qadis	NCB	No	No	Post	31-May-10	18-Mar-11	27-May-11	631	90	31-May-13	Designs/ BOQ Appd
6	H114	1	Kata Chashma Canal	261,252	Herat	Ghore	Doliana	NCB	No	No	Post	31-Jan-11	18-Mar-11	27-May-11	571	180	30-Jun-13	
7	H115	1	Wardak Ha canal	229,931	Herat	Ghore	Dawlat Yar	NCB	No	No	Post	30-Jun-10	18-Mar-11	27-May-11	419	120	30-Nov-12	Designs/ BOQ Appd
8	H116	1	Almos & Shahdost Canal	142,423	Herat	Baghdis	Qadis	NCB	No	No	Post	30-Sep-10	18-Mar-11	27-May-11	296	90	30-Jun-12	Designs/ BOQ Appd
9	H117	1	Chakab Irrigation Canal	145,993	Herat	Ghore	Dawlat Yar	NCB	No	No	Post	31-Jan-11	18-Mar-11	27-May-11	480	180	31-Mar-13	
10	H119	1	Arbab Server Canal	193,839	Herat	Baghdis	Qadis	NCB	No	No	Post	31-Jan-11	18-Mar-11	27-May-11	571	180	30-Jun-13	

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualificn.	Dom. Prefer.	WB Review	Actual/Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Expected Award Dt	Construction Period (in days)	Slack Period (in days)	Expected Completion Dt	Present Status
11	H121	1	Canal Deh Berenj	130,000	Herat	Badghis	Moqor	NCB	No	No	Post	31-Mar-11	15-May-11	24-Jul-11	300	90	31-Aug-12	
12	H123	1	Jakana wa Taraki	145,000	Herat	Badghis	Moqor	NCB	No	No	Post	30-Sep-11	14-Nov-11	23-Jan-12	360	150	30-Jun-13	
13	H124	1	Gorji Beshto Canal	149,999	Herat	Farah	Center of Farah	NCB	No	No	Post	31-Dec-11	14-Feb-12	24-Apr-12	359	90	31-Jul-13	
14	H126	1	Chashma Siea Collab	100,000	Herat	Ghore	Charsada	NCB	No	No	Post	30-Jun-11	14-Aug-11	23-Oct-11	331	180	31-Mar-13	
15	H127	1	Denbaly canal	100,000	Herat	Farah	Lash Jowin	NCB	No	No	Post	31-Aug-11	15-Oct-11	24-Dec-11	330	180	31-May-13	
16	H128	1	Dehsatn Canal	160,000	Herat	Badghis	Qala Now	NCB	No	No	Post	31-Oct-11	15-Dec-11	23-Feb-12	390	120	31-Jul-13	
17	H129	1	Koga Wa Kuch canal	100,000	Herat	Farah	Lash Jowin	NCB	No	No	Post	31-Jan-12	16-Mar-12	25-May-12	328	90	31-Jul-13	
18	H130	1	Dehak Canal	200,000	Herat	Farah	Center	NCB	No	No	Post	29-Feb-12	14-Apr-12	23-Jun-12	421	90	30-Nov-13	
19	H131	1	Koshkak Wa Dozdbad Karriiz Canal	150,000	Herat	Farah	Posht-e Koh	NCB	No	No	Post	30-Apr-12	14-Jun-12	23-Aug-12	360	90	30-Nov-13	
20	H132	1	Bazar Canal	150,000	Herat	Badghis	Qala Now	NCB	No	No	Post	31-May-12	15-Jul-12	23-Sep-12	360	180	31-Mar-14	
21	H133	1	Dawri Joie Canal	150,000	Herat	Farah	Sheb koh	NCB	No	No	Post	30-Jun-12	14-Aug-12	23-Oct-12	360	180	30-Apr-14	
22	H134	1	Targin Canal	140,000	Herat	Farah	Sheb koh	NCB	No	No	Post	30-Aug-12	14-Oct-12	23-Dec-12	330	180	31-May-14	
23	J156	1	Baizy Canal	107,795	Jalalabad	Nangarhar	Goshta	NCB	No	No	Post	30-Jun-10	18-Mar-11	27-May-11	83	90	30-Nov-11	Designs/ BOQ Appd
24	J157	1	Pewa Canal	116,947	Jalalabad	Nangarhar	Rodat	NCB	No	No	Post	31-Dec-10	18-Mar-11	27-May-	235	90	30-Apr-12	

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualificn.	Dom. Prefer.	WB Review	Actual/Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Expected Award Dt	Construction Period (in days)	Slack Period (in days)	Expected Completion Dt	Present Status
			Phase-II											11				
25	J158	1	Harmol canal -II	110,000	Jalalabad	Laghman	Mihterlam	NCB	No	No	Post	30-Apr-11	14-Jun-11	23-Aug-11	270	90	31-Aug-12	
26	J159	1	Charbagh Canal	350,000	Jalalabad	Laghman	Qarghaee	NCB	No	No	Post	31-Mar-11	15-May-11	24-Jul-11	666	180	30-Nov-13	
27	J160	1	Sarjal Canal	250,000	Jalalabad	Nangarhar	Surkh road	NCB	No	No	Post	31-Jan-11	18-Mar-11	27-May-11	631	90	31-May-13	
28	J161	1	Sarjal-Char Qala Canal	180,000	Jalalabad	Nangarhar	Khewa	NCB	No	No	Post	31-Aug-11	15-Oct-11	24-Dec-11	452	180	30-Sep-13	
29	J162	1	Mangary Canal	140,000	Jalalabad	Nangarhar	Nazyzn	NCB	No	No	Post	30-May-11	14-Jul-11	22-Sep-11	331	90	30-Nov-12	
30	J163	1	Narang Canal-II	320,000	Jalalabad	Kunar	Narang	NCB	No	No	Post	30-Jun-11	14-Aug-11	23-Oct-11	606	270	31-Mar-14	
31	J164	1	Shamati Canal	250,000	Jalalabad	Laghman	Mehterlam	NCB	No	No	Post	30-Sep-11	14-Nov-11	23-Jan-12	544	240	31-Mar-14	
32	J165	1	Kan canal cluster	255,000	Jalalabad	Nangarhar	Rodat	NCB	No	No	Post	31-Oct-11	15-Dec-11	23-Feb-12	573	210	30-Apr-14	
33	J166	1	Zainoo Kalai Canal	200,000	Jalalabad	Nangarhar	Rodat	NCB	No	No	Post	31-Dec-11	14-Feb-12	24-Apr-12	420	90	30-Sep-13	
34	J167	1	Kaee Loy Band canal	185,000	Jalalabad	Nangarhar	Achen	NCB	No	No	Post	29-Feb-12	14-Apr-12	23-Jun-12	452	180	31-Mar-14	
35	J168	1	Omer Zaie Intake & Canal	250,000	Jalalabad	Laghman	Mehterlam	NCB	No	No	Post	30-Apr-12	14-Jun-12	23-Aug-12	544	180	31-Aug-14	
36	J169	1	Kachoor-Shamati Canal	350,000	Jalalabad	Laghman	Alingar	NCB	No	No	Post	31-May-12	15-Jul-12	23-Sep-12	665	270	30-Apr-15	
37	J170	1	Chawky Canal Intake	430,000	Jalalabad	Kunar	Chawky	NCB	No	No	Post	30-Jun-12	14-Aug-12	23-Oct-12	849	270	30-Nov-15	
38	J171	1	Sarkany	380,000	Jalala	Kunar	Sarkany	NCB	No	No	Post	31-Aug-	15-	24-	726	270	30-Sep-	

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualificn.	Dom. Prefer.	WB Review	Actual/Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Expected Award Dt	Construction Period (in days)	Slack Period (in days)	Expected Completion Dt	Present Status
			Canal Intake		bad							12	Oct-12	Dec-12			15	
39	K183	1	Jalayer Canal	314,257	Kabul	Wardak	Markaz	NCB	No	No	Post	31-Mar-11	15-May-11	24-Jul-11	575	180	31-Aug-13	
40	K185	1	Balna Joi Canal	422,143	Kabul	Wardak	Behsud	NCB	No	No	Post	31-Mar-11	15-May-11	24-Jul-11	878	180	30-Jun-14	
41	K190	1	Bazar & Qazikhel Canal	211,865	Kabul	Kabul	Istalif	NCB	No	No	Post	31-Oct-11	15-Dec-11	23-Feb-12	481	90	30-Sep-13	
42	K191	1	Mahala & Sayedan Canal	230,762	Kabul	Kabul	Istalif	NCB	No	No	Post	31-Jan-11	18-Mar-11	27-May-11	600	90	30-Apr-13	
43	K194	1	Chalaw canal	187,000	Kabul	Paktia	Saeed Karam	NCB	No	No	Post	30-Nov-10	18-Mar-11	27-May-11	419	90	31-Oct-12	Designs/ BOQ Appd
44	K195	1	Petaab Sheena canal	288,477	Kabul	Wardak	Behsood -2	NCB	No	No	Post	31-Jan-12	16-Mar-12	25-May-12	634	180	31-Aug-14	
45	K196	1	Gonbad Canal	273,728	Bamiyan	Parwan	Surkh-e-Parsa	NCB	No	No	Post	31-Aug-10	18-Mar-11	27-May-11	541	180	31-May-13	Designs/ BOQ Appd
46	K198	1	Erdokhak canal	84,224	Bamyan	Panjshir	Unaba	NCB	No	No	Post	31-May-11	15-Jul-11	23-Sep-11	179	180	30-Sep-12	
47	K199	1	Kossin Canal	250,000	Kabul	Paktia	Saeed Karam	NCB	No	No	Post	30-Apr-11	14-Jun-11	23-Aug-11	514	180	31-Jul-13	
48	K200	1	Char dah Canal	260,870	Kabul	Ghazni	Center	NCB	No	No	Post	30-Apr-12	14-Jun-12	23-Aug-12	574	180	30-Sep-14	
49	K201	1	Dahana Qul Canal	147,827	Kabul	Ghazni	Center	NCB	No	No	Post	30-May-12	14-Jul-12	22-Sep-12	361	180	31-Mar-14	
50	K202	1	Nawabad Canal phase -II	142,800	Kabul	Kapisa	Kohistan	NCB	No	No	Post	30-Jul-12	13-Sep-12	22-Nov-12	330	180	30-Apr-14	
51	K203	1	Laghmani, Batani	93,500	Kabul	Kabul	Guldara	NCB	No	No	Post	30-Aug-12	14-Oct-12	23-Dec-12	299	180	30-Apr-14	

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualificn.	Dom. Prefer.	WB Review	Actual/Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Expected Award Dt	Construction Period (in days)	Slack Period (in days)	Expected Completion Dt	Present Status
			Canal															
52	M102	1	Imam Sahib Canal	346,575	Mazar	Faryab	Pushton Kot	NCB	No	No	Post	31-Dec-10	18-Mar-11	27-May-11	694	180	31-Oct-13	
53	M103	1	Salmani Canal	128,897	Mazar	Saripul	Centre	NCB	No	No	Post	31-Aug-10	18-Mar-11	27-May-11	235	90	30-Apr-12	Designs/ BOQ Appd
54	M104	1	Baz Mohammad Canal	151,052	Mazar	Faryab	Pushton Kot	NCB	No	No	Post	31-Dec-10	18-Mar-11	27-May-11	388	90	30-Sep-12	
55	M105	1	Qishlaq Ariqh and Qazel Ariqh canal	106,610	Mazar	Saripul	Sang charak	NCB	No	No	Post	31-Jan-11	18-Mar-11	27-May-11	449	90	30-Nov-12	
56	M106	1	Malik Uzbaki & Tajikia Canal	116,853	Mazar	Saripul	Sozmaqala	NCB	No	No	Post	31-Jan-11	18-Mar-11	27-May-11	266	90	31-May-12	
57	M107	1	Haji Habibullah Canal	271,525	Mazar	Faryab	Khwaja sabz posh	NCB	No	No	Post	28-Feb-11	14-Apr-11	23-Jun-11	758	270	30-Apr-14	
58	M108	1	Khanaqa kalan and khord canal	150,000	Mazar	Saripul	Sozma qala	NCB	No	No	Post	30-Apr-11	14-Jun-11	23-Aug-11	361	90	30-Nov-12	
59	M109	1	Malik uzbakya canal	116,854	Mazar	Saripul	Sozma qala	NCB	No	No	Post	30-Jun-11	14-Aug-11	23-Oct-11	270	90	31-Oct-12	
60	M110	1	Zohrabi canal	120,000	Mazar	Samangan	center	NCB	No	No	Post	31-May-11	15-Jul-11	23-Sep-11	269	90	30-Sep-12	
61	M111	1	Arab Bayee Canal	130,000	Mazar	Sar-i-Pul	Sancharak	NCB	No	No	Post	30-Nov-11	14-Jan-12	24-Mar-12	238	150	30-Apr-13	
62	M112	1	Dara canal	120,000	Mazar	Sar-i-Pul	Center	NCB	No	No	Post	30-Nov-11	14-Jan-12	24-Mar-12	268	90	31-Mar-13	

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualificn.	Dom. Prefer.	WB Review	Actual/Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Expected Award Dt	Construction Period (in days)	Slack Period (in days)	Expected Completion Dt	Present Status
63	M113	1	Sayed Abad Canal	120,000	Mazar	Sar-i-Pul	Center	NCB	No	No	Post	30-Jan-12	15-Mar-12	24-May-12	268	90	31-May-13	
64	M114	1	Darai Zamchi canal	145,000	Mazar	Sar-i-Pul	Sancharak	NCB	No	No	Post	30-May-12	14-Jul-12	22-Sep-12	361	180	31-Mar-14	
65	M115	1	Pakandi canal	120,000	Mazar	Sar-i-Pul	Sozmzqala	NCB	No	No	Post	30-Jun-12	14-Aug-12	23-Oct-12	269	90	31-Oct-13	
66	M116	1	Moghul canal	110,000	Mazar	Samangan	Firoznakhjir	NCB	No	No	Post	30-Jul-12	13-Sep-12	22-Nov-12	300	180	31-Mar-14	
67	Q137	1	Malezai canal	283,331	Kandahar	Urozgan	Tarinkot	NCB	No	No	Post	31-May-10	18-Mar-11	27-May-11	571	180	30-Jun-13	Designs/ BOQ Appd
68	Q139	1	Yatimak Canal	270,151	Kandahar	Urozgan	Tarinkot	NCB	No	No	Post	30-Dec-10	18-Mar-11	27-May-11	602	180	31-Jul-13	Designs/ BOQ Appd
69	Q140	1	Ghra Kilay Canal	112,041	Kandahar	Kandahar	Daman	NCB	No	No	Post	28-Feb-11	14-Apr-11	23-Jun-11	331	90	31-Aug-12	
70	Q141	1	Charamgar Canal	150,000	Kandahar	Urozgan	Tarinkot	NCB	No	No	Post	28-Feb-11	14-Apr-11	23-Jun-11	361	90	30-Sep-12	
71	Q142	1	Khairabad Canal	170,000	Kandahar	Urozgan	Tarinkot	NCB	No	No	Post	31-Mar-11	15-May-11	24-Jul-11	422	180	31-Mar-13	
72	Q143	1	Kharaba Canal	200,000	Kandahar	Urozgan	Tarinkot	NCB	No	No	Post	30-Jun-11	14-Aug-11	23-Oct-11	484	180	31-Aug-13	
73	Q144	1	Anar Joy Canal	250,000	Kandahar	Urozgan	Tarinkot	NCB	No	No	Post	31-Aug-11	15-Oct-11	24-Dec-11	544	270	31-Mar-14	
74	Q145	1	Landejoy Canal	120,000	Kandahar	Kandahar	Dand	NCB	No	No	Post	30-Oct-11	14-Dec-11	22-Feb-12	269	120	31-Mar-13	
75	Q146	1	Sarmorghab Canal	150,000	Kandahar	Urozgan	Tarinkot	NCB	No	No	Post	31-Dec-11	14-Feb-12	24-Apr-12	359	90	31-Jul-13	
76	Q147	1	Toghai Canal	150,000	Kandahar	Urozgan	Trinkot	NCB	No	No	Post	28-Feb-12	13-Apr-12	22-Jun-12	361	90	30-Sep-13	
77	Q148	1	Zoor Roh Rabad Canal	130,000	Kandahar	Kandahar	Dand	NCB	No	No	Post	28-Feb-14	14-Apr-14	23-Jun-14	299	90	31-Jul-15	

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualificn.	Dom. Prefer.	WB Review	Actual/Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Expected Award Dt	Construction Period (in days)	Slack Period (in days)	Expected Completion Dt	Present Status
78	Q149	1	Sofiyan Canal	170,000	Kandahar	Urozgan	Trinkot	NCB	No	No	Post	30-Apr-12	14-Jun-12	23-Aug-12	452	180	31-May-14	
79	Q150	1	Shahtot Canal	200,000	Kandahar	Urozgan	Trinkot	NCB	No	No	Post	30-Jun-12	14-Aug-12	23-Oct-12	421	180	30-Jun-14	
80	Q151	1	Nachin Canal	250,000	Kandahar	Urozgan	Trinkot	NCB	No	No	Post	31-Aug-12	15-Oct-12	24-Dec-12	543	270	31-Mar-15	
81	U092	1	Hisarak canal	150,000	Kunduz	Badakhshan	Jurm	NCB	No	No	Post	30-Jan-11	18-Mar-11	27-May-11	358	90	31-Aug-12	
82	U096	1	Pusht e Qala and Dahan Nalak Canal	100,000	Kunduz	Baghlan	Talu barfak	NCB	No	No	Post	30-Mar-11	14-May-11	23-Jul-11	331	90	30-Sep-12	
83	U097	1	Wali Big canal	150,000	Kunduz	Takhar	Warsaj	NCB	No	No	Post	30-Nov-10	18-Mar-11	27-May-11	296	90	30-Jun-12	Designs/ BOQ Appd
84	U098	1	Guzar-e-chuqul	180,000	Kunduz	Badakhshan	khash	NCB	No	No	Post	31-May-11	15-Jul-11	23-Sep-11	452	180	30-Jun-13	
85	U099	1	Naghara Khana Pechak Canal	140,000	Kunduz	Badakhshan	Tala Barfak	NCB	No	No	Post	30-Apr-11	14-Jun-11	23-Aug-11	331	90	31-Oct-12	
86	U100	1	Kamal garan canal	100,000	Kunduz	Badakhshan	Jurm	NCB	No	No	Post	30-Mar-11	14-May-11	23-Jul-11	301	90	31-Aug-12	
87	U101	1	Ghara Bik Canal	120,000	Kunduz	Baghlan	Center	NCB	No	No	Post	31-Jan-12	16-Mar-12	25-May-12	267	90	31-May-13	
88	U102	1	Ghul dasht bahark Canal	150,000	Kunduz	Badakhshan	Shaghnan	NCB	No	No	Post	30-Jun-11	14-Aug-11	23-Oct-11	361	180	30-Apr-13	
89	U103	1	Mogayeb Intake & Canal	200,000	Kunduz	Badakhshan	Shoada	NCB	No	No	Post	31-Oct-11	15-Dec-11	23-Feb-12	421	120	31-Aug-13	
90	U104	1	Trank Intake &	130,000	Kunduz	Badakhshan	Wardoch	NCB	No	No	Post	30-Nov-11	14-Jan-12	24-Mar-12	298	90	30-Apr-13	

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualificn.	Dom. Prefer.	WB Review	Actual/Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Expected Award Dt	Construction Period (in days)	Slack Period (in days)	Expected Completion Dt	Present Status
			Canal															
91	U105	1	Chap Che Intake & Canal	200,000	Kunduz	Badakshan	Bahrak	NCB	No	No	Post	31-Dec-11	14-Feb-12	24-Apr-12	420	90	30-Sep-13	
92	U106	1	Kohna Qala Nahrin Canal second phase	80,000	Kunduz	Baghlan	Nahrin	NCB	No	No	Post	31-Mar-12	15-May-12	24-Jul-12	237	90	30-Jun-13	
93	U107	1	Kalakay Canal	200,000	Kunduz	Baghlan	Doushi	NCB	No	No	Post	30-Apr-12	14-Jun-12	23-Aug-12	421	180	30-Apr-14	
94	U108	1	Asyab Mola Faqer & Zarday Intake &Canal	150,000	Kunduz	Baghlan	Khanjan	NCB	No	No	Post	31-May-12	15-Jul-12	23-Sep-12	360	180	31-Mar-14	
95	U109	1	Canal omime khash Qarya Takabi Canal	150,000	Kunduz	Kunduz	khan abad	NCB	No	No	Post	30-Jun-12	14-Aug-12	23-Oct-12	481	90	31-May-14	
96	U110	1	Joy Bala Canal Intake	120,000	Kunduz	Baghlan	Khanjan	NCB	No	No	Post	31-Jul-12	14-Sep-12	23-Nov-12	238	90	31-Oct-13	
97	U111	1	Alchen Intake & Canal	220,000	Kunduz	Kundoz	Center	NCB	No	No	Post	31-Aug-12	15-Oct-12	24-Dec-12	482	180	31-Oct-14	
				18,106,717														

Component A - Rehabilitation of Irrigation Infrastructure - (ii) Large Irrigation Schemes

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualification	Dom. Prefer.	WB Review	Likely Date of finalization of BOQ/Specs	Expected Bid Opening Dt	Award Dt	Construction/ Delivery Pd (in Months)	Slack Period (in Months)	Completion Dt	Present Status
1	H511	2	Qandaran Canal	500,000	Herat	Heart	Obey	NCB	No	No	Post	30-Mar-11	14-May-11	23-Jul-11	15.00	6.00	27-Apr-13	Under Design
2	J511	4	Baba Saheb Canal	1,700,000	Jalalabad	Laghman	Center	NCB	No	No	Prior	28-Feb-11	2-May-11	26-Jul-11	24.00	9.00	25-Apr-14	Under Design
3	J512	2	Narang Main Canal	860,000	Jalalabad	Konar	Narang	NCB	No	No	Post	30-Mar-11	14-May-11	23-Jul-11	15.00	6.00	27-Apr-13	Under Design
4	J513	4	Shahiy Canal	1,200,000	Jalalabad	Laghman	Alingar	NCB	No	No	Prior	30-Nov-11	1-Feb-12	26-Apr-12	18.00	6.00	30-Apr-14	
5	Q511	4	Seakhsar &Ibrahimabad Canal	3,000,000	Kandahar	Nimroz	Kang	NCB	No	Yes	Prior	28-Feb-11	16-May-11	22-Aug-11	24.00	9.00	22-May-14	Under Design
6	Q512	4	Surkh Murghab Canal	1,500,000	Kandahar	Urozgan	Trinkot	NCB	No	No	Prior	30-Mar-11	1-Jun-11	25-Aug-11	18.00	6.00	28-Aug-13	Under Design
7	U511	4	Kosh Tepa Canal	1,300,000	Kunduz	Kunduz	Khanabad	NCB	No	No	Prior	30-Jul-11	1-Oct-11	25-Dec-11	18.00	6.00	28-Dec-13	
8	U512	2	Shar-e-Now Canal	600,000	Kunduz	Badakhshan	Faizabad	NCB	No	No	Post	30-Mar-12	14-May-12	23-Jul-12	15.00	6.00	28-Apr-14	
		26		**10,160,000**														

Component C – Procurement of Goods for Hydrology

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualification	Dom. Prefer.	WB Review	Likely Date of finalization of Specs	Expected Bid Opening Dt	Award Dt	Delivery Pd (in Months)	Slack Period (in Months)	Completion Dt	Present Status
1	G-221	1	Installation of 47 hydrological stations	611,000	HQ	NA	NA	SSS	No	Yes	Prior	01-Jul-11	01-Aug-11	01-Sep-11	6	0	28-Feb-12	
2	G-222	6	Procurement of Hydrological equipments /software	500,000	HQ	NA	NA	ICB	No	Yes	Prior	01-Aug-11	17-Oct-11	23-Jan-12	4	0	22-May-12	
3	G-223		Telemetry at 55 Snow Stations	605,000	HQ	NA	NA	SSS	No	Yes	Prior	01-Jul-11	01-Aug-11	01-Sep-11	12	0	01-Sep-12	
4	G-224		Installation of Cableways	810,000	HQ	NA	NA	ICB	No	Yes	Prior	01-Aug-11	17-Oct-11	23-Jan-12	12	0	22-Jan-13	
				2,526,000														

Component D - Procurement of Other Goods

Srl	Package ID No	No of Lots	Description of Work	Est Cost in USD	Region	Province	District	Proc. Method	Pre Qualification	Dom. Prefer.	WB Review	Likely Date of finalization of Specs	Expected Bid Opening Dt	Award Dt	Delivery Pd (in Months)	Slack Period (in Months)	Completion Dt	Present Status
1	G-281	3	Internet Services for PCU + Regional Offices + Hydrology	180,000	HQ	NA	NA	NCB	No	No	Prior	31-Mar-11	2-Jun-11	26-Aug-11	18		31-Dec-12	

A. Selection of Consultants

Table 6: Selection Methods and Thresholds

	Selection Method	Threshold	Comments
1.	CQS for Firms	US$ 200,000 equivalent or less	
2.	QCBS,QBS, FBS, LCS	depending on the nature and complexity of assignment	

2. Prior Review Threshold: Selection decisions subject to Prior Review by World Bank as stated in Appendix 1 to the Guidelines Selection and Employment of Consultants:

	Selection Method	Prior Review Threshold	Comments
1.	Competitive Methods (Firms)	$100,000 or more	
2.	Competitive methods (individuals)	$50,000 or more	
3	Single Source (Firms)/Individuals	All regardless of value	

217. **Short list comprising entirely national consultants:** Short list of consultants for services, estimated to cost less than US$100,000 equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

Irrigation Restoration and Development Project
Procurement Plan

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
Component B - Consultancy Services for Small Dam											
1	C-601	Feasibility Studies	2,000,000	QCBS	Prior	1-Jul-11	15-Nov-11	29-Jan-12	14-Mar-12	8-Jan-13	
2	C-602	Detailed design and supervision small dams	3,000,000	QCBS	Prior	2-Oct-11	16-Nov-11	30-Jan-12	15-Mar-12	9-Jan-13	
3	C-603 to C-611	Hiring of International Panel of Experts for small dam (List of Experts to be finalized later)*	250,000	IC	Post	30-Jun-11	25-Aug-11		6-Oct-11	31-Dec-12	
		*Tentatively Dam design Engineer, Irrigation Engineer, Agriculturist, Hydrologist, Economist, Environmentalist, Geodesist, Geologist, Sociologist									
		Sub Total	**5,250,000**								
Component D - Other Consultancy Services											
(i) Consultancy Services through Firms											
1	C-621	Technical Assistance for Project Mgt and Implementation	17,443,000 Excluding passthrough items	SSS/QBS	Prior	28-Feb-11		15-May-11	01-Dec-11	30-June-17	
2	C-622	Consultancy services for strengthening of MIS started under EIRP	100,000	QCBS	Prior	31-Aug-11	26-Oct-11	25-Dec-11	23-Feb-12		
3	C-623	Consultancy Services for Independent 3rd Party Monitoring of ESMF compliance	500,000	QCBS	Prior	15-Feb-11	12-Apr-11	12-Jul-11	08-Nov-11	30-Jun-17	
		Sub Total (Consultancies -Firms)	**18,043,000**								
(ii) Individual Consultants											
1	C-631	Hiring of Int'l Finance & Admin. Specialist for F&A Dept. MEW	192,000	IC	Prior	31-Jan-11	02-Mar-11	NA	16-May-11	30-Jun-13	
2	C-632	Hiring of One National Environmental & Social Safeguard Specialist For PCU Main Office	36,000	IC	Post	15-Jan-11	12-Mar-11	NA	11-May-11	31-Dec-13	

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
3	C-633	Hiring of One National Contract Management Supervisor for PCU Main Office	36,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
4	C-634	Hiring of One National Procurement Assistant for PCU Main Office	18,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
5	C-635	Hiring of Four National Finance Assistants for PCU Main Office	72,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
6	C-636	Hiring of One National Cashier for PCU Main Office	12,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
7	C-637	Hiring of One National MIS Officer for PCU Main Office	12,000	IC	Post	31-Jan-11	17-Mar-11	NA	16-May-11	31-Dec-13	
8	C-638	Hiring of One National IT Officer for PCU Main Office	12,000	IC	Post	31-Jan-11	31-Mar-11	NA	14-Jul-11	31-Dec-13	
9	C-639	Hiring of One National Media & Information Assistant for PCU Main Office	12,000	IC	Post	31-Jan-11	17-Mar-11	NA	16-May-11	31-Dec-13	
10	C-640	Hiring of Six National Admin/Finance/Procurement Assistants (for Regional Offices)	72,000	IC	Post	31-Mar-11	15-May-11	NA	14-Jul-11	31-Dec-13	
11	C-641	Hiring of Six National Contract Management/Procurement Officers (Regions)	162,000	IC	Post	31-Mar-11	15-May-11	NA	14-Jul-11	31-Dec-13	
12	C-642	Hiring of Five National Surveyors (for Regional Offices)	90,000	IC	Post	31-Jan-11	17-Mar-11	NA	16-May-11	31-Dec-13	
13	C-643	Hiring of Eight Supervisors (for Regional Offices)	192,000	IC	Post	31-Jan-11	17-Mar-11	NA	16-May-11	31-Dec-13	
14	C-644	Hiring of Seven Community Water Development Assistants (for Regional Offices)	126,000	IC	Post	31-Mar-11	15-May-11	NA	14-Jul-11	31-Dec-13	
15	C-645	Hiring of Six National Environmental & Social Safeguard Assistants (for Regional Offices)	108,000	IC	Post	15-Jan-11	01-Mar-11	NA	30-Apr-11	31-Dec-13	
16	C-646	Hiring of Six National Quality Control Lab Technicians(for Regional Offices)	72,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
17	C-647	Hiring of Six National IT Assistants (for Regional Offices)	72,000	IC	Post	31-Mar-11	15-May-11	NA	14-Jul-11	31-Dec-13	
18	C-648	Hiring of Six National M&E Regional Coordinators/Operation & Maintenance (for Regional Offices)	108,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
19	C-649	Hiring of One National M&E Specialist (for M & E Unit)	36,000	IC	Post	31-Mar-11	15-May-11	NA	14-Jul-11	31-Dec-13	
20	C-650	Hiring of One National M&E Construction Management Specialist (for M & E Unit)	36,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
21	C-651	Hiring of One National Data Processing Supervisor (for M & E Unit)	18,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
22	C-652	Hiring of One National Data Collection Supervisor (for M & E Unit)	18,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
23	C-653	Hiring of One National Environment Impact Assessment Officer	18,000	IC	Post	31-Mar-11	15-May-11	NA	14-Jul-11	31-Dec-13	
24	C-654	Hiring of Two National Data Entry Officers (for M & E Unit)	18,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
25	C-655	Hiring of Five National Field Enumerators & GPS Plotters (for M & E Unit)	135,000	IC	Post	05-Mar-11	19-Apr-11	NA	18-Jun-11	31-Dec-13	
26	C-656	Hiring of Three National Finance & Admin. Specialist for F&A Dept. MEW	54,000	IC	Post	15-Jan-11	01-Mar-11	NA	30-Apr-11	31-Dec-13	
27	C-657	Hiring of Two National Internal Audit Assistants	132,000	IC	Prior						Exisitng
		Sub Total (Individual Consultants)	**1,869,000**								
Component D – Trainings											
1	T-901	2 weeks Overseas Training Course for 10 participants on Procurement (generic)	25,000	CQS	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
2	T-902	1 week Overseas Training Course for 8 participants on Contract Management	18,000	CQS	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
3	T-903	One week In country Training Course for 40 participants on Construction Supervision - Quality Control (through International Trainer)	10,000	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
4	T-904	Three weeks In country Training Course for 10 participants on Financial Management (generic) (through Local Trainer)	4,000	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	8-Dec-11	
5	T-905	One week In country Training Course for 10 participants on FM (advanced/topic specific based on needs assessment) (through Local Trainer)	2,000	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
6	T-906	One day In country Contractors' Training for 25 participants	4,000	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
7	T-907	One week In country Training Course for 10 participants on Environmental Screening and EIA (through Local Trainer)	2,500	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
8	T-908	One day In country Training Course for 6 participants on Resettlement Action Plan - development and monitoring (through International Trainer)	5,000	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
9	T-909	Three days In country Training Course for 10 participants on Social Assessment (through Local Trainer)	2,000	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
10	T-910	Two days In country Training Course for 25 participants on Gender Issues (through Local Trainer)	4,000	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
11	T-911	One week In country Training Course for 8 participants on Monitoring and Evaluation (through Local Trainer)	3,000	IC	Post	1-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
12	T-912	One week Overseas Training Course for 7 participants on Integrated Water Resource Management	18,000	CQS	Post	1-Aug-11	15-Sep-11	29-Nov-11	13-Jan-12	28-Jan-12	
13	T-913	One week Overseas Training Course for 7 participants on Irrigation Agronomy / Economic Analysis	21,000	CQS	Post	1-Aug-11	15-Sep-11	29-Nov-11	13-Jan-12	28-Jan-12	
14	T-914	One week In country Training Course for 8 participants on Remote sensing and GIS in irrigation planning (through local Trainer)	2,000	SSS	Prior	1-Aug-11	15-Sep-11	29-Nov-11	13-Jan-12	28-Jan-12	
15	T-915	One week In country Training Course for 10 participants on Hydraulic Design (through International Trainer)	10,000	IC	Post	1-Aug-11	15-Sep-11	29-Nov-11	13-Jan-12	28-Jan-12	

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
16	T-916	One week In country Training Course for 10 participants on Modern Survey (through International Trainer)	10,000	IC	Post	1-Aug-11	15-Sep-11	29-Nov-11	13-Jan-12	28-Jan-12	
17	T-917	One week In country Training of 25 *Mirab*s in record keeping, O&M, etc. (through local Trainer)	3,750	SSS	Prior	1-Jan-12	15-Feb-12	30-Apr-12	14-Jun-12	29-Jun-12	
18	T-918	One week In country Training of 25 CDC members on community water management (through local Trainer)	3,750	SSS	Prior	1-Jan-12	15-Feb-12	30-Apr-12	14-Jun-12	29-Jun-12	
19	T-919	2 weeks Overseas Training Course for 10 participants on Procurement (generic)	25,000	CQS	Post	1-Mar-12	15-Apr-12	29-Jun-12	13-Aug-12	28-Aug-12	
20	T-920	1 week Overseas Training Course for 8 participants on Contract Management	18,000	CQS	Post	1-Mar-12	15-Apr-12	29-Jun-12	13-Aug-12	28-Aug-12	
21	T-921	One week In country Training Course for 20 participants on Construction Supervision - Quality Control (through International Trainer)	10,000	IC	Post	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
22	T-922	Three weeks In country Training Course for 10 participants on Financial Management (generic) (through Local Trainer)	4,000	SSS	Prior	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	8-Oct-12	
23	T-923	One week In country Training Course for 10 participants on FM (advanced/topic specific based on needs assessment) (through Local Trainer)	2,000	SSS	Prior	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
24	T-924	One day In country Contractors' Training for 25 participants	4,000	SSS	Prior	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
25	T-925	One week In country Training Course for 5 participants on Environmental Screening and EIA (through Local Trainer)	1,500	SSS	Prior	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
26	T-926	Three days In country Training Course for 5 participants on Social Assessment (through Local Trainer)	1,500	SSS	Prior	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
27	T-927	Two days In country Training Course for 25 participants on Gender Issues (through Local Trainer)	4,000	SSS	Prior	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
28	T-928	One week In country Training Course for 8 participants on Monitoring and Evaluation (through Local Trainer)	3,000	SSS	Prior	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
29	T-929	Three weeks In country Training Course for 7 participants on Communication - internal and external (through International Trainer)	15,000	IC	Post	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
30	T-930	One week In country Training Course for 10 participants on Operations and Maintenance (through International Trainer)	10,000	IC	Post	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
31	T-931	One week In country Training Course for 10 participants on Crop Water Requirement and Management (through International Trainer)	10,000	IC	Post	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
32	T-932	Two weeks In country Training Course for 5 participants on Small Dams (full cycle + construction supervision) (through International Trainer)	10,000	IC	Post	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
33	T-933	One week In country Training Course for 10 participants on Database management - Hydromet data collection & mgt (through International Trainer)	10,000	IC	Post	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
34	T-934	Three weeks Overseas Training Course for 7 participants on Participatory Irrigation Management	30,000	CQS	Post	1-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
35	T-935	One week Overseas Training Course for 6 participants on Floods and Drought Management	18,000	CQS	Post	2-Apr-12	17-May-12	31-Jul-12	14-Sep-12	29-Sep-12	
36	T-936	One week Overseas Training Course for 7 participants (in 2 batches) on Drainage and Land Reclamation (International Training)	21,000	CQS	Post	3-Apr-12	18-May-12	1-Aug-12	15-Sep-12	30-Sep-12	

Srl	Package ID No	Description of Services	Est Cost (in USD)	Proc. Method	WB Review	Likely Date of finalization of TOR	Expected Deadline Date of closing of EOIs	Expected Technical Proposal Opening Dt	Expected Award Dt	Expected Completion Dt	Present Status
37	T-937	One week Overseas Training Course for 7 participants on Hydrology measurement and analysis	21,000	CQS	Post	4-Apr-12	19-May-12	2-Aug-12	16-Sep-12	1-Oct-12	
38	T-938	One week In country Training Course for 8 participants on Remote sensing and GIS in irrigation planning (through local Trainer)	2,000	SSS	Prior	1-Mar-12	15-Apr-12	29-Jun-12	13-Aug-12	28-Aug-12	
39	T-939	One week In country Training Course for 10 participants on Hydraulic Design (through International Trainer)	10,000	IC	Post	1-Mar-12	15-Apr-12	29-Jun-12	13-Aug-12	28-Aug-12	
40	T-940	Two days In country Training for 25 participants on ESMF and RPF	4,000	IC	Post	01-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
41	T-941	Two day In country Training for 15 participants on gender	7,000	IC	Post	01-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
42	T-942	Two day In country Training for 25 participants on Perations Manual	4,000	IC	Post	01-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
43	T-943	One week In country Trianing for 10 participants on Hydromet database management	6,000	IC	Post	01-Jun-11	16-Jul-11	29-Sep-11	13-Nov-11	28-Nov-11	
44	T-944	Two days In country Training for 25 participants on ESMF and RPF	4,000	IC	Post	01-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
45	T-945	Two day In country Training for 25 participants on Perations Manual	4,000	IC	Post	01-Apr-12	16-May-12	30-Jul-12	13-Sep-12	28-Sep-12	
		Sub Total (Trainings)	**407,000**								
		Grand Total for Component D	**20,319,000**								
		Grand Total for All Consultancy Services (Component B & D	**25,569,000**								

Consultancy Assignments with Selection Methods and Time Schedule

218. **Capacity Building:** The following programs are proposed to enhance the knowledge of the staff.

Expected outcome/Activity Description	Estimated Cost	Estimated Duration	Start date	Comments
Familiarity of MEW/PCU staff in procurement of goods following shopping procedures/selection of consultants	Bank Budget	2 days		Bank staff at Kabul office will conduct in English/Dari
Familiarity of staff with Procurement under Bank Financed Projects	US$ 30,000	Two weeks	TBD	One PCU procurement staff and two procurement directorate staff will receive training under PPU/MOF and then those staff will be sent to NIFM or ASCI for advance training to India

219. Agreed Procedures for National Competitive Bidding:

i. Standard bidding documents approved by the Association shall be used.
ii. Invitations to bid shall be advertised in at least one (1) widely circulated national daily newspaper and bidding documents shall be made available to prospective bidders, at least twenty eight (28) days prior to the deadline for the submission of bids.
iii. Bids shall not be invited on the basis of percentage premium or discount over the estimated cost.
iv. Bidding documents shall be made available, by mail or in person, to all who are willing to pay the required fee.
v. Foreign bidders shall not be precluded from bidding.
vi. Qualification criteria (in case pre-qualifications were not carried out) shall be stated on the bidding documents, and if a registration process is required, a foreign firm determined to be the lowest evaluated bidder shall be given reasonable opportunity of registering, without any hindrance.
vii. Bidders may deliver bids, at their option, either in person or by courier service or by mail.
viii. All bidders shall provide bid security or a bid security declaration form as indicated in the bidding documents. A bidder's bid security or the declaration form shall apply only to a specific bid.
ix. Bids shall be opened in public in one place preferably immediately, but no later than one hour, after the deadline for submission of bids.

x. Evaluation of bids shall be made in strict adherence to the criteria disclosed in the bidding documents, in a format, and within the specified period, agreed with the Association.

xi. Bids shall not be rejected merely on the basis of a comparison with an official estimate without the prior concurrence of the Association.

xii. Split award or lottery in award of contracts shall not be carried out. When two (2) or more bidders quote the same price, an investigation shall be made to determine any evidence of collusion, following which: (A) if collusion is determined, the parties involved shall be disqualified and the award shall then be made to the next lowest evaluated and qualified bidder; and (B) if no evidence of collusion can be confirmed, then fresh bids shall be invited after receiving the concurrence of the Association;

xiii. Contracts shall be awarded to the lowest evaluated bidders within the initial period of bid validity so that extensions are not necessary. Extension of bid validity may be sought only under exceptional circumstances.

xiv. Extension of bid validity shall not be allowed without the prior concurrence of the Association (A) for the first request for extension if it is longer than four (4) weeks, and (B) for all subsequent requests for extensions irrespective of the period, in case of prior review.

xv. Negotiations shall not be allowed with the lowest evaluated or any other bidders.

xvi. Re-bidding shall not be carried out without the Association's prior concurrence in case of prior review; and

xvii. All contractors or suppliers shall provide performance security as indicated in the contract documents. A contractor's or a supplier's performance security shall apply to a specific contract under which it was furnished.

Annex 7: Implementation and Monitoring Arrangements
Afghanistan: Irrigation Restoration and Development Project

Implementation Arrangements

220. **Project Coordination Unit:** The implementation arrangements for the EIRP have generally worked well and the same would be used for the IRDP with some modifications. Chart 1 shows the overall arrangements for project implementation. These include a project coordination unit (PCU) in MEW, assisted by a technical assistance team that provides day-to-day support for overall project implementation. The PCU has six regional offices, a large schemes unit, a financial management unit, a procurement unit and an M&E unit. The PCU and its regional office provide nationwide coverage for preparation, supervision of rehabilitation schemes and monitoring. The PCU staff work closely with local communities in preparing, designing and supervising construction of schemes.

221. **Role of local communities, *Mirabs* and CDCs:** Under the EIRP local communities and local communities and *Mirabs* participate in decision making processes throughout the sub-project cycle, including identification, preparation, design, construction, sign off on *OK Cards* and contractors' final bills, and operation and maintenance of completed sub-projects. Under the IRDP field staff will also work closely with CDCs or clusters of CDCs as representatives of the local communities, including women CDCs. The CDCs would provide a natural entry point for acquiring local knowledge and promoting community participation. The project will use data readily available with the NSP on the mapping of the CDCs to better plan the extent of CDC involvement in the planned project schemes. Since most canals traverse several villages/CDCs, the IRDP would work with CDC clusters where they exist. Possible role of CDCs in the project would include: participation in walk-through/transect surveys during identification and design stages; facilitating consultation with women; safeguarding water rights; providing construction supervision oversight through the *Mirabs*; sign-off on contractor's final bills; oversight of compliance with provisions of ESMF (including LARAPs); oversight of O&M; and safeguarding project facilities, including hydrological stations.

222. **Technical assistance team's (TAT's) role:** Besides providing day to day assistance in overall project management, procurement and financial management and capacity building, the TAT would also be responsible for periodic spot checks of construction works, quality control, certifying final payments and reporting issues to the PCU.

223. **General Directorate of Water Affairs Management's (GDWAM's) role:** The GDWAM of MEW would be responsible for the implementation of Component C. However, the PCU will be responsible for all procurement activities under this component. The Hydrologist in the TAT will be posted in the GDWAM and would focus primarily on capacity building and making the hydro-met services operational with limited time devoted to procurement, including preparation of technical specifications.

Institutional Arrangements for Hydrological Services

224. **Current Institutional Arrangements:** The GDWAM in MEW is responsible for the collection and analysis of hydro-meteorological data as well as the operation and maintenance of hydro-meteorological stations established by MEW. The staff of the GDWAM at Kabul and the six river basin offices at Kabul, Amu, Harirud, North and Helmand Rivers is directly in charge of these activities.

225. Hydrological and meteorological data is captured by the data-loggers installed at the stations. Hydrologists from the provincial offices visit the hydrological stations and download the data from the

data-loggers on a monthly basis. The data collected are submitted to GDWAM office in Kabul on compact discs through courier service. The staff of the GDWAM analyze the data.

226. Currently the GDWAM department is weak both in terms of office facilities (access to internet and equipment for storage and retrieval of data) and availability of trained and experienced staff. Many of the staff are newly recruited fresh university graduates (or with lesser qualifications) who require training in basic hydrology and meteorology. The few staff with more experience are stationed at Kabul. Consequently there are few opportunities for hands-on training for the staff at the provincial offices.

227. **Small Dams:** The Mazar-e-Sharif Regional office will be appropriately staffed to deal with work load relating to the small dams[38]. Design and construction supervision of small dams would be the responsibility of an international consulting firm selected in accordance with Bank guidelines for selection of consultants. An independent agency reporting to the Deputy Minister MEW would be recruited to monitor compliance with the provisions of ESMF/LARAP.

228. **Project Staffing:** Learning from the experience of EIRP, the PCU and its regional offices will be strengthened with additional staff to improve quality of sub-project preparation, construction supervision and quality control, contract management and devote greater attention to social and environmental and gender issues. Additional staff positions of regional contract managers, construction supervisors, quality control Engineers, environmental and social safeguard officers, community water assistants (social mobilization), hydro-meteorologist, procurement officers, financial management officers, IT, M&E, enumerators, etc. have been included under the Project. Performance-based incentives would continue for the MEW/PWMD staff. To promote coordination with on-farm interventions to be implemented by MAIL under the OFWM Project, MEW/PCU will designate a focal person who will ensure preparation of coordinated designs and establish synergies.

229. **Project Coordination and Steering Arrangements:** Chart 2 shows the project coordination and steering arrangements. The Regional Coordination Committees (RCCs) established under the EIRP would help ensure coordination with other programs/projects at all stages of scheme preparation, design and implementation in each of the six regions in which IRDP would be operating. The RCCs are chaired by the respective Directors of the PWMDs and have members from provincial offices of MAIL and other ministries, other donor programs/projects, local communities (*Mirabs*, CDCs), and NGOs. The Steering Committee (SC) for IRDP chaired by the Minister of MEW and with members from MAIL and MOF would provide high level oversight and policy guidance. The SC would meet at least once every six months or more frequently if required. The Director PCU will serve as the secretary to the SC and will prepare the agenda and minutes of the meetings for necessary follow up on the decisions taken.

Implementation monitoring and reporting

230. **Arrangements for monitoring and reporting progress**. The PCU will be responsible for monitoring physical progress and collation of progress reports. The PCU will: (i) collaborate with its regional offices and the M&E unit; (ii) maintain the overall project management information system (PMIS); (iii) monitor and evaluate progress in the provision of critical project inputs and activities; and (vii) submit periodic (monthly and quarterly) progress reports to MEW and the World Bank on the Project. These reports would include, inter alia: (a) up-to-date physical and financial progress compared to annual and end-of-project targets; (b) updated indicators of project performance compared to annual and end-of-project targets; and (c) successes and problems encountered during the reporting period with

[38] The potential sites for small dams in closed river basins that are currently been studied are located in areas that fall within the jurisdiction of the PCU's Mazar regional office.

suggested remedial actions. An independent organization (e.g. NGO(s)) would be hired to monitor compliance with the provisions of the ESMF during project implementation. Similarly an independent organization would be hired to monitor implementation of LARAPs for specific sub-projects (e.g. small dams) that involve land acquisition and re-settlement.

231. **Monitoring and Evaluation:** The M&E system will be anchored on the results framework. The M&E system will combine the traditional implementation approach (inputs, activities, outputs) with assessment of results (outcomes and impacts). This system will allow IRDP to modify and make adjustments to both its structure and implementation processes in order to more directly support the achievement of its outcomes. The institutional and staffing arrangements will build upon the existing M&E arrangements of EIRP, which include an independent M&E Unit focused on monitoring results.

232. **M&E Unit:** Monitoring of results/outcomes will be carried out by an M&E unit. This unit will be responsible for collection and analysis of panel data, conducting a limited number of case studies, and for providing continuous feedback to the PCU and the World Bank. The M&E unit would be strengthened through training and the provision of specialists and field staff, including one national M&E specialist, one database management specialist, and one international M&E specialist (hired under the TAT contract). The responsibilities of the M&E unit include the creation of an M&E framework based on the project's results framework that would be expanded to include inputs, activities, and output indicators. It will define key process and performance monitoring indicators, data collection frequencies, and formats for collecting the relevant information. This framework will clearly specify data collection responsibilities of the different implementing agencies and consultants.

233. The M&E Unit will: (i) analyze project-level M&E information and generate regular M&E reports; (ii) conduct the Baseline Survey for project; (iii) evaluate progress in achieving the project outputs and outcomes and evaluate the project's impact at key junctures during the project period to assess progress towards achieving project's objectives; (iv) provide a yearly seasonal assessment to the PCU that would summarize the impact and achievements of the preceding growing season, cross-cutting issues and recommendations, and updated project indicators; (v) conduct special M&E studies as needed; (viii) identifying bottlenecks and corrective actions; (vi) document success stories; and (vii) regularly report to PCU, the Project Steering Committee, and the World Bank.

234. **Baseline Survey:** The M&E unit will undertake the baseline survey for the project taking the first measurement of the indicators to document the *Before-Project situation*. Field work for the baseline survey has been completed and the report will be completed by May 15, 2011. In order to enable an impact evaluation of the project it is critical that the sample design for the baseline survey includes controls. The controls will include areas where no IRDP activities are being implemented. The M&E unit will be responsible for determining the final breakdown of "treatment" versus control areas and households to ensure that statistically meaningful comparison can be made. Control areas and villages should have similar socio-economic and agronomic characteristics to the treatment sample. Propensity score or other matching methods will need to be used to assess the validity of the controls in the analysis of the baseline data. Probability sampling will be used to select a sample, allowing for statistically robust estimates of difference in key parameters of interest. Furthermore, the control group could be subject to a rolling sampling in order to allow a proper comparison over time.

235. Specific tasks related to the baseline survey include: (i) developing an appropriate sample design, (ii) developing and finalizing baseline survey questionnaires; (iii) arranging for the questionnaires to be translated into relevant language (*Pashtu* or *Dari*); (iv) field testing the questionnaires; (v) incorporating revisions to the questionnaire after the field test; (vi); hiring and training the field supervisors and enumerators; (vii) planning the field work logistics; (viii) conducting a

pilot survey and revising the questionnaire based on the findings of the pilot survey; (ix) preparing survey implementation and questionnaire documentation; (x) supervising survey implementation and ensuring quality control; (xi) developing the data entry program, supervising the project database and arranging for data cleaning and entry; and (xii) analyzing and reporting the findings of the survey and providing datasets and final documentation.

236. **Impact Evaluation Studies:** The impact evaluation studies (seasonal assessments) will be carried out at the end of the crop season. These studies play an important role in supplementing information acquired by monitoring progress toward outcomes and impacts. They are especially important as monitoring data do not fully reveal why that level of performance occurred or provide causal explanations about changes in performance from one seasonal assessment to the other or one site to another.

237. The impact evaluation studies will allow:

- A more in-depth study of results-based outcomes.
- The use of data sources other than the indicators being tracked.
- Examination of factors that are too difficult or expensive to monitor continuously.
- Investigation of why and how the trends being tracked with monitoring data are moving in the direction they are.

238. The impact evaluation surveys will closely follow the sampling and data collection methodologies used for the project's baseline survey. Moreover, the stratified sampling will take into account the phasing of activities. This will ensure that for each seasonal assessment the sample includes locations that have been rehabilitated prior to the cropping season. Specific tasks are as specified above for the baseline survey. The M&E unit will be expected to pool the baseline survey data, and the control group data for the same period, and final impact assessment survey data to create a panel data set to analyze and measure changes with respect to the performance of the project. The content of seasonal assessment surveys will include all questions from the baseline survey as a "core" module for year 3 and year 6, and only key questions during other years. Each impact assessment will develop a comparison between current project progress, baseline, and the progress made by the control sample (hence, the need for a rolling sample). In addition to this "core" module, the M&E unit would need to add additional questions/content as required to ensure that the impact assessment surveys adequately capture all results indicators being monitored as part of the project, including important qualitative information. The content of the impact evaluation questionnaires will be finalized in consultation with the PCU.

239. **Thematic studies:** Aside from the seasonal assessments, special studies will be commissioned periodically to generate a better understanding of strategic issues as well as to disaggregate indicators as per results framework. These studies can cover a range of issues such as production of high value crops, increase in technical skills of project employees, performance after the technical assistance is phased out (year 4), regional comparative studies on incremental irrigated area and yield, and cropping patterns and crop diversification.

240. **Project Management Information System (PMIS) and M&E Module:** The M&E system will feed into the project MIS resulting in substantial savings in monitoring costs. Part of the planned upgrade to a web based system that would allow the regional offices to make entries in the system directly will include the development of an M&E module, which was not developed for EIRP's MIS. This updated MIS and the new M&E module will provide interactive user-friendly tools, allowing the collection of inputs from the implementing agencies, producing standard reports, and allowing specialized queries to track all aspects of project progress (including physical and financial progress and project outputs and outcomes) at any time.

Chart 1: Implementation Arrangements

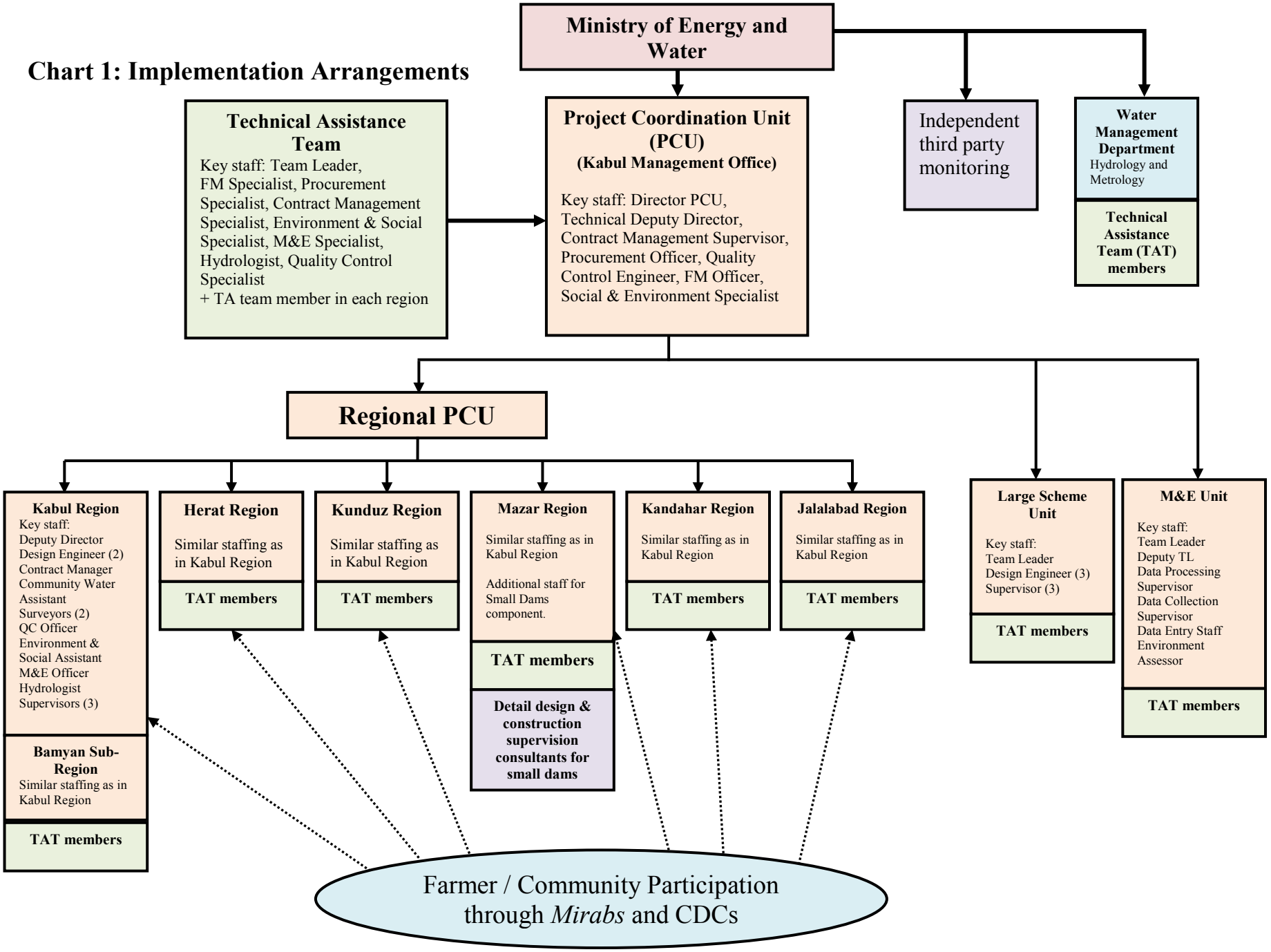
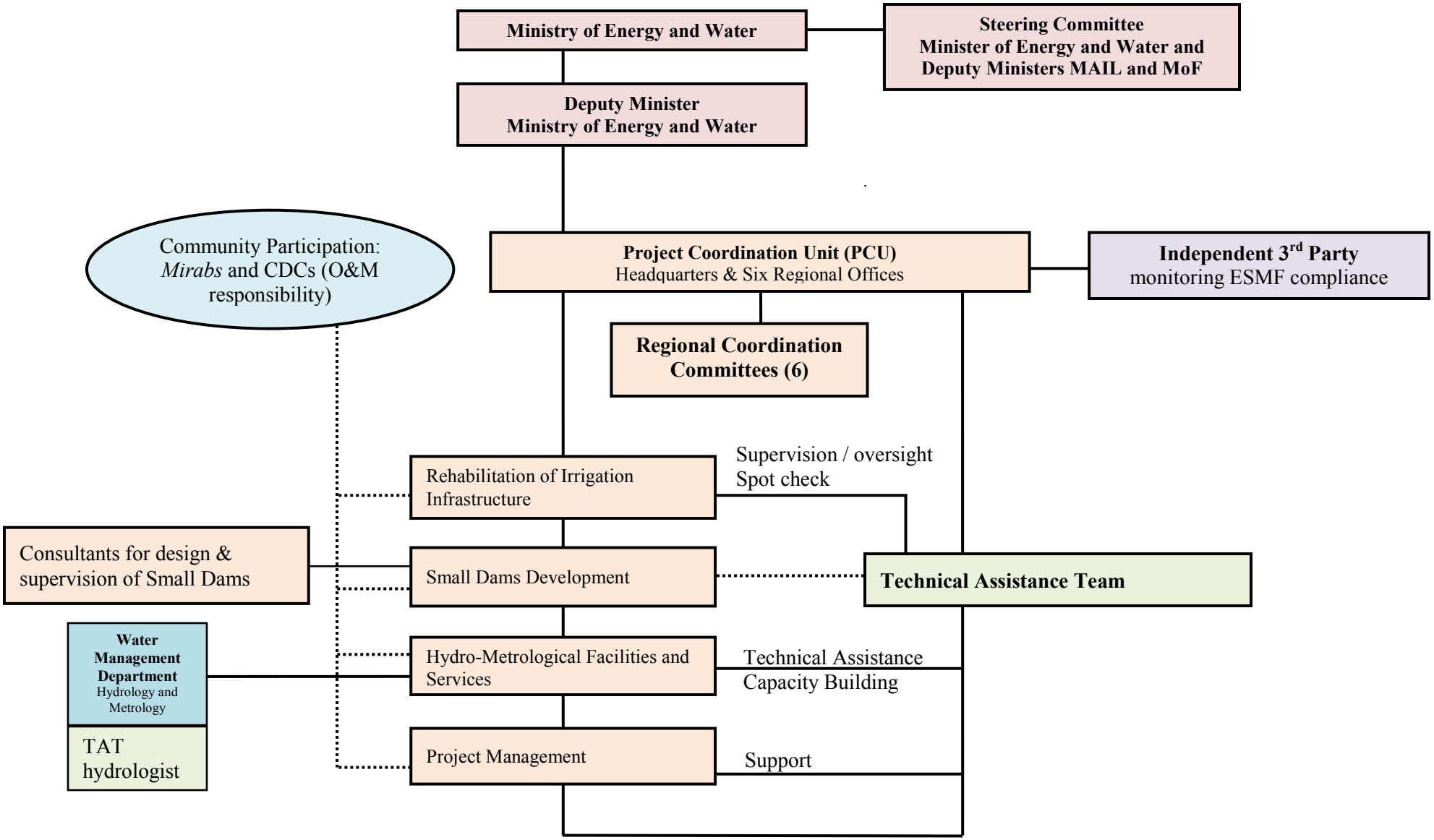


Chart 2: Project Steering and Coordination Arrangements and Project Components



Annex 8: Economic and Financial Analysis
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A. Summary of Benefits

241. The proposed Project would rehabilitate irrigation systems serving about 300,000 hectares of land that is currently served by dilapidated irrigation infrastructure with low efficiency and reliability of irrigation supply. Monitoring data of the ongoing EIRP[39], which is also supporting similar rehabilitation, shows that rehabilitation results in improved efficiency of the irrigation system leading to the following benefits: (i) the existing irrigated area receives more reliable and timely water supplies, particularly at the tail-ends of canals and results in a increase in cropping intensity from about 122 percent to 152 percent; (ii) an increase of about 15 to 30 percent in the irrigable area; and (iii) an increase in crop yields in excess of 20 percent compared to control group and 40 percent compared to pre-rehabilitation.

242. Considering that sub-projects with the highest benefits may have already been selected under the EIRP, for purposes of economic and financial analysis the following conservative estimates have been used for the sub-projects to be rehabilitated under the IRDP: (i) increase in cropping intensity from 122 percent to 152 percent; (ii) an average increase of 15 percent increase in irrigated area (45,000 ha equal to 15 percent of 300,000 ha); and (iii) an average 20 percent increase in crop yields (wheat being the dominant crop has been used as a proxy for all crops). The area to be served by the small dams is not quantified yet and has been excluded from this analysis. Similarly indirect and other benefits that cannot be quantified at this stage have been ignored. These include: possible shift of cropping pattern towards higher value crops; benefits of mini-hydro power generation at small dams and canals where opportunities exist; the benefits of institutional strengthening and improved future planning of water resources, including the benefits of hydro-met services.

243. Economic rate of return (ERR) of the project is estimated at about 28 percent.

B. Assumptions

244. The following assumptions and approach have been used in the analysis:

a. The life of the civil works supported under the project would be 20 years including the investment period of six-years;
b. A standard conversion factor (SCF) of 0.9 has been used for converting cost of non-tradable goods to economic/shadow prices;
c. Total project cost (US$148.7 million) spread over six years has been defrayed against the project benefits; and
d. Possible reduction in operation and maintenance has been ignored[40].

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39 EIRP-Third Seasonal Impact Assessment Report: December 2009

40 The pre-appraisal mission collected data from farmers and *Mirabs* on operation and maintenance costs. It is clear from the data collected that farmers spend considerable resources (time, labor and money) to keep the system functional even at the low efficiency. After rehabilitation, the O&M costs will reduce substantially. However, there is a large variation in O&M costs among sub-projects depending on the location and nature of works involved. Therefore, to be on the conservative side, the reduction in O&M cost has not been taken into account in the analysis. If the reduction in O&M cost is taken into account the ERR would be higher.

245. **The without-project scenario:** The overall low irrigation efficiency will continue and the irrigated area crop yields may decrease. However, for purposes of this analysis, a conservative approach has been adopted assuming no change in the present level of crop yields, inputs and cropped area.

246. **The with-project Scenario:** As result of rehabilitation there would be about 15 percent increase in the targeted 300,000 hectare of irrigated areas resulting in an increase of about 45,000 ha of irrigable area. The areas that would benefit from the small dams have not been included in this analysis.

247. Secondary data[41] shows that the Wheat occupies 80 percent of the total irrigated cultivated area followed by Barley 8.7 percent; Rice 6.7 percent; and Maize 4.6 percent. Similar findings were observed by the mission members during field visits. Therefore, Wheat has been used as a proxy for the purpose of this analysis.

248. **Cropping intensity:** The EIRP's Third Seasonal Impact Assessment Report, December 2009, indicates that the average cropping intensity increases from 122 percent before rehabilitation to 152 percent at full development. The same persentages have been assumed for this analysis. It is assumed that full development will take place over a period of 10 years.

249. **Crop Yields:** Baseline survey has been carried out for 56 schemes proposed to be rehabilitated under the project. The data from this survey shows the Wheat yield to be 1915 Kg per hectare. The same has been used in this anlayis. In the with-project scenario, Wheat yield is assumed to increase by 20 percent over a period of 10 years. The assumed increase in yield is conservative and would result from improved timeliness and reliability of irrigation supply after rehabilitation.

250. **Crop Budget:** Crop budget for the Wheat crop was developed for the present situation as well as at full development. Data on inputs was collected by interviewing farmers and was adjusted for incremental yield anticipated over the period of full development. The data used for developing crop budget was also cross checked with the data available for projects of similar nature in neighbouring countries. The crop budget for Wheat was used to estimate net agricultural benefits of the project.

C. Projected benefits and related assumptions

251. **Area Benefited:** The extent of area benefiting from the project is summarized below:

Area under irrigation rehabilitation sub-projects

Area Benefitted	**Ha**
Irrigated Area Rehabilitated	300,000
Incremental Area (15 percent)	45,000
Total area after rehabilitation at full development	**345,000**

252. **Non-quantifiable and indirect benefits:** In addition to the direct and quantifiable economic benefits the project would also have various other benefits that are not quantifiable at this time: (i) the hydro-meteorological network in the project area will generate information for improved future planning[42], development, sustainable use and management of national water sources; (ii) the benefits of

[41] Yearbook Statistics 2008-09 and 2009-10 issued by the GoA

[42] In the absence of hydrological data, design engineers tend to be conservative and often overdesign structures leading to higher costs.

mini-hydropower generation; (iii) increase in agricultural area and crop yields in the areas served by small dams; and (iv) the benefits of building capacity in the MEW.

253. **Prices:** For the financial and economic analysis, prices of inputs and outputs have been expressed in October 2010 constant prices. Data on open market prices was collected through various sources for determining the farm-gate financial prices, including price bulletins issued by the GoA as well as FAO. Economic evaluation has been carried out using economic prices. Import parity prices have been derived for Wheat and fertilizers using commodity price data issued by World Bank in October 2010.

254. **Derivation of Import Parity Prices:** Derivation of import parity prices is included in Tables 8.1 to 8.3. Financial and economic prices used in the analysis are summarized in Table 8.4.

D. Economic Analysis

255. **Methodology and Assumptions:** The economic value of project benefits has been calculated by estimating incremental input and outputs at parity prices. The project cost in economic prices has been calculated by applying the standard conversion factor (SCF). Cost of all project components has been taken into account. The project life is conservatively assumed to be 20 years including the construction period of 6 years. Dollar conversion rate has been used as 1 US$ = 45 AFN. Since the value of standard conversion factor (SCF) for Afghanistan has been not estimated by the Bank, a standard conversion factor (SCF)[43] of 0.9 has been used for shadow pricing. However, sensitivity to varying values of the SCF has been tested by considering SCF values of 1 and 0.85 as well.

E. Economic Rate of Return

256. The project's economic rate of return (ERR) is estimated at 28 percent. Details are included in Table 8.5. The estimated ERR is similar to the estimated ERRs of the subprojects implemented under the EIRP and the irrigation schemes implemented under the NSP.

257. The project cost per hectare is US$430/ha (US$ 148.7 m divided by total area). If the investment is increased to US$815/ha the ERR still remains above 15 percent.

F. Sensitivity Analysis/Switching Values

258. The ERR is robust and not sensitive to reasonable cost overruns, reduced benefits and a combination of both. A 20 percent reduction in benefits reduces the ERR to 25.8 percent. A 20 percent increase in cost reduces the ERR to 26.5 percent. A combination of 20 percent increase in cost and 20 percent reduction in benefits reduces the ERR to 23.1 percent.

259. The sensitivity analysis above covers subproject failures. Under the EIRP, most subproject failures took place during identification and preparation. Such subprojects were not undertaken for implementation. However, contracts for some subprojects could not be completed because of deteriorating security or poor performance of the contractors. Out of 774 subprojects for which contracts were awarded under EIRP, only 29 sub-projects (3.7 percent) could not be completed. The impact of these failures is adequately covered in the sensitivity tested for 20 percent reduction in benefits and 20 percent increase in costs.

[43] The same value of SCF was used by the ADB for the project; "Western Basins Water Resources Management and Irrigated Agriculture Development Project"

260. The impact of cost over runs and reduction in benefits is summarized below:

Sensitivity Analysis: ERR Response

Description	ERR %
Economic Analysis	
Base Case	28.0%
Sensitivity Analysis	
(i) Costs Increase by 20%	26.5%
(ii) Benefits decrease by 20%	25.8 %
(iii) Combination of 20% reduction in benefits and 20% increase in cost	23.1%
(iv) SCF =1	24.3%
(v) SCF = 0.85	30.1%

261. The above results indicate that the ERR is robust.

262. Analyses for switching values indicate that the ERR for the project would fall to 15 percent if the cost increased by more than 90 percent or the benefits decreased by more than 55 percent.

G. Financial Analysis

263. The financial value of project benefits has been estimated by using market prices. All other assumptions are the same as for the economic analysis.

H. Financial Rate of Return

264. The project's financial rate of return (FRR) is estimated as 20.3 percent. Details are included in Table 8.6.

I. Sensitivity Analysis in Financial Terms

265. The results are presented in the following Table:

Sensitivity Analysis: FRR Response

Description	FRR %
Financial Analysis	
Base Case	20.3%
Sensitivity Analysis in Financial Terms	
(i) Costs increase by 20%	19.2%
(ii) Benefits decrease by 20%	18.7%
(iii) Combination of 20% reduction in benefits and 20% increase in cost	16.2%

J. Project Impact

266. **Agricultural Production:** The incremental production of Wheat as a result of the project at full development in year 10 is summarized below:

Annual Production – Wheat (000 tons)

Crops	Baseline Year 1	Future WP Year 10	Incremental Production
Production from existing irrigable area (300,000ha)	700	1048	347
Production from the incremental area (45,000 ha)	-	157	157
Total	700	1205	504

Key: Future WP: Future with project (at full development)

267. The project would create about 2.9 million additional person days per annum of employment as farm labor. This estimate reflects the additional labor days required for land preparation, ploughing, watering, harvesting, etc. at full development.

Table 8.1: Economic Price Derivation for Wheat Import Parity Basis

Description	Values
Projected Price in Current Dollars $/mt a/	365.6
Quality Adjustment Factor b/	0.85
World Market Equivalent $/mt	310.8
Transport and Insurance	37
cif, Karachi	348
Port charges $/mt c/	8.8
Storage and handling c/	14.1
Transport Karachi to Torkhum $/mt (2200 km)	15.9
cif, Torkhum $/mt	386.6
Value at Torkhum AFN/mt	17,397.5
Transport Torkhum to Kabul AFN/mt	250.0
Transport to Mill AFN/mt	100
At Mill price AFN/ton	18,173
Transport to Project Area AFN/mt	800
Value at Project Area market AFN/mt	18,973
Add local agent's commission @2.5%	474
Add transport - Market to Farm AFN/ton	150
Value at farmgate AFN/mt	19,597
Economic Value at farmgate $/mt	435
Economic Value at farmgate (AFN/kg)	19.6
Economic Value at farmgate (AFN/40kg)	784
Local farmgate Financial price (AFN/40kg)	632
Local farmgate price ($/40kg)	14.0
Local farmgate price ($/kg)	0.35
Economic Price AFN per Kg	19.6
Financial Price AFN Per Kg	15.80
Ratio of border to local farmgate price	1.24

a/ Commodity prices and price projections in current dollars - Nov 2010 Issue of World Bank - Canadian Wheat.

b/ Quality factor for Canadian Wheat at Pakistan is used to be 0.85; Afghan Wheat is more or less is of the same quality.

c/ Source: Shipping Corporation Office Karachi Port July 2010 Quote

Table 8.2: Economic Price Derivation for UREA (fertilizer) Import Parity Prices

Description	Values
Projected Price in Current Dollars $/mt a/	329.4
Quality Adjustment Factor	1.0
World Market Equivalent $/mt	329.4
Transport and Insurance /b	33.3
cif, Karachi $/mt	362.7
Port charges $/mt	8.8
storage and handling $/mt	14.1
Transport Karachi to Torkhum $/mt (2200 km)	15.9
cif, Torkhum $/mt	401.5
Value at Torkhum AFN/mt	18,067.4
Add local agent's commission AFN/mt	451.7
Add transport - Market to farm AFN/mt	150.0
Value at farmgate	18,669.1
Economic farmgate Price (AFN/50kg bag)	933.5
Economic farmgate Price (AFN/kg)	18.7
Local farmgate price (AFN/50 kg bag)	819.0
Ratio of border to local farmgate price	1.140

a/ Eastern Europe
b/ Source: Shipping Corporation Office Karachi Port July 2010 Quote

Table 8.3: Economic Price Derivation for DAP (fertilizer) Import Parity Prices

Description	Values
Projected Price in Current Dollars $/mt a/	575.0
Quality Adjustment Factor	1.0
World Market Equivalent $/mt	575.0
Transport and Insurance /b	33.3
cif, Karachi $/mt	608.3
Port charges $/mt	8.8
storage and handling $/mt	14.1
Transport Karachi to Torkhum $/mt (2200 km)	15.9
cif, Torkhum $/mt	647.1
Value at Torkhum AFN/mt	29,120.6
Add local agent's commission AFN/mt	728.0
Add transport - Market to farm AFN/mt	150.0
Value at farmgate	29,998.6
Economic farmgate Price (AFN/50kg bag)	1,499.9
Economic farmgate Price (AFN/kg)	30.0
Local farmgate price (AFN/50 kg bag)	1,674.0
Ratio of border to local farmgate price	0.896

a/ Eastern Europe
b/ Source: Shipping Corporation Office Karachi Port July 2010 Quote

Table 8.4: Prices Used in Financial and Economic Analysis

(Farm gate Prices October 2010 Price Level)

	Description	Unit	Financial	Economic
A.	**Outputs**			
1	**Yields**			
	Wheat	Afs/kg	15.80	19.60
2	**By-Products**			
	Wheat Straws	Afs/kg	2.00	1.80
B.	**Inputs**			
3	**Seed**			
	Wheat	Afs/kg	23.70	21.33
4	**Fertilizers**			
	Urea	Afs/Bag	819.00	933.5
	DAP	Afs/Bag	1,674.00	1,499.9
	Farm Yard Manure	1000 Kg	-	-
5	**Pesticides**			
	Wheat	Afs/Spray	400.00	360.00
6	Manual Labor	Afs/Day	250.00	225.00
7	Mechanical Labor	Afs/Hour	500.00	450.00

Table 8.5: Economic Analysis

US$ Million

Years	Investment Costs	Incremental O&M	Total Costs	Agricultural Benefits	Net Incremental Benefits
Year-1	12.33	-	12.33	-	(12.33)
Year-2	20.75	-	20.75	(1.39)	(22.15)
Year-3	29.84	-	29.84	(2.81)	(32.64)
Year-4	26.97	-	26.97	(0.33)	(27.30)
Year-5	23.22	-	23.22	7.48	(15.75)
Year-6	20.34	-	20.34	17.29	(3.06)
Year-7	-	-	-	33.96	33.96
Year-8		-	-	50.09	50.09
Year-9		-	-	64.95	64.95
Year-10		-	-	94.87	94.87
Year-11		-	-	94.87	94.87
Year-12		-	-	94.87	94.87
Year-13		-	-	94.87	94.87
Year-14		-	-	94.87	94.87
Year-15		-	-	94.87	94.87
Year-16		-	-	94.87	94.87
Year-17		-	-	94.87	94.87
Year-18		-	-	94.87	94.87
Year-19		-	-	94.87	94.87
Year-20		-	-	94.87	94.87
			ERR	Base case	28.0%
			a. Cost overrun by 20%		26.5%
			b. Benefits Reduced by 20%		25.8%
			c. Combination of a. & b. above		23.1%

Table 8.6: Financial Analysis

US$ Million

Years	Investment Costs	Incremental O&M	Total Costs	Agricultural Benefits	Net Incremental Benefits
Year-1	13.70	-	13.70	-	(13.70)
Year-2	23.06	-	23.06	(1.53)	(24.59)
Year-3	33.15	-	33.15	(2.28)	(35.43)
Year-4	29.97	-	29.97	(0.28)	(30.25)
Year-5	25.80	-	25.80	4.98	(20.82)
Year-6	22.60	-	22.60	10.50	(12.10)
Year-7	-	-	-	22.69	22.69
Year-8		-	-	34.53	34.53
Year-9		-	-	44.75	44.75
Year-10		-	-	65.45	65.45
Year-11		-	-	65.45	65.45
Year-12		-	-	65.45	65.45
Year-13		-	-	65.45	65.45
Year-14		-	-	65.45	65.45
Year-15		-	-	65.45	65.45
Year-16		-	-	65.45	65.45
Year-17		-	-	65.45	65.45
Year-18		-	-	65.45	65.45
Year-19		-	-	65.45	65.45
Year-30		-	-	65.45	65.45
			FRR	**Base case**	**20.3%**
			a. Cost overrun by 20%		19.2%
			b. Benefits Reduced by 20%		18.7%
			c. Combination of a. & b. above		16.2%

Annex 9: Governance and Accountability Plan
Afghanistan: Irrigation Restoration and Development Project

Introduction

268. The IRDP would be implemented in a high risk environment. However, the Government of Afghanistan (GoA) is fully committed to the Project and its proper and most effective implementation considering that continued rehabilitation of irrigation infrastructure and development of water resources remains critical for the economy and development of Afghanistan.

269. To mitigate and guard against governance, corruption and fraud risks and improve transparency and accountability in the implementation of IRDP several measures have been incorporated in the implementation and monitoring arrangements for the Project. These measures are included in the Governance and Accountability Plan (GAAP) to identify and mitigate critical risks in achieving the development objectives. The GAAP measures include:

(i) Improved implementation arrangements for IRDP that build upon the lessons learnt from EIRP;
(ii) Improved fiduciary processes including FM and Procurement;
(iii) Enhanced construction supervision including spot checks by the TAT; and
(iv) Enhanced monitoring and evaluation arrangements.

Improved Implementation Arrangements

270. The implementation arrangements for IRDP incorporate lessons from EIRP and introduce additional steps to mitigate the risk of not achieving the intended development outcomes due to poor governance.

Arrangements under EIRP

271. Under the EIRP, the overall oversight and policy guidance was provided by the Project Steering Committee (PSC) chaired by the Minister of MEW at the national level. The PSC was complemented by Regional Coordination Committees (RCCs) at the six regions chaired by the respective Directors of PWMDs. The EIRP implementation arrangements included establishment of a Project Coordination Unit (PCU) in the MEW which was assisted by the Technical Assistance Team (TAT) comprising of national and international specialists to provide support for the project management and implementation. The TAT also provided support for financial management and procurement during EIRP implementation. The PCU was devolved at the regional and provincial level through six regional offices across the country and undertook preparation and supervision of rehabilitation schemes. At the provincial level the PWMDs worked closely with the PCU Regional Offices as well as the local communities and *Mirabs* for identification, preparation, design, construction and operation and maintenance of irrigation schemes. Additional measures were undertaken to verify quality of works and completion of schemes through community ok cards and geo-referenced photographs.

Improved Arrangements under IRDP

272. For the IRDP, while the above arrangements will continue to be in place, the additional measures will include:

- Hiring of additional staff for contract management from the open market to mitigate the human resource gap as well as build long-term local capacities.
- Strengthening the PCU Regional Office in Mazar region to implement the small dams component.

- Providing performance based incentives to the MEW and Provincial Water Management Departments (PWMDs).
- Promoting active coordination with Ministry of Agriculture, Irrigation and Livestock (MAIL) by designating focal persons in the MEW/PCU.
- Preparing the IRDP Operations Manual to provide detailed description of procedures and processes to be followed for various aspects of the project management.

Oversight and Policy Guidance

273. The oversight and policy guidance will be provided through the PSC chaired by the Minister of MEW at the national level while the six RCCs will facilitate coordination with other programs at regional levels. However, under the IRDP the PSC will be strengthened by including Deputy Ministers from MAIL and Ministry of Finance (MoF) as members of the PSC to promote coordination with other programs in the Agriculture and Rural Development Cluster[44]. In addition, with the proclamation of Afghanistan's Water Law in 2009, the emerging role of PWMDs into River basin Authorities (RBAs) will be incorporated into the RCCs as and when these become functional.

Strengthened Community Participation

274. Under the IRDP, the existing role of local communities and *Mirabs* in decision making processes throughout the sub-project cycle will be further enhanced by including participation of CDCs. Possible role of CDCs will include: participation in walk through/transect surveys; consultation with women; safeguarding water rights; providing construction supervision oversight through the *Mirabs*; sign-off on contractor's final bills; oversight of compliance with provisions of ESMF (including LARAPs); oversight of O&M; and safeguarding project facilities including hydrological stations.

Contract Management Capacity

275. One of the lessons learnt in the implementation of the EIRP was related to the MEW's capacity for effective contract management of rehabilitation of irrigation infrastructure. Under the IRDP, this particular area of project implementation and monitoring will be enhanced through capacity building and human resource development. In particular, the IRDP will recruit Contract Management specialists for the PCU headquarter at Kabul and all the six regional offices. Similarly, IRDP will have a substantial component on building the capacity of implementation agencies at national and regional levels in procurement and contract management amongst other competencies. The capacity building and training will not only be aimed at strengthening the PCU and regional staff of the IRDP but will also address long term capacity building needs of the construction industry in Afghanistan. To this effect, a study to develop a detailed inventory of construction industry in Afghanistan will be commissioned and disseminated widely to all national and regional stakeholders. Also, workshops for Contractors would be held frequently to create awareness regarding Bank procurement guidelines and steps open to them to report any mishandling of procurements.

Social and Environmental Safeguards

276. With the inclusion of the small dam component, the IRDP is rated Environmental Category A. The IRDP will be the first Category A project in Afghanistan and the GoA has shown its full support for meeting all necessary measures to support the project implementation. As the scope and design of rehabilitation schemes and the potential small dams will only be known during the implementation stage, to date an Environmental and Social Management Framework (ESMF) has been prepared considering that the project will follow a program approach. In addition, presuming the possibility of dealing with resettlement issues, the ESMF also includes a Land Acquisition and

[44] The ARD cluster consists of MAIL, MEW, MRRD and the Ministry of Couter-narcotics

Resettlement Policy Framework (LARPF) that has been approved by the appropriate authorities in the GoA. The Executive Summary of the ESMF including the LARPF was disclosed by MEW in Afghanistan in both *Dari* and *Pashto* in relevant places in the country and also disclosed at the InfoShop.

277. Since the IRDP is expected to have significant positive impact on the local economy through the rehabilitation of irrigation structure, community participation and consultation will form an important part of the project implementation strategy. The IRDP will also encourage field visits by important stakeholders to see the results and hear from beneficiaries directly. To address gender issues, PCU would explore Women CDCs as a possible vehicle for increasing women's participation in the project.

Grievance Redressal Mechanism

278. The IRDP will further strengthen the transparency of project supported works through establishing a comprehensive Grievance Redressal Mechanism (GRM). The GRM will develop a policy, guidelines and operating procedures detailing how the complaints will be received, sorted, processed acknowledged, investigated and acted upon, and monitored. Clearly defined timetables for complaint acknowledgement and follow up activities will be established which will be publicized externally as part of the IRDP's communication strategy. The PCU staff at Kabul and regional levels will be assigned complaints handling responsibilities and provided the necessary training. In addition, complaints nodal volunteers will be identified at the community level to inform and community members how to register their complaints. In addition, the GRM will be developed in line with a Procurement Appeal and Review mechanism.

Improved Fiduciary Processes

279. The overall design of the IRDP lends itself to promoting transparency in rehabilitation of irrigation infrastructure and water resource development in Afghanistan. The particular measures for improved fiduciary processes will be part of the: (i) financial management arrangements; and (ii) procurement processes, as described below.

Financial Management Arrangements

280. Under the IRDP the overall FM risk rating is high and the residual risk rating after application of the mitigating measures is substantial. One of the key limitations identified for FM implementation and compliance with Bank's standards is the lack of suitably qualified and experienced staff for FM. The IRDP will provide the necessary FM expertise through the TAT and recruitment of international and national FM staff for MEW/PCU. The staff will be provided with regular training on various aspects of FM to continue strengthening the fiduciary arrangements in the long run. The detailed FM arrangements are provided in Annex 5. Below are the highlights of key steps that will directly address FM risks in the IRDP:

- IRDP's internal controls and procedures will be detailed out in a FM Manual to be developed by MEW;
- IRDP will recruit internal auditors to strengthen the Internal Audit Department of MEW;
- The Interim Un-Audited Financial Reports (IUFRs) will be prepare by the MEW on agreed formats and the Financial Statements and Project Reports will be used for project monitoring and supervision;
- The PSC for IRDP will provide high level decision making and oversight on FM issues;
- A budget committee will be formed in MEW to coordinate the preparation of annual work plan and the derivation of annual budget;
- IRDP will follow same arrangements for funds flow, legal requirements for authorized signatories, and accounting as was done for EIRP;

- IRDP specific internal control procedures for requests and approval of funds will be described in the FM Manual including segregation of duties, documentation reviews, physical asset control, and cash handling and management;
- The FM covenants will include that MEW should ensure retention of key FM staff throughout the duration of the project in order to ensure sustainability; and
- The overall project training and capacity building plan will include specific training on FM including all aspects of financial monitoring;

Procurement Arrangements

281. Annex 6 includes the measures for improving procurement arrangements under the IRDP that build on the lessons from EIRP and other IDA projects in Afghanistan. The key challenge that IRDP would face relates to the security and construction supervision in remote parts of the country where security situation may be volatile and the presence of anti-government insurgents pose an immediate threat to the communities and project staff alike. In addition, Bank team's ability to supervise the project in large parts of the country is likely to remain limited. This risk coupled with weak government institutions in Kabul and provincial levels will continue to be a challenge for the Project. In order to address these risks, following steps will be taken in regards to procurement arrangements:

- Regular intensive supervision missions – The supervision missions will review overall project progress, reassess relevance of the project development objective, and agree on key actions to be undertaken prior to the next mission.

- Monthly meetings – The task team leader is located in Kabul and will meet with the PCU on a monthly basis to review the progress on the agreed actions and provide any necessary support to the project.

- Technical support – The World Bank Procurement team will provide regular oversight including for preparing a Procurement Plan as the basis for procurement methods which will be updated on a quarterly basis. The Bank team will carry out prior review supervision of all procurement actions that exceed agreed upon thresholds during project preparation. In addition, a post procurement review will be carried out of procurement actions and compliance with the agreed procedures at the community level.

- Field visits – The Bank task team will carry out field visits whenever possible, but given the security restrictions, these may be limited and alternative arrangements will be required. The task team will: (i) visit the more secure provinces where mobility is possible; (ii) bring PCU regional staff and community/*Mirab*/CDC members to Kabul; (iii) hire a third party monitor to carry out spot checks in more remote areas to check on technical quality of infrastructure, quality of FP facilitation etc; and (iv) expand the use of GPS-enabled camera or smart phones to prepare a database of geo-referenced photographs to verify physical progress of subproject implementation.

- Staffing and Skill Requirements. The World Bank Task Team will comprise of staff specializing in water resources, irrigation, hydrology, and environmental and social with long-term experience of irrigation projects within and outside Afghanistan. The task team will also have project related skills in information technology, M&E, community participation, gender, environment, financial management, and procurement.

Tiered Approach to Supervision

282. Learning from the experience under the EIRP, the responsibility for supervision has been clarified. MEW/PCU will have the primary responsibility for supervision of rehabilitation schemes. However, the TAT will periodically carry out spot checks, certify quality and report back to PCU.

The design and construction supervision responsibility for the small dam component would be entrusted to a consulting firm selected through international competition following Bank guidelines. The consulting firm will make arrangements for *resident supervision*. The PCU Project Director will serve as the *Employer*, and the consulting firm will serve as the *Engineer* for construction supervision. The firm will appoint a *Resident Engineer* at the construction sites assisted by a team of specialists and inspectors to supervise the Contractor.

Enhanced Monitoring and Evaluation

283. The PCU will be responsible for monitoring physical progress and collation of progress reports. The PCU will: (i) collaborate with its regional offices and the M&E unit; (ii) maintain the overall project management information system (PMIS); (iii) monitor and evaluate progress in the provision of critical project inputs and activities; and (vii) submit periodic (monthly and quarterly) progress reports to MEW and the World Bank on the Project. These reports would include, inter alia: (a) up-to-date physical and financial progress compared to annual and end-of-project targets; (b) updated indicators of project performance compared to annual and end-of-project targets; and (c) successes and problems encountered during the reporting period with suggested remedial actions. An independent organization (e.g. NGO(s)) would be hired to monitor compliance with the provisions of the ESMF during project implementation. Similarly an independent organization would be hired to monitor implementation of LARAPs for specific sub-projects that involve land acquisition and re-settlement.

The Governance and Accountability Action Plan

284. The above mentioned measures are included in the IRDP design as specific steps to not only improve implementation of the project but also to directly mitigate the governance and accountability risks. The Governance and Accountability Action Plan (GAAP) presented in the following table incorporates these risks and the respective mitigation measures.

Areas Identified for Monitoring Risks	Proposed Mitigation Measures
Implementation Arrangements	
Low capacity at PCU and regional offices coupled with challenges in recruitment and retention of appropriately skilled staff at all levels	Bridging the staff gap by hiring contract management staff from open market; providing performance based incentives for PCU and PWMDs; and implementing a capacity building and training program for staff at various tiers and implementation responsibilities.
Lack of coordination and building synergies with other agriculture and irrigation projects in the country	The PSC to include Deputy Ministers from MAIL and MoF. The PCU and RCCs to include focal person to coordinate with the OFWM Project of MAIL. The RCCs will incorporate the emerging role of RBAs as and when these become functional.
Strengthened community participation in various stages of the project cycle including identification, preparation, design, construction and operation and maintenance of irrigation schemes and small dams	The CDCs established under the NSP that would ultimately become village councils will be involved in the IRDP. the CDCs, together with the local communities and *Mirabs*, will participate in walk through/transect surveys, consult with women, monitor water rights, and participate in construction supervision and oversight of compliance of ESMF (and where applicable LARPF). The CDCs will also participate in oversight of O&M and safeguarding of irrigation and water management assets.
Constituency building for the interventions supported by IRDP	IRDP will also encourage field visits by important stakeholders to see the results and hear from

Areas Identified for Monitoring Risks	Proposed Mitigation Measures
	beneficiaries directly. A communications strategy will be developed to guide constituency building through internal and external communications with IRDP stakeholders.
Effective system for registering and addressing complaints	IRDP will establish a comprehensive GRM with well defined timetables for complaint acknowledgement and redressal. The GRM will be publicized externally as part of the IRDP's communications strategy. The PCU and regional staff will be assigned complaints handling responsibilities and provided the necessary training. Community based complaints nodal volunteers will be identified to inform and community members how to register their complaints. The GRM will be developed in line with a Procurement Appeal and Review mechanism.
Fiduciary Processes	
Low FM capacity and ability of timely decision making at MEW	Recruitment of national and international FM staff for MEW/PCU. Provide regular training on various aspects of FM to MEW staff at PCU and regional levels. Develop detailed internal controls and procedures as part of FM Manual. Recruitment of internal auditors. The PSC will provide high level decision making and oversight on FM issues. A budget committee at MEW will coordinate the preparation of annual work plan and the derivation of annual budget.
Lack of procurement management capacity in MEW could lead to delays or mismanagement of procurement processes There is no procurement capacity in the regions.	The TAT will include a a qualified international procurement Specialist. The international procurement specialist will be based in the procurement directorate of the MEW. He will train the MEW national procurement specialists. Since there is no procurement capacity in the regional offices to conduct procurement in the region it has been agreed that no procurement of NCB civil work will be conducted in the regional offices. The international procurement specialist will review all the bidding documents prior to advertisement and shall review all the BERs prior to award of contracts.
Low contract management capacity at MEW	Recruitment of Contract Management specialists in the PCU and regional offices. Building capacity at national and regional levels in procurement and contract management. Preparation of a detailed inventory of construction industry in Afghanistan to identify capable contractors. Holding of workshops for Contractors to create awareness on Bank procurement guidelines and steps open to them to report any mishandling of procurements.
Enhanced Supervision	
Building on lessons from EIRP for effective supervision and quality control	MEW/PCU will have the primary responsibility for supervision. The TAT will periodically carry out spot checks, certify quality and report back to PCU. For the small dams component a design and construction supervision consultants will be recruited. The design and construction consultants will arrange for *resident supervision*.

Areas Identified for Monitoring Risks	Proposed Mitigation Measures
Enhanced Monitoring and Evaluation	
Strengthening the M&E system that responds to the new component of small dams	PCU will monitor physical progress and collate progress reports. The PCU will also collaborate with regional offices and the M&E unit; maintain the overall project management information system (PMIS); monitor and evaluate progress in the provision of critical project inputs and activities; and submit periodic progress reports to MEW and the World Bank. In addition, an independent organization would be hired to monitor ESMF compliance and implementation of LARAPs for specific sub-projects that involve land acquisition and re-settlement.
Continuing risk of insecurity and potential escalation in insurgency related violence with direct impacts on project activities	Alternative measures for project supervision including third party monitoring to carry out spot checks in more remote areas; and increased use of GPS-enabled camera or smart phones to prepare a database of geo-referenced photographs to verify physical progress of subproject implementation.

285. The GAAP will be reviewed during implementation and updates will be prepared in consultation with MEW/PCU and other stakeholders including communities at agreed intervals.

Annex 10: Environmental and Social Safeguards Framework
Afghanistan: Irrigation Restoration and Development Project

Introduction

286. This Annex is based on the Executive Summary of ESMF (January 2011). Much of the text is copied as such from this Summary. However, to avoid repetition some of the sections are not presented here as such and instead references are made to the sections of the EPP. The annexes to the Executive Summary are available in Project Files.

287. The IRDP is rated Environmental Category A. While the project would build upon and scale up activities supported under the on-going Emergency Irrigation Rehabilitation Project (EIRP), it would also support MEW in making a modest start towards developing Afghanistan's water resources for irrigation comprising a small dam development program in closed river basins that are free of trans-boundary riparian issues. The bulk of the project investment will be in rehabilitation of existing irrigation systems but the small dam component and large rehabilitation schemes may involve land acquisition and resettlement. Given that the IRDP follows a program approach, an Environmental and Social Management Framework (ESMF) has been prepared to guide environmental and social impact assessment of project schemes and preparation of environmental and social management plans. The ESMF includes a Resettlement Policy Framework that would be applied to prepare site/scheme specific land acquisition and resettlement action plan (LARAPs) if land acquisition and/or resettlement are involved. In addition baseline surveys of ten potential dam sites have been prepared through remote sensing using remote sensing technology and digital elevation modelling to make a preliminary assessment of the social and environmental impact.

288. During preparation of the present ESMF, the experience of implementation of ESMFs in several projects (NSP, NERAP, HLP, EIRP and other projects) in Afghanistan was reviewed and good practices and lessons learned have been incorporated into the present ESMF including guidelines regarding grievance redressal and community consultations. The project has also developed a comprehensive matrix of all anticipated adverse environmental and social impacts of supported activities, as well as their monitoring and mitigation measures.

289. The ESMF prescribes guidelines and procedures that would avoid, mitigate, or minimize adverse environmental and social impacts of supported activities and interventions. The ESMF was prepared by the Government of Afghanistan (GoA) in accordance with definitions provided in the World Bank Policies on Environmental Assessment (OP 4.01), Involuntary Resettlement (OP4.12), Dam Safety (OP 4.13), and Projects on International Waterways (OP/BP 7.50) as well as relevant national laws and legislations.

290. The full ESMF with annexes and photographs of some of the potential dams is available in the project files.

Legislative, Regulatory and Policy Context

291. An overview of the national legislative and regulatory framework as well as the WB safeguard policies is provided below.

292. **National, Regulatory and Policy Review:** The primary relevant laws and legislations framing social and environmental issues are The Environment Law of Afghanistan (2007;The Water Law (2009) and Water Sector Strategy (2008); The Law on the Preservation of Afghanistan's Historical and Cultural Heritages (2004); The Land Expropriation Law (2005).

293. *The National Environmental Protection Agency (NEPA)*, constituted in 2005, is the prime environmental regulatory and approval authority in the country. A preliminary Environmental

Assessment of any project, plan, policy or activity must be submitted to NEPA, in order to allow the Agency to determine the associated potential adverse effects and possible impacts.

294. A review by the Agency's Board of Experts informs NEPA's decision to grant or review permission. If granted, a project must be implemented within 3 years from the date of issuance of permission. Decisions of the EIA Board of Experts can be appealed. NEPA's environmental assessment procedure is included as Annex 5.

295. Implications of the Environment Law and the EIA Regulation for IRDP project.

296. It is envisaged that virtually all subprojects and activities of the IRDP fall under Category 2, which comprises activities with potentially adverse, site specific impacts, primarily of reversible nature. Small Dams is the only component of the IRDP that would be Category 1.

297. For Category 2 the Afghan EIA Regulation requires that the project proponent and owner submit to NEPA an application form and a screening report in accordance with the organization's required technical guidelines. NEPA then would either (i) issue a Certificate of Compliance, with or without conditions or (ii) advise the applicant in writing to review the technical reports and address the concerns raised. According to the EIA regulation the next step is for NEPA to either grant a Certificate of Compliance or refuse to do so providing the applicant with written reasons for the refusal. The EIA regulations make no mention of NEPA's role during implementation of the activities and projects.

298. *The Water Law and the Water Sector Strategy (WSS)* promote an integrated water resources management (IWRM) approach based on a transition towards river basin development and a strong role for local stakeholder participation. The WSS has an explicit commitment to poverty reduction and stresses the need to build the capacity of all stakeholders and support farmers to achieve sustainable livelihoods. 'End-user' participation in decision making relating to water resource management is stressed and NGOs are seen as having a vital role in this process. Throughout the years of conflict, NGOs developed strong links with rural communities and the WSS proposes 'broadening' their role to 'coach' Water Users Associations and members of Community Development Councils (CDCs) in conservation techniques and water management systems. Likewise, the Water Law encourages stakeholder involvement in overall IWRM planning and management and recognizes that participation is especially important at local level when problems faced by water users can be resolved more easily.

299. The Water Law recognizes the key role of local water users associations in the protection and management of water resources. MEW and MAIL both have responsibility for setting up associations. Article 10 assigns MEW the task of establishing water users associations and under Article 11 MAIL is charged with establishing irrigation associations.

300. *The Law on Preservation of Afghanistan's Historical and Cultural Artefacts, 2004*. Operations, which causes destruction or harm to the recorded historical and cultural sites or artifacts is prohibited (art .11, art. 16). The law provides guidelines for how to deal with chance finds.

301. *Mine Risk Management*. Subprojects will not be implemented without appropriate mine-risk management. Procedures for mine risk management are included in Annex 10 of the ESMF.

302. *The Law on Land Expropriation, (LLE) 2005* sets out the provisions governing the expropriation or acquisition of land for public interest purposes, such as the establishment/construction of public infrastructure or for acquisition of land with cultural or scientific values, land of higher agricultural productivity and large gardens. It declares, inter alia, that: a) acquisition of a plot or portion of a plot land for public use is decided by the Council of Ministers and is compensated at fair value based on current market rates (Article 2); b) the right of the owner or land user will be terminated three months prior to the start of civil works on the project

and after the proper reimbursement to the owner or person using the land has been made. (Article 6); c) the value of land, value of houses and buildings on the land and value of trees and other assets on the land will be considered for compensation (Article 8; and f) compensation is determined by the Council of Ministers. The Law, however, is silent on resettlement. It makes no special provision for a resettlement plan or indeed any arrangements for resettlement.

WORLD BANK SAFEGUARD POLICIES

303. The following policies are triggered.

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[ ]
Natural Habitats (OP/BP 4.04)	[ ]	[X]
Pest Management (OP 4.09)	[ ]	[X]
Physical Cultural Resources (OP/BP 4.11)	[ ]	[X]
Involuntary Resettlement (OP/BP 4.12)	[X]	[ ]
Indigenous Peoples (OP/BP 4.10)	[ ]	[X]
Forests (OP/BP 4.36)	[ ]	[X]
Safety of Dams (OP/BP 4.37)	[X]	[ ]
Projects in Disputed Areas (OP/BP 7.60)	[ ]	[X]
Projects on International Waterways (OP/BP 7.50)	[X]	[ ]

304. Environmental Assessment (EA OP/BP 4.01): An ESMF including a land acquisition and resettlement policy framework has been prepared.

305. Involuntary Resettlement (OP/BP 4.12): This policy is triggered in view of possible need for land acquisition and resettlement. A land acquisition and resettlement framework (LARPF) has been prepared in accordance with OP 4.12. For a comparison between Law on Land Expropriation and World Bank OP.4.12 see Annex 2a of the ESMF.

306. Safety of Dams (OP/BP 4.37). The dam safety policy is triggered. As per requirements of OP/BP 4.37, generic safety measures for small dams would be assessed as part of preparation of environmental and social assessments and ESMPs and reflected in the design and operation of small dams.

307. International Waterways (OP 7.50). Since most of the rivers in Afghanistan, on which the sub-projects supported under the Project would be located, are international waterways this policy is triggered. However, the project involves rehabilitation of existing irrigation systems. It does not involve works and activities that would exceed the original scheme, change its nature, or so alter or expand its scope and extent as to make it appear a new or different scheme. The rehabilitation works will (a) not adversely change the quantity and quality of water flows to the other riparians, and (b) not be affected by adversely affected by the other riparians' possible water use.

308. The project team has also reviewed the Afghan-Iranian Helmand River Water Treaty signed by Afghanistan and Iran on March 13, 1973. The Treaty comprises 12 Articles and has two Protocols. Under the Treaty, Afghanistan is to provide Iran, in a regular Water Year, an average flow of 22 m^3/ second. The monthly flows allowed for Iran are set forth in the table to Article 3. Article 5 stipulates that Afghanistan will not take any action to deprive Iran, fully or partially, from receiving its legal share of water. As regards rights to water over and above the amount of water to be made available to Iran, Afghanistan retains its full rights to the rest of the Helmand River waters and for using it in any manner desired. Under the Treaty, Iran has renounced rights to the Helmand River waters exceeding the amounts granted to it. The Treaty has no provision requiring notification by Afghanistan for any rehabilitation works on the River. However, it is important to note that given

the strictly rehabilitation nature of the project, its implementation would not impact the quantity and quality of water to be provided by Afghanistan to Iran under the Treaty.

309. Based on the above, the Bank task team has determined the Project qualifies for exception to the notification requirement as provided under paragraph 7 of OP 7.50.

Environmental and Social Baseline

310. A socio-environmental survey will be coordinated by PCU regional safeguards officers across all identified stakeholder groups at local level as a core element of subproject preparation activities. A screening tool will be used to help identify potential impacts of environmental and social issues on each group. See Annex 3. Survey findings will be used to select the most relevant mitigation measures which will be integrated into sub-project ESMPs, the development of which will form an integral part of the preparation of each sub project. (See Annex 7).

311. Where findings indicate that voluntary land donations and/or land acquisition will be required to enable proposed irrigation rehabilitation to proceed, an EIA and SIA will be undertaken and will include a land acquisition and resettlement action plan (LARAP). This will comply with the requirements of the Land Acquisition and Resettlement Policy Framework (LARPF) with regard to eligibility criteria for identifying Affected Persons (APs) and compensation categories and rates. See Annexes 2b and 2c.

312. In those irrigation rehabilitation sub-projects where safeguards officers and site engineers consider more in-depth study is required a Limited Environment Assessment (LEA) will be conducted.

313. Where a specific site is selected for a small dam a full environmental assessment (EA) and social impact assessment (SIA) will be carried out. These assessments will be reviewed and approved by both the Government of Afghanistan and the World Bank before a decision is made to proceed with the structure. A SIA will include a land acquisition and resettlement action plan (LARAP) which will comply with the resettlement principles and organizational arrangements set out in the LARPF. Generic TOR for EA and SIA are included as Annexes 9a and 7b respectively.

Stakeholder Consultations

314. The IRDP will prioritise stakeholder consultations to improve the effectiveness, relevance and sustainability of sub-projects. Consultations are considered vital in building trust and collaborative relationships between different groups within communities and the project. They also pave the way for the participation necessary for communities to take ownership of project activities. Consultations will include: providing people with information about proposed activities and their potential impact; soliciting feedback from different groups within communities, particularly people's concerns and recommendations regarding proposed activities; incorporating these in project design to the extent possible; sharing with communities mitigation measures included in the design to address potential impacts; and involving communities throughout the course of a project.

315. **Consultation Process:** The project will build on and extend the consultation processes from the EIRP. As a first step stakeholders will be identified. These will fall into two categories: (i) Primary stakeholders who will be directly affected by the project and (ii) Secondary stakeholders who will be indirectly affected by the project (or who could influence its outcome).

316. Following stakeholder identification and categorisation, participatory methods such as focus group discussions and semi structured interviews will be used by regional safeguards officers to conduct meetings with representatives from each stakeholder group. These will be arranged through key people in the community, usually the village and the head of the Women's CDC. These meetings will be arranged at times to ensure the maximum participation of stakeholders. Project

management will ensure the availability of either female safeguards officers or women working with NGOs in the locality to meet and talk to women.

317. Initial meetings with stakeholders provide a forum not just for dissemination of information about the project and its potential impact, but also constitute an important opportunity to hear people's concerns and take on board their recommendations to the extent possible in project design. They also will lay the foundations for systematic consultation and participation of the community in all subsequent stages of the project's development.

318. Priority will be given to meeting and seeking the views of the most disadvantaged and marginalized groups e.g. women, landless, disabled and the elderly. Particular attention will be paid to female-headed households, both those with and without land, as they are generally amongst the most vulnerable in communities and risk having their rights ignored.

319. Consultations with secondary stakeholders will be conducted in parallel to those being conducted within communities. These will include meetings with regional representatives from relevant government departments and agencies including Ministry of Agriculture, Irrigation and Livestock (MAIL), National Environment Protection Agency (NEPA), Department of Water Management, National Solidarity Programme as well as district government officials. Meetings will also be held with NGOs working in the locality. The quarterly regional NGO meetings may prove to be a useful forum for such consultations.

320. Additional public and stakeholder consultations will apply to those sub-projects where resettlement of people is required. The consultation process with affected persons (APs) will include the disclosure of the resettlement policy framework through various meetings and distribution of informative material and is aimed at creating awareness among APs regarding their entitlements and compensation payment procedures and grievances redress mechanisms. This process will ensure that anyone voluntarily donating land is made fully aware of his or her right to receive compensation for any land which he or she is losing to a project and the specific waiving of that right is properly documented.

321. The implementing NGO and PCU regional staff will meet with provincial and local officials to ensure that they are informed and regularly updated on the implementation of the LARAP. The PCU will coordinate with land valuation committees as well as with the district governors which have jurisdiction over the sub-project areas and village leaders. Information about the entitlement provisions and compensation packages will be shared with these government officials and other stakeholders.

Potential Environmental and Social Impacts

322. The development of the IRDP is informed by a comprehensive assessment of compliance with environmental and social safeguards in the current EIRP. During this process a range of project and other relevant documents were studied, detailed meetings were held with project technical staff to understand fully various aspects of the project and field visits made to several sub-projects in four regions to collect and check data. In addition, consultations were held with different groups in local communities as well as other stakeholders including representatives from local government and NGOs, to receive their comments and recommendations on social and environmental issues related to sub-projects. See Annex 6 of the ESMF for the summary of consultations.

323. Based on the information collected through the process described above, environmental and social management matrices were developed which identify potential negative impacts that may be encountered in each phase of IRDP sub-projects. Most of the latter will be similar to the current EIRP subprojects and therefore are not expected to have any large scale, significant and /or irreversible impacts. However, there would be some potential small scale and temporary impacts on the local environment and the communities during the construction and operation phases of sub

projects. Appropriate measures to avoid or mitigate the negative impacts and enhance the benefits to local communities have been determined and are also included in the environmental and social management matrices. See Annex 4a for Typical Environment Impacts and Mitigation Measures and Annex 4b for Typical Social Impacts and Mitigation Measures.

324. During the design phase of each sub project a socio-environmental survey would be carried out in consultation with local communities to identify specific negative environmental and social impacts that may arise as a result of sub-project activities. Appropriate avoidance, mitigation measures will be reflected in environmental and social management plans.

325. **Potential Impacts and Mitigation:** Potential negative impacts of irrigation rehabilitation and small dams are briefly discussed below.

326. **Environmental Impacts:** It is anticipated that environmental impacts associated with most sub-projects will be largely temporary and reversible in nature and that by employing relevant mitigation measures these impacts will either be avoided or reduced to an acceptable level.

327. Environmental impacts may include soil erosion, degradation of borrow areas, damage to natural vegetation, siltation and contamination of soil and water.

328. Soil erosion would be controlled/avoided through a combination of employing sound engineering practices and planting appropriate vegetation on hill slopes and other potentially erodible places along embankments. Significant deforestation is not expected in the IRDP but should there be a need for felling trees along water channels, twice as many new trees would be planted in a nearby location.

329. Soil and water contamination would be controlled through employing a sound waste management system which will include safe disposal of solid wastes, provision of impervious base to storage areas to prevent contamination through hazardous materials leaching into ground water. Communities and Water management associations would be trained to deal with any water logging and pollution from fertilizer and pesticide runoffs.

330. The project will ensure uninterrupted traffic of humans and animals by building bridge structures where appropriate and would also provide for “community structures” to allow safe use of off-channel laundry basins, ablution places by the local populations through the construction of small diversions.

331. Pre-feasibility studies of 22 potential dam sites would be carried out, and based on the findings the sites would be ranked according to economic, social, environmental criteria. Sites involving major adverse social and environmental impacts will be dropped. The ten top ranked sites would be selected for preparing detailed feasibility studies, including preparation of full ESIAs/EMP, LARAP through international consulting firms. Finally, two or three sites would be selected for preparation of detailed design and construction.

332. **Social Impacts:** Social impacts of the proposed project may include increased incidences of disease, migration of workers into communities, increasing inequities between upstream and downstream communities and conflict related to land acquisition/donation.

333. Mitigation measures to reduce adverse effects on communities’ health, particularly water-borne and vector borne communicable diseases such as cholera and malaria, would include effective drainage of project areas and liaison with health authorities on early warning communication.

334. Contractors would provide amenities in construction camps to cater for inflows of construction workers and reduce stress on already overstretched community infrastructure.

335. The project would take care to avoid increasing inequities between downstream and upstream communities by ensuring the equitable sharing of employment opportunities. The project would also strengthen the capacity of village leaders and local government bodies, as well as traditional and new water management associations, to manage local level land and water conflicts that may arise from, or be exacerbated by, project activities.

Social and Environmental Impacts related to Small Dam Development

336. The most significant social impact associated with the small dam components could be the loss of land/assets/livelihoods, disruption of community life and networks as a result of the unavoidable resettlement of people. A preliminary assessment of the possibility of the need for resettlement of people as well as potential loss of livelihoods such as grazing access due to the creation of these small storage reservoirs was undertaken with Google Earth Imageries (December 2007) supplemented by tools from ArcMAP geographic Information System (GIS). All the 22 proposed sites (shown in Figure 1 below) were analyzed for Land Use/Land Cover and 10 representative sites were analyzed for submergence impacts for an assumed dam height of 20 meters. Detailed report of this assessment work is provided as an Annex to the full ESMF report.

Figure 1: Location of proposed dam sites in closed basin

337. Land Use and Land Cover (LU/LC) classification was carried out based on visual interpretation of the imageries for 10 km radius (buffer) around each of the 22 dam locations. The most dominant land cover across all the 22 dam sites is the barren and fallow lands. Contributions from land use such as settlement and agriculture are far less and so also the vegetation. Dense vegetation is virtually absent in all buffer areas. Settlement areas are prominent in the buffer areas around Pasha and Bato Baba dams. But settlement areas which might require resettling or moving people based on final impoundment heights appear only in the case of Masjet Sabz, Fayz Abad, Darz Ab and Shah Abdullah dam sites. Of these sites, it is possible that the settlements may actually fall outside the submergence zone in Fayz Abad, Darz Ab and Shah Abdullah sites.

338. Digital Elevation Model (DEM) was sourced from Shuttle Radar Topography Mission (SRTM) with 90m resolution. A 90 meter spatial resolution gives elevation information (elevation in meters) for area 90 m x 90 m. For each dam location, DEM was generated at 1 m interval by interpolation algorithms available in Arc MAP. Watersheds were generated for 17 of the 22 dams based on DEM and locations of small dams. Estimation of submergence area was done for 10 of the 22 dams assuming impoundment resulting from 20m dam heights using tools available in Arc MAP. It has been concluded that for the 10 dam sites analyzed, environmental and social impacts due to submergence may be considered as nil or negligible, except for Masjet Sabz dam.

339. The existence of barren lands in the catchment area of all dam sites would require a thorough review of impact on sedimentation in the proposed storage reservoirs. This aspect would be studied in detail during the pre-feasibility/feasibility stage. The watershed area estimates when compared to storage volumes of impoundments for an assumed 20 meter dam height are at least two orders of magnitude higher. This indicates availability of water would not be an issue. Agricultural land and settlements exist downstream of the proposed dam sites in most cases which is an indication that developing storages would assist and enhance agricultural activity in the area. Assessment for the ten representative sites regarding this is given below.

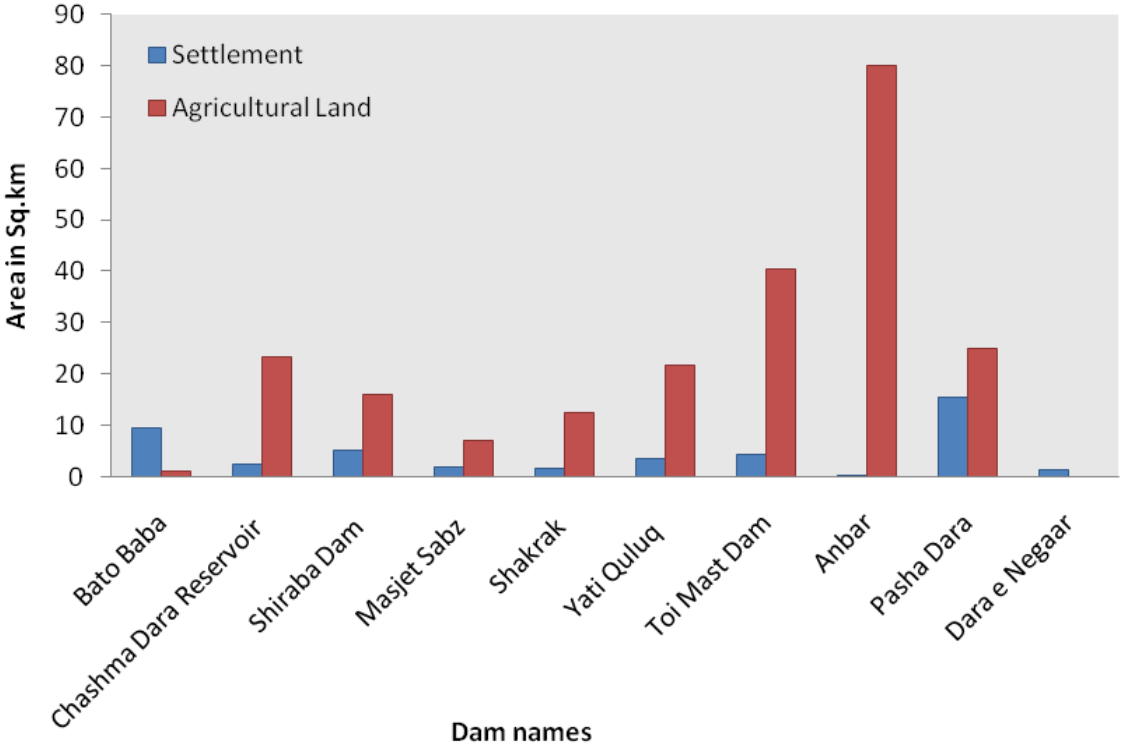


Figure 2: Distribution of Settlement and Agricultural Land across 10 dams in the buffer of 10 kms

340. Based on this analysis, it can be concluded that environmental and social impacts due to submergence would be nil in eighty percent of the potential sites and probably negligible in another fifteen percent of the potential sites to be taken up for pre-feasibility studies.

341. The above preliminary assessment has helped in screening and scoping of possible social and environmental impacts for the 22 dam sites proposed for further investigation. For detailed assessment at feasibility level, it is proposed that satellite stereo imageries are used and extraction of Visible and Infrared (VIR) data is done using software such as ERDAS. Such data can be sourced from SPOT, IRS, ASTER, IKONOS or QuickBird. This approach will be considered for the final list of dams chosen for feasibility studies and detailed designs as an aide to detailed ground investigations required. This technology would be used during implementation as well as later in the monitoring and assessment phase.

342. A Land Acquisition and Resettlement Policy Framework (LARPF), based on Afghan legal framework and compliant with the requirements of OP.4.12, has been approved by the Government of Afghanistan and will be applied where it is not feasible to avoid land acquisition and/or resettlement. The LARPF clarifies resettlement principles, organizational arrangements and design criteria to be applied to sub-projects to be prepared during project implementation. In this way a consistent approach to resettlement practice will be ensured over the course of the project. A fundamental principle of the LARPF is the need to ensure social justice and equity for those people directly affected by the project by making certain that they are not impoverished by displacement and at the very least their livelihoods are restored to their pre-project levels. Under the LARPF host

communities would be involved in the consultations on the resettlement process and offered opportunities to participate in the development of resettlement action plans thus limiting potential conflict between the settled and settling communities.

343. Additional impacts likely during construction of small dams include diversion of river, construction of cofferdams, access roads and air and noise pollution, Measures to mitigate these effects would include allowance of adequate water downstream to meet existing demands during construction, effective use of construction machinery and minimization of increased turbidity in the river due to construction activities.

344. With small dams the filling of reservoirs should be done in such a manner as to avoid disruption of traditional water rights of downstream users. This would require close consultations with the communities in accordance with the water law of Afghanistan. Similarly flood-handling facilities should be operated in such a manner as to avoid or minimize downstream losses while ensuring the safety of the structure. These aspects would be written up in the operating rules of the dam and reservoir complex.

345. Sites that are representative of geographical and ecological features; size of dams; hydrology and geology; potential impact on upstream and downstream riparian etc were chosen for the Baseline analysis. In addition to the above baseline surveys, despite poor security situation in the areas, preliminary consultations with the local communities[45] were carried out at 12 of the 22 potential dam sites. Community representatives included local elders, members of CDCs, *Mirab*s, women and nomads. In these consultations the community representatives were given the opportunity discuss the positive and negative impact of the proposed dams on their lives and environment.

346. Dara and Pasha Dara) in the Faryab Province and one site in Aybak Samangan (Shamar) raised concerns relating to possible submersion of rain fed agricultural land. Similar concerns were not raised by the community representatives at the other 9 sites. Further and more detailed consultations will be carried out during the preparation of pre-feasibility/feasibility studies.

347. **Unanticipated Environmental and Social Impacts:** Where unanticipated environmental and social impacts become apparent during project implementation the MEW/PCU will either update the environmental and social assessments or commission new assessments to assess the potential impacts and outline mitigation measures to address those impacts.

Environmental and Social Management Framework (ESMF)

348. ESMPs would be developed within a framework that enables early identification of adverse impacts and provides general policies and guidelines for integrating mitigation measures to address specific environmental and social issues into sub-project implementation. Each subproject will undergo a review process to screen for sensitive environmental/social issues Sub-projects with attributes registered on the 'negative list' will be ineligible for support. (See Annex 1 of the ESMF).

349. **Institutional Arrangements:** The implementation arrangements for the EIRP have worked well and the same would be used for the IRDP with some modifications. These include a Project Coordination Unit (PCU) within the Ministry of Energy and Water assisted by a technical assistance team responsible for overall project implementation, including procurement and financial management. The PCU has six regional offices that provide nationwide coverage for preparation and supervision of rehabilitation schemes.

350. Informed by the EIRP experience, staff with specific responsibility for implementing the ESMF provisions during subproject identification, preparation, and construction has been added to the PCU team at headquarters as well as at the field level. Similarly, the TAT would include social

[45] It is noted that the proposed 22 dam sites have, in the first place, been proposed by the local communities.

and environmental specialists for oversight and internal monitoring compliance with the ESMF. An independent organization reporting directly to the Deputy Minister MEW would be hired to monitor and report on compliance.

351. An appropriate NGO would be selected by the PCU to implement and supervise the provisions of the Land Acquisition and Resettlement Action Plan (LARAP) in close liaison with the PCU.

352. **Mitigation Plans:** Environmental and social mitigation plans will form a core part of sub project plans. They will provide mitigation actions against each potential impact that may be encountered during different project activities.

Monitoring Framework

353. **Activity Monitoring:** Compliance with the ESMF will be subject to internal monitoring at two levels.

354. At local level, PCU regional safeguards officers, together with a regional social/gender organizer, will be responsible for monitoring to ensure that all required environmental and social measures are satisfactorily implemented. Information collected from their various village-level meetings and observations of sub-projects together with feedback provided by village organizers will be reported monthly to the national PCU team using standard reporting forms.

355. At national level the safeguards specialists and national safeguards officers will take overall responsibility for overseeing progress in implementing the ESMF. Appropriate monitoring and reporting check lists have been developed.

356. Resettlement activities will be monitored by the Safeguards Specialists, national and regional PCU safeguards officers and the Implementing NGO. Specific monitoring benchmarks will include: Information campaign and consultation with APs; status of land acquisition and payments on land compensation; compensation for affected structures and other assets; relocation of APs and payments for loss of income and income restoration activities. Quarterly reports will be submitted to the World Bank.

357. **Effects Monitoring:** The safeguards specialists and national safeguards officers will monitor to determine the effectiveness of the mitigation measures in the ESMF.

358. **Third Party Monitoring:** Assessment of compliance with the provisions of the ESMF will be carried out by an independant organization to be appointed by the MEW and approved by the World Bank.

359. **Independent Monitoring of Resettlement:** External monitoring will be carried out on a regular basis with the results communicated to the PCU and the World Bank through a bi-annual compliance report. An independent agency will be responsible for the preparation of the bi-annual compliance report which will review how compensation and related resettlement assistance in cash or kind are being delivered to the affected households. The EMA will use the compliance report specifically to assess the status of project- affected vulnerable groups such as female-headed households, landless, disabled/elderly and poor families. Based on the results of the compliance report, the EMA will recommend to MEW/the World Bank if the necessary civil works on irrigation rehabilitation and dam building with resettlement impacts can commence.

360. The EMA will carry out a post-implementation evaluation of the Land Acquisition and Resettlement Action Plan (LARAP) for each sub-project one year after its implementation. The aim will be to assess the extent to which LARAP objectives have been achieved and, more importantly, whether livelihoods and living standards have been restored/ enhanced. Where the outcome of the

study indicates that the LARAP objectives have not been attained the EMA will make recommendations for improvement which may include supplemental assistance for affected person (APs).

361. **Capacity Building:** A series of trainings targeted towards the particular needs of different groups directly involved in the implementation of the project will help ensure that the requirements of the ESMP are clearly understood and implemented. Training will focus on:

a) Strengthening the institutional capacity of the PCU to better support the development and integration of social and environmental measures into projects at regional level and their implementation at community level.

b) Building capacity of local or community level structures e.g. Community Development Councils (CDCs), Water Users Associations (WUA), Irrigational Associations (IA) and *Mirabs*, to ensure compliance with environmental and social safeguards in implementation of project activities. Staff from key local government departments such as the Department of Water Management and NEPA will also be included in local level capacity development efforts as their support is considered vital to the future sustainability of project activities.

362. International and Local capacity building specialists will have primary responsibility for training project staff, including environmental and social safeguards officers, engineers and management staff. Safeguards offices will take a leading role in delivering training at community level. See Annex 8a for a Training Action Plan for Environmental and Social Safeguards and Annex 8b for Training and Capacity Development activities at different levels.

363. **Documentation and Record Keeping:** The key elements included in the documentation and record keeping system of the proposed project are briefly discussed below:

364. **Data Recording and Maintenance:** Standard forms will be used by regional safeguards officers to monitor the implementation of the social and environmental plans and report monthly to the Project Coordination Unit on key issues including mitigation measures taken, trainings conducted and lessons learnt. Wherever possible check boxes will be used to facilitate data entry.

365. **Reports:** The PCU and the Technical Assistance team will prepare quarterly and annual reports on environmental and social issues for the Government and the World Bank. These reports will document progress on implementing mitigation measures and include environmental and social trainings, key outstanding issues and recommendations for their redressal.

366. In the case of resettlement the implementing NGO will prepare quarterly reports to PCU and the World Bank on the implementation of the Resettlement Action Plan.

367. **Management Information Systems:** All information concerning resettlement issues and land acquisition including socio-economic data related to acquired land and affected structures, inventory of losses by APs, compensation and entitlements, payments and relocation will be collected by the implementing NGO. This bank of information will inform the development, implementation and monitoring of Resettlement Action Plans and facilitate efficient resettlement management.

368. **Communication Strategy:** A communication for development strategy to increase the overall effectiveness of the project will be developed by the Technical Assistance Team and will be implemented principally by environmental and social safeguards officers. Its key objectives will include:

- providing relevant information to communities about the project through appropriate communication channels,

- facilitating a meaningful two way exchange of information with different groups of stakeholders throughout the course of the project
- building trust between project staff and communities and promoting collaboration among all stakeholders.
- Facilitating collaborative relationships with other development agencies.

369. **Communication Methods:** The strategy will include:

a) Involvement of policy makers: The PCU will make presentations to, and hold briefing sessions, with relevant Government Ministries including the MEW, MAIL, on a regular basis. They will be invited to participate in ongoing consultation processes to ensure transparency and gain public support.

b) Communication through relevant media: The Safeguard specialists will assess community and other stakeholders access to, and use of, broadcast and print media and explore how the most appropriate outlets might be used to raise awareness of the project. During sub-project preparation a public awareness campaign will make use of relevant media to inform communities of their legal entitlements, rights and responsibilities in respect of water resources management at community level.

c) Communication through locally relevant channels. Regional safeguard officers will identify trusted ways in which different groups within communities, particularly poorer groups, receive and communicate information (e.g. Village meetings, mosque, water users associations, women CDC, market etc.) and will make use of these channels to convey information and receive information.

d) Involvement of regional government departments: Regional PCU staff will meet regularly with government staff in key regional departments such as the Water Management Department and NEPA staff, Department of Health, Agricultural Extension Services etc to explore possible program linkages.

e) Communication through NGOs. The implementing/partner NGO will also disseminate project information about the LARP and other aspects of the project through its own communication mechanism.

f) PCU participation in various regional fora. Where possible, regional Safeguards officers will participate in regional NGO meetings to inform local NGOs about the work and explore possible areas of synergy with the IRDP for community level work.

370. **Grievance Redressal:** The Technical Assistance Unit, Regional Safeguards Officers and partner NGOs will have an important role in ensuring that communities have a full understanding of the concept of just compensation for land and/or assets and the procedures to be followed in filing complaints.

371. The Land Acquisition Committee (LAC), established by the Council of Ministers under the Law on Land Expropriation, also performs the task of a grievance redress committee in relation to the value of land or assets acquired. The five member LAC will seek to reach a consensus on the replacement value of land and assets lost.

372. If the negotiated approach fails the affected person (AP) may bring this matter to a Grievance Redress Committee (GRC), established under the IRDP, to try and resolve the issue. The GRC does not have any legal mandate or authority but acts as a facilitator to try and resolve issues between the affected household and the MEW/PCU which would implement the valuation based on the decision of the LAC. The GRC shall try and resolve the matter and make a recommendation within 7-10 working days. If no decision after 10 days the AP may seek recourse through the legal system as a last resort – but every effort will be made to avoid this costly alternative for the AP.

373. **Cost Estimates**: An amount of US$525,000 is earmarked in the project cost for ESMF related training and capacity building of staff, *Mirabs*, CDC, contractors, training manuals, awareness materials, exposure visits, preparation of site specific EMP and independent monitoring.

The cost of LARAP preparation and implementation (if applicable) will be estimated as part of the feasibility studies of small dams. This cost will be met from the allocation for the small dam component.

374. **Public Disclosure:** The draft LARPF and the Executive Summary of ESMF were disclosed in-country on December 27, 2010 and January 9, 2011 respectively. These documents were also disclosed at the InfoShop on January 5, and January 10, 2011 respectively. The Executive Summary of the ESMF was distributed to the World Bank Board on January 13, 2011.

Process and Responsibilities of Social and Environmental Screening/Assessment

375. All schemes/sub-projects identified for implementation under the Project will be subjected to the screening process to ensure compliance with the provisions of this ESMF and to determine whether they are permissible and abide by all the legal requirements of the government and safeguard policies of the World Bank.

376. Schemes requiring detailed assessment will be subjected to a LSEA or full ESIA[46].

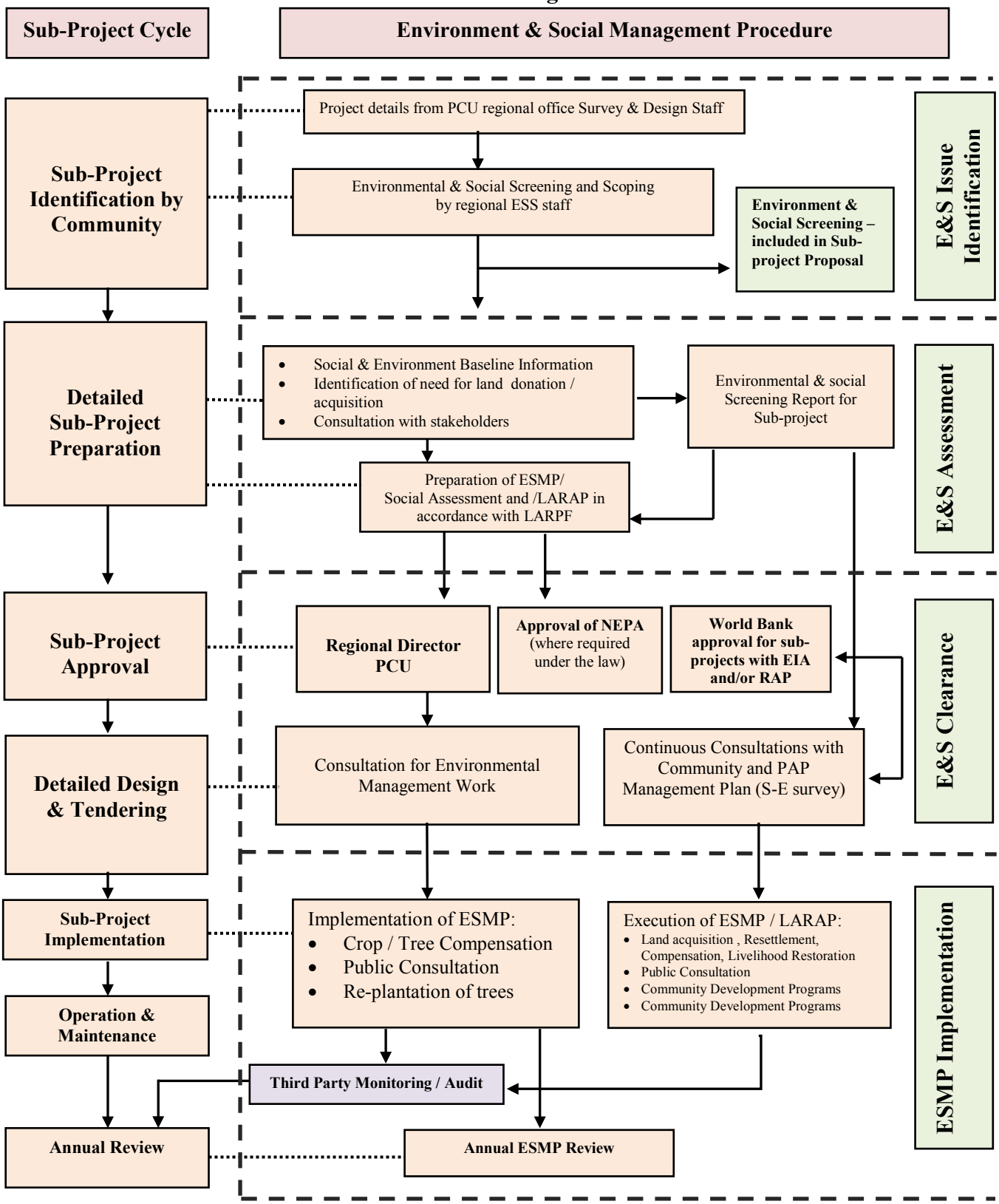
377. Proposals for schemes involving voluntary land donation or involuntary acquisition and resettlement or serious environmental issues would be subject to World Bank's prior review and clearance.

378. NEPA's approval would be sought where required under the Law.

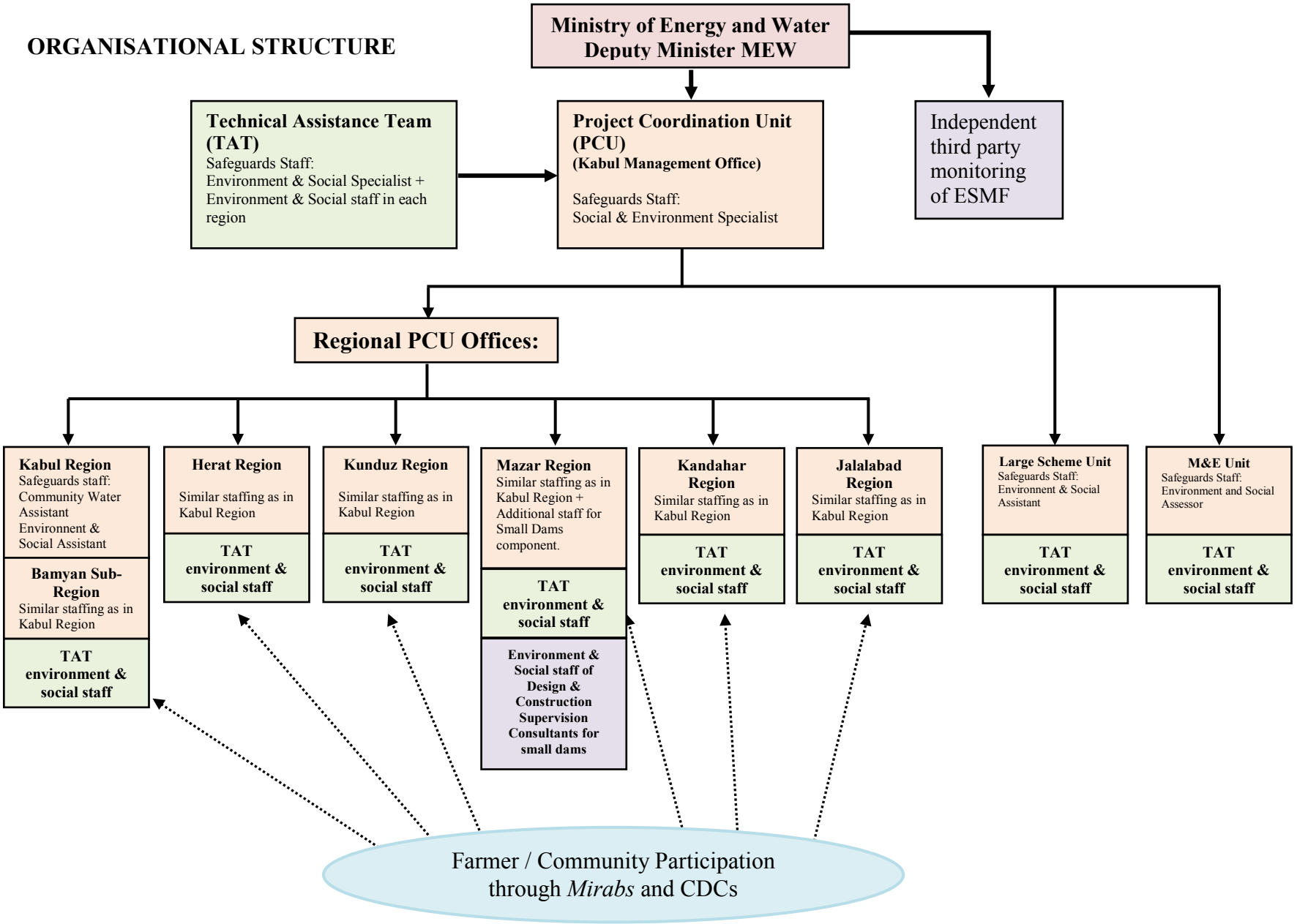
379. An independent organization would monitor implementation of scheme/sub-project specific land acquisition and resettlement plans and EMPs. The independent organization will submit periodic reports on compliance with the ESMF.

[46] The dams will be subject to preparation of full EIA/LARAP. Some of the large rehabilitation schemes may also require LEA.

Environmental & Social Management Procedures



ORGANISATIONAL STRUCTURE



Organizational structure and responsibilities

380. The PCU offices at Kabul and in the regional offices will have social and environmental staff. The TAT will have environment and social management specialists at Kabul. These environmental and social staff at Kabul will have the following key responsibilities:

- Reviewing adequacy of the screening/appraisal reports prepared by the regional staff. These reports will be an integral part of the scheme/sub-project proposal.
- Coordinating environmental and social commitments and initiatives with relevant government agencies including the Afghanistan Land Authority and NEPA.
- Coordination of all social and environmental activities through-out the sub-project cycle from conceptualisation to operation and maintenance. Monitor ESMP implementation across all stages of sub-project implementation.
- Advising and coordinating with the PCU regional offices to carry out environmental and social surveys for all sub-projects.
- Following up to expedite environmental clearances and the land acquisition processes, where applicable.
- Training of regional staff, *Mirabs*, CDCs on environment and social issues and implementation of management plans.
- Training of staff of other departments in MEW to familiarize them with the ESMF document.
- Coordinating with, and receiving feedback from the Independent Monitoring Agency.

381. Responsibilities of regional social and environmental and social staff. The social and environmental officers and the community water development assistants (CWDA) of the regional offices will have the primary responsibility for:

(i) Carrying out environmental and social screening/appraisal in accordance with the provisions of the ESMF in close consultation with the local communities, *Mirabs* and CDCs. The screening/environmental appraisal will:
   - Identify the specific prevention/mitigation measures that will be implemented to prevent/mitigate the adverse environmental impacts of the proposed activity.
   - Assess the requirements of various resources (financial, technical, institutional, and so on) to implement the mitigation measures.
   - Identify the relevant institutes/government departments, which can support the resource requirements for implementation of the mitigation measures.
   - Revise the budget (if necessary) considering all the above three points.

(ii) Conduct surveys on sites being considered for land acquisition (100 % HH socio-economic survey of all potential PAPs in case of land acquisition – except for small dams component, where a Consultant will be contracted).

(iii) Interact with Revenue Authorities for land acquisition and follow up with authorized agencies for implementation of ESMP.

(iv) Supervise and Monitor ESMP implementation and produce periodic reports.

Responsibilities for Environment & Social Assessment Process

PROJECT CYCLE	ACTIVITIES / PROCESS	OUTPUT / INDICATORS	RESPONSIBILITY			
			INTERNAL			EXTERNAL
			PREPARATION /EXECUTION	REVIEW	APPROVAL	PREPARATION
I. Project Identification						
1. Irrigation Rehabilitation Sub-Projects: Environmental & Social Screening and Scoping	• Screen and scope sub-project sites from an environmental & social perspective	• E&S screening and scoping documents as part of sub-project proposal	• PCU Regional Office	• Review by TAT E&S Staff	• PCU Regional Director	
2. Small Dams: Environmental & Social Screening and Scoping	• Prefeasibility study of 22 small dam sites by consultants	• 22 prefeasibility studies	• International Consultant	• PCU & TAT		• World Bank review
3. Irrigation Rehab Sub-project: Environmental & Social approval	• Submit sub-project proposal (with E&S Screening & scoping details) for Regional PCU Approval	• Community acceptance	• PCU Regional Office E&S Staff	• Review by TAT E&S Staff	• PCU Regional Director	
4. Small Dams: Environmental & Social approval	• Ranking of sites based on social, environment, and technical criteria and community acceptance through consultation	• Acceptance of World Bank	• Consultants	• PCU & TAT	• Deputy Minister MEW	• World Bank review
II. Project Preparation						
1. Irrigation Rehabilitation Sub-Projects: Environmental & Social Screening and Scoping	• Screen and scope sites from an environmental & social perspective	• Sub-project proposal report	• PCU Regional Office	• PCU & TAT	• PCU Regional Director	

PROJECT CYCLE	ACTIVITIES / PROCESS	OUTPUT / INDICATORS	RESPONSIBILITY			
			INTERNAL			EXTERNAL
			PREPARATION /EXECUTION	REVIEW	APPROVAL	PREPARATION
2. Small Dams: Environmental & Social Screening and Scoping	• Community Consultation	• Selection of 10 sites for preparation of detailed feasibility reports	• International Consultant	• PCU & TAT	• Deputy Minister MEW	• World Bank review
3. Irrigation Rehab Sub-project: Environmental Assessment & Management Planning	• Preparation of ESMP	• ESMP	• PCU Regional Office	• PCU & TAT	• PCU Regional Director	
4. Small Dams: Environmental Assessment & Management Planning	• Preparation of ESMP	• ESMP	• Consultants	• PCU & TAT	• Deputy Minister MEW	• NEPA & World Bank
III. Project Approval						
1. Irrigation Rehab Sub-projects: GoA Authorities Approvals	• Submit sub-project proposal (with ESMP and social Screening & Scoping reports) for approvals	• Sub-project proposal including ESMP approved by PCU	• PCU Regional Office	• PCU & TAT	• PCU Regional Director	
2. Small Dams: GoA Authorities Approvals	• Submit feasibility studies of 10 dams including ESMP for approval	• Feasibility studies approved by Deputy Minister MEW	• Consultant	• PCU & TAT	• Deputy Minister MEW	• NEPA & World Bank
3. Selection of 2 to 3 Dam sites for detailed design preparation	• Submit relative ranking of 10 dam sites based on social, environment, technical and economic criteria and selection of	• Selection of 2 to 3 dams sites for preparation of detailed design and detailed EMP	• Consultant	• PCU & TAT	• Deputy Minister MEW	• World Bank appraisal and concurrence

PROJECT CYCLE	ACTIVITIES / PROCESS	OUTPUT / INDICATORS	RESPONSIBILITY			
			INTERNAL			EXTERNAL
			PREPARATION /EXECUTION	REVIEW	APPROVAL	PREPARATION
	detailed design and supervision consultant	/ SA & LARAP • Detailed design and supervision consultants.	• PCU	• PCU & TAT	• Deputy Minister MEW	• World bank NoL for selection of DD&S consultants
IV. Detailed Design & Award						
1. Irrigation Rehabilitation sub-projects: detailed design prepared with ESMP	• Preparation of ESMP with community consultation	• Detailed design and bid documents	• PCU Regional Office	• PCU & TAT	• Director PCU	
2. Small Dams: social assessment & management planning	• Prepare detailed design with ESMP • Appointment of independent monitors	• Detailed design with ESMP • Independent organization appointed	• Detailed Design and Supervision Consultant	• PCU,TAT	• Deputy Minister MEW	• World Bank clearance of ESMP / SA &LARAP
3. Concurrence for SMP for small dams	• Submit SMP for concurrence	• Concurrence	• DD&S consultant	• PCU, TAT	• Deputy Minister MEW	• World Bank NoL
4. Consultation for works & Tendering & Award for small dams	• Consult authorised agencies for environmental management work	• Authorised agencies consulted to execute environmental management works	• PCU regional Office	• PCU, TAT	• Deputy Minister MEW	• World Bank NoL
	• Select and award social management work to appropriate agencies through competitive bidding, if necessary	• Agencies appointed to execute social management works	• PCU HQ	• PCU, TAT	• Deputy Minister MEW	• World Bank NoL

PROJECT CYCLE	ACTIVITIES / PROCESS	OUTPUT / INDICATORS	RESPONSIBILITY			
			INTERNAL			EXTERNAL
			PREPARATION /EXECUTION	REVIEW	APPROVAL	PREPARATION
V. Project Implementation						
1. Small Dams and Irrigation Rehab Sub-projects: Execution of Environmental Management measures	• Execute environmental management measures	• Environmental management measures executed	• PCU Regional Office • Selected Agency	• PCU & TAT	• PCU Director	
2. Small Dams and Irrigation Rehab Sub-projects: Execution of Social Management measures	• Execute social management measures	• Social management measures executed	• PCU Regional Office • Selected Agency	• PCU & TAT	• PCU Director	• Ex. Agency (if required) for SMP implementation.
VI. Operation & Maintenance						
1. Small Dams and Irrigation Rehab Sub-projects: Environmental & Social Monitoring	• Monitor environmental assessment management plan measures	• Periodic monitoring reports	• PCU Regional Office	• PCU HQ & TAT	• Deputy Minister MEW	• Independent organization
	• Monitor social assessment & management plan measures	• Periodic monitoring reports	• PCU Regional Office	• PCU HQ & TAT	• Deputy Minister MEW	• Independent organization
VII. Project Review						
1. Small Dams and Irrigation Rehab Sub-projects: Annual Environmental & Social Review	• Review and report on environmental and social performance of project during construction, operation and maintenance	• Annual environmental and social review report	• PCU & TAT	• Director PCU	• Deputy Minister MEW	• Independent organization

List of Annexes to the ESMF Executive Summary Available in Project Files

Annex 1 – Negative List of Sub-project Attributes

Annex 2(b) –Actions under the Resettlement Policy Framework

Annex 2(c) – Compensation Entitlements and Rates under the LARPF

Annex 3 – Sub-project Screening Checklist

Annex 4(a) Typical Environment Impacts & Mitigation Measures for Sub-Projects

Annex 4(b) Typical Social Impacts and Mitigation Measures for IRDP Sub-Projects

Annex 5 – Environmental Impact Assessment Procedure at NEPA

Annex 6 – EIRP: ESMF Assessment Consultations

Annex 7 – Template for Environmental and Social Management Plan (ESMP)

Annex 8(a) – Training Action Plan for Environmental and Social Safeguards

Annex 8(b) – Training and Capacity-Building Activities at Different Levels

Annex 9(a) – Generic Terms of Reference for a full Environmental Assessment

Annex 9(b) – Sample Terms of Reference for Social Impact Assessment

Annex 10 – Procedures for Mine Risk Management

Annex 11 – Protection of Cultural Property

Annex 11: Project Preparation and Appraisal Team Members

Afghanistan: Irrigation Restoration and Development

NAME	TITLE / FUNCTION
Water Resources / Irrigation	
Usman Qamar	Task Team Leader, SASDA
Jun Matsumoto	Senior Water Resource Specialist, SASDA
Srinavasan Raj Rajagopal	WRM /Irrigation Specialist, Consultant
Environment/ Social / Gender	
Mohammad Arif Rasuli	Senior Environmental Specialist, SASDI
Asta Olesen	Senior Social Development Specialist, SASDS
Abdul Mohammad Durani	Social Specialist, SASDI
Najla Sabri	Gender, SASDA
Agriculture / M&E	
Ladisy Komba Chengula	Senior Agriculture Economist, SASDA
Andres Garcia	YP-Economist Monitoring and Evaluation Specialist, AFTFE
Altaf Iqbal	Consultant (Economist)
Ai Chin Wee	Senior Operations Officer (M&E), SASDA
Financial Management and disbursements	
Kenneth Okpara	Senior Financial Specialist, SARFM
Chau-Ching Shen	Senior Finance Officer, CTRFC
Procurement	
Deepal Fernando	Senior Procurement Specialist, SARPS
Rahimullah Wardak	Procurement Specialist, SARPS
Legal	
Martin Serrano	Senior Counsel, LEGES
Wandipa Pearl Tshambani	Counsel, LEGES
Information Technology	
Deepak Bhatia	Lead e- Government Specialist (ICT)
External Relations	
Abdul Raouf Zia	Senior Communication Officer (EXT)
Operations Officers	
Mir Ahmad Ahmad	Operations Officer, SASDA
Tahira Syed	Operations Officer, SASDA
Team Support	
Marie Florence Elvie	Team Assistant (HQ), SASDA
Wazhma Khalili	Team Assistant, Kabul, SASDA

Annex 12: Documents in Project Files

Afghanistan: Irrigation Restoration and Development Project

1. Identification Mission Aide Memoire and Management Letter – Jul 26–Aug 11, 2010
2. Project Concept Note and Decision Note, September 2010
3. Pre-Appraisal Mission Aide Memoire (Nov 21–Dec 20, 2010)
4. Appraisal Mission Aide-memoire (February 20-March 3, 2011)
5. Environmental and Social Management Framework, January 2011
6. Resettlement Policy Framework, December 2010
7. Environment and Social Impacts of Representative Small Dam Sites (Baseline Report) December 2010 (based on remote sensing and digital elevation models)
8. List of potential small dam sites
9. List of identified large irrigation schemes
10. List of identified medium irrigation schemes
11. List of Hydrological and Meteorological Observation Stations
12. Terms of Reference for Technical Assistance Team
13. EIRP Technical Annex
14. Training Plan for IRDP
15. Baseline values of key indicators

Annex 13: Statement of Loans and Credits

Afghanistan: Irrigation Restoration and Development Project

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P110407	2010	Rural Enterprise Devt Program	0.00	30.00	0.00	0.00	0.00	26.00	-2.56	0.00
P112872	2010	Customs Reform and Trade Facilitation	0.00	50.48	0.00	0.00	0.00	51.49	0.00	0.00
P113421	2010	Afghanistan Pension Admin and Safety Net	0.00	7.50	0.00	0.00	0.00	6.66	2.21	0.00
P117103	2010	National Solidarity Program III	0.00	40.00	0.00	0.00	0.00	39.55	-2.00	0.00
P110644	2009	AF Financial Sector Strengthening Proj	0.00	8.00	0.00	0.00	0.00	7.92	1.60	0.00
P112446	2009	Strengthng.Health Activts.for Rural Poor	0.00	79.00	0.00	0.00	0.00	52.34	-15.24	0.00
P106259	2008	Education Quality Improvement Program II	0.00	30.00	0.00	0.00	0.00	11.51	-0.60	0.00
P104301	2008	AF Microfinance Project	0.00	30.00	0.00	0.00	0.00	12.14	12.40	0.00
P103343	2008	National Emergency Rural Access Project	0.00	152.00	0.00	0.00	0.00	59.55	19.09	0.00
P102573	2008	Afghanistan Skills Development Project	0.00	20.00	0.00	0.00	0.00	10.33	5.73	0.00
P101502	2008	Afghanistan HIV/AIDS Prevention Project	0.00	10.00	0.00	0.00	0.00	3.54	3.42	0.00
P099980	2007	AF: Public Financial Management Reform	0.00	33.40	0.00	0.00	0.00	10.75	3.79	0.00
P097030	2007	Civil Service Reform Project	0.00	20.40	0.00	0.00	0.00	10.02	6.93	0.00
P090928	2007	AF PSD Support Project	0.00	25.00	0.00	0.00	0.00	12.41	10.80	0.00
P087860	2006	Urban Water Sector	0.00	40.00	0.00	0.00	23.09	18.19	39.11	0.42
P098118	2006	Afghanistan: Natural Resources Devt	0.00	40.00	0.00	0.00	0.00	22.48	10.54	0.00
P083919	2005	Kabul Urban Reconstruction Project	0.00	25.00	0.00	0.00	0.00	5.08	3.81	0.00
P088719	2005	Investment Guarantee Facility	0.00	5.00	0.00	0.00	0.00	2.84	2.59	0.00
P089040	2005	Strengthening Higher Education Program	0.00	60.00	0.00	0.00	0.00	25.10	4.72	1.39
P083908	2004	Emergency Power Rehabilitation Project	0.00	105.00	0.00	0.00	0.00	18.64	13.25	13.25
P078936	2004	AF: Emer Irrig Rehab	0.00	126.50	0.00	0.00	0.00	42.44	-48.19	24.06
		Total:	0.00	937.28	0.00	0.00	23.09	448.98	71.40	39.12

AFGHANISTAN
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2006	Areeba Afg. LTD	40.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	FMBA	0.00	0.85	0.00	0.00	0.00	0.85	0.00	0.00
2006	FMBA	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004	TPS (A)	0.00	0.00	7.00	0.00	0.00	0.00	7.00	0.00
	Total portfolio:	43.50	5.85	7.00	0.00	0.00	0.85	7.00	0.00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
	Total pending commitment:	0.00	0.00	0.00	0.00

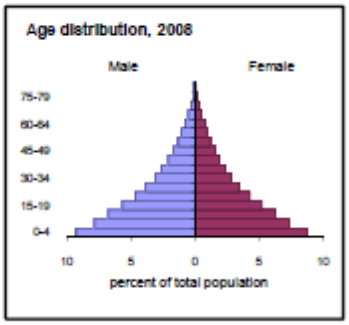
Annex 14: Country at a Glance

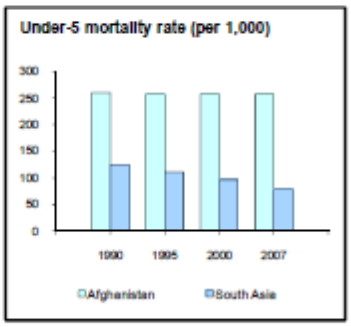
Afghanistan: Irrigation Restoration and Development Project

Afghanistan at a glance

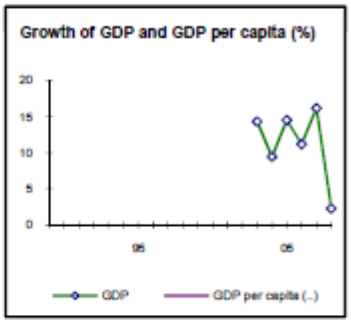
2/25/10

Key Development Indicators (2008)	Afghanistan	South Asia	Low income
Population, mid-year (millions)	..	1,543	973
Surface area (thousand sq. km)	652	5,140	19,310
Population growth (%)	..	1.5	2.1
Urban population (% of total population)	..	29	29
GNI (Atlas method, US$ billions)	10.6	1,522	510
GNI per capita (Atlas method, US$)	..	986	524
GNI per capita (PPP, international $)	..	2,733	1,407
GDP growth (%)	2.3	6.9	6.4
GDP per capita growth (%)	..	5.3	4.2
(most recent estimate, 2003–2008)			
Poverty headcount ratio at $1.25 a day (PPP, %)	..	40	..
Poverty headcount ratio at $2.00 a day (PPP, %)	..	74	..
Life expectancy at birth (years)	44	65	59
Infant mortality (per 1,000 live births)	165	59	78
Child malnutrition (% of children under 5)	33	41	28
Adult literacy, male (% of ages 15 and older)	..	74	72
Adult literacy, female (% of ages 15 and older)	..	52	55
Gross primary enrollment, male (% of age group)	125	111	102
Gross primary enrollment, female (% of age group)	78	104	95
Access to an improved water source (% of population)	22	87	67
Access to improved sanitation facilities (% of population)	30	33	38





Net Aid Flows	1990	2000	2008
(US$ millions)			
Net ODA and official aid	122	136	3,951
Top 3 donors (in 2007):			
United States	56	2	1,514
Canada	3	7	345
European Commission	2	18	307
Aid (% of GNI)	..	*16.4*	38.9
Aid per capita (US$)	*12*	..	..



Long-Term Economic Trends				1980–90	1990–2000	2000–08
				(average annual growth %)		
Consumer prices (annual % change)	..	..	26.8			
GDP implicit deflator (annual % change)	..	..	4.8			
Exchange rate (annual average, local per US$)	50.6	67.7	51.0			
Terms of trade index (2000 = 100)	..	..	..			
Population, mid-year (millions)	*12.1*	..	..	*-1.6*	..	..
GDP (US$ millions)	..	*2,462*	10,624	..	..	*11.8*
Agriculture	..	*45.2*	31.6	..	..	*4.4*
Industry	..	*19.7*	26.3	..	..	*17.5*
Manufacturing	..	*15.0*	16.2	..	..	*196.3*
Services	..	*35.1*	42.1	..	..	*15.4*
Household final consumption expenditure	..	111.5	97.9	..	..	..
General gov't final consumption expenditure	..	7.9	10.0	..	..	..
Gross capital formation	..	11.6	27.6	..	..	..
Exports of goods and services	..	30.6	17.2	..	..	..
Imports of goods and services	..	61.6	52.7	..	..	..
Gross savings	..	*1.6*	*45.1*			

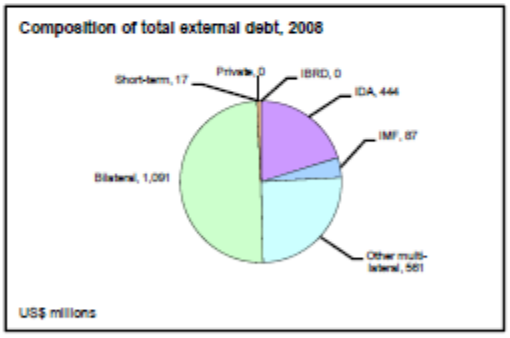
Note: Figures in italics are for years other than those specified. 2008 data are preliminary. .. indicates data are not available
a. Aid data are for 2007.

Development Economics, Development Data Group (DECDG).

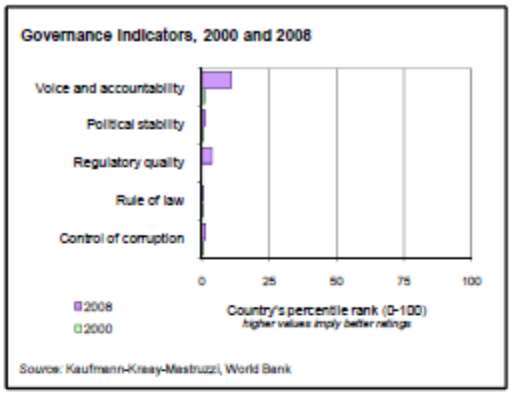
Balance of Payments and Trade	**2000**	**2008**
(US$ millions)		
Total merchandise exports (fob)	*1,291*	*1,835*
Total merchandise imports (cif)	1,697	*3,260*
Net trade in goods and services	*-1,363*	*-6,002*
Current account balance	*-150*	*85*
as a % of GDP	*-3.5*	*0.8*
Workers' remittances and compensation of employees (receipts)	..	..
Reserves, including gold	*425*	*1,662*

Central Government Finance		
(% of GDP)		
Current revenue (including grants)	7.8	10.5
Tax revenue	..	..
Current expenditure	7.9	9.4
Overall surplus/deficit	-4.9	-5.1
Highest marginal tax rate (%)		
Individual	..	..
Corporate	..	..

External Debt and Resource Flows		
(US$ millions)		
Total debt outstanding and disbursed	..	2,200
Total debt service	..	12
Debt relief (HIPC, MDRI)	571	..
Total debt (% of GDP)	..	20.7
Total debt service (% of exports)	..	*0.6*
Foreign direct investment (net inflows)	..	300
Portfolio equity (net inflows)	..	0



Private Sector Development	**2000**	**2008**
Time required to start a business (days)	–	9
Cost to start a business (% of GNI per capita)	–	59.5
Time required to register property (days)	–	250
Ranked as a major constraint to business (% of managers surveyed who agreed)	**2000**	**2008**
n.a.	..	..
n.a.	..	..
Stock market capitalization (% of GDP)	..	..
Bank capital to asset ratio (%)	..	..



Technology and Infrastructure	**2000**	**2008**
Paved roads (% of total)	13.3	29.3
Fixed line and mobile phone subscribers (per 100 people)	..	..
High technology exports (% of manufactured exports)	..	..

Environment		
Agricultural land (% of land area)	58	*58*
Forest area (% of land area)	1.6	*1.3*
Nationally protected areas (% of land area)	..	*0.3*
Freshwater resources per capita (cu. meters)	..	..
Freshwater withdrawal (billion cubic meters)	23.3	..
CO2 emissions per capita (mt)	..	..
GDP per unit of energy use (2005 PPP $ per kg of oil equivalent)	..	..
Energy use per capita (kg of oil equivalent)	..	..

World Bank Group portfolio	**2000**	**2008**
(US$ millions)		
IBRD		
Total debt outstanding and disbursed	*0*	0
Disbursements	*0*	0
Principal repayments	*0*	0
Interest payments	*0*	0
IDA		
Total debt outstanding and disbursed	*0*	444
Disbursements	*0*	44
Total debt service	*0*	6
IFC *(fiscal year)*		
Total disbursed and outstanding portfolio	0	9
of which IFC own account	0	9
Disbursements for IFC own account	0	0
Portfolio sales, prepayments and repayments for IFC own account	0	0
MIGA		
Gross exposure	–	78
New guarantees	–	1

Note: Figures in italics are for years other than those specified. 2008 data are preliminary
.. indicates data are not available. – indicates observation is not applicable.

2/25/10

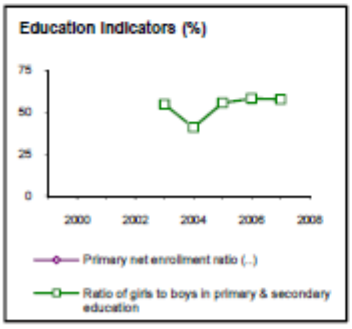
Development Economics, Development Data Group (DECDG).

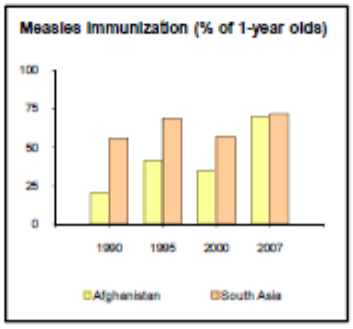
Millennium Development Goals

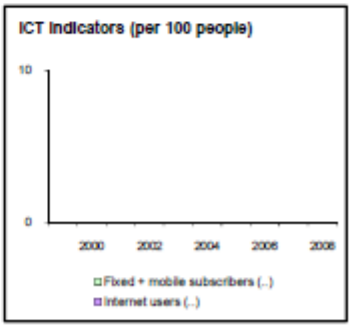
Afghanistan

With selected targets to achieve between 1990 and 2015
(estimate closest to date shown, +/- 2 years)

	Afghanistan			
Goal 1: halve the rates for extreme poverty and malnutrition	**1990**	**1995**	**2000**	**2008**
Poverty headcount ratio at $1.25 a day (PPP, % of population)	..	..	..	..
Poverty headcount ratio at national poverty line (% of population)	..	..	..	..
Share of income or consumption to the poorest quintile (%)	..	..	..	..
Prevalence of malnutrition (% of children under 5)	..	..	..	*32.9*
Goal 2: ensure that children are able to complete primary schooling				
Primary school enrollment (net, %)	*25*	..	..	..
Primary completion rate (% of relevant age group)	..	..	..	*38*
Secondary school enrollment (gross, %)	11	21	*13*	*28*
Youth literacy rate (% of people ages 15-24)	..	..	34	..
Goal 3: eliminate gender disparity in education and empower women				
Ratio of girls to boys in primary and secondary education (%)	*54*	..	..	*58*
Women employed in the nonagricultural sector (% of nonagricultural employment)	18	..	..	..
Proportion of seats held by women in national parliament (%)	4	..	..	28
Goal 4: reduce under-5 mortality by two-thirds				
Under-5 mortality rate (per 1,000)	260	257	257	*257*
Infant mortality rate (per 1,000 live births)	168	165	165	*165*
Measles immunization (proportion of one-year olds immunized, %)	20	41	35	*70*
Goal 5: reduce maternal mortality by three-fourths				
Maternal mortality ratio (modeled estimate, per 100,000 live births)	..	..	..	*1,800*
Births attended by skilled health staff (% of total)	..	..	12	*14*
Contraceptive prevalence (% of women ages 15-49)	..	..	5	*10*
Goal 6: halt and begin to reverse the spread of HIV/AIDS and other major diseases				
Prevalence of HIV (% of population ages 15-49)	..	..	..	..
Incidence of tuberculosis (per 100,000 people)	168	168	168	*168*
Tuberculosis cases detected under DOTS (%)	..	*4*	18	*64*
Goal 7: halve the proportion of people without sustainable access to basic needs				
Access to an improved water source (% of population)	..	21	21	22
Access to improved sanitation facilities (% of population)	..	32	30	*30*
Forest area (% of total land area)	2.0	1.8	1.6	*1.3*
Nationally protected areas (% of total land area)	..	..	..	*0.3*
CO2 emissions (metric tons per capita)	*0.2*	..	..	..
GDP per unit of energy use (constant 2005 PPP $ per kg of oil equivalent)	..	..	..	..
Goal 8: develop a global partnership for development				
Telephone mainlines (per 100 people)	*0.3*	..	..	..
Mobile phone subscribers (per 100 people)	*0.0*	..	..	..
Internet users (per 100 people)	..	..	..	..
Personal computers (per 100 people)	..	..	..	..







Note: Figures in italics are for years other than those specified. .. indicates data are not available

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Development Economics, Development Data Group (DECDG).

IBRD 38311

UZBEKISTAN

TURKMENISTAN

TAJIKISTAN

TAJIKISTAN

PAKISTAN

INDIA

ISLAMIC REPUBLIC OF IRAN

62° E 64° E 66° E 68° E 70° E 72° E 74° E

38° N 36° N 34° N 32° N 30° N

100 mm 200 mm 300 mm 400 mm 500 mm 600 mm

Faisabad
Taloqan
Kunduz
Baghlan
Mazar-e Sharif
Sheberghan
Saripul
Samangan
Meymaneh
Qal'eh-ye Now
Herat
Chaghcharan
Bamyan
Charikar
Mahmud-e Raqi
Nuristan
Asadabad
KĀBUL
Mehtarlam
Jalalabad
Meydan Shahr
Pol-e 'Alam
Ghazni
Gardiz
Kowst
Sharan
Tarin Kowt
Farah
Qalat
Lashkar Gah
Kandahar
Zaranj

N

0 50 100 150 200
KILOMETERS

AFGHANISTAN

AFGHANISTAN
IRRIGATION RESTORATION & DEVELOPMENT PROJECT
HYDROMETRIC NETWORK & RIVER BASINS

- COMPLETED HYDROLOGICAL STATIONS
- PLANNED HYDROLOGICAL STATIONS
- PLANNED SNOW SURVEY STATIONS
- PLANNED METEOROLOGICAL STATIONS
- EXISTING DAMS
- POTENTIAL DAM SITES UNDER STUDY

RIVER BASINS:

- AMU DARYA
- HARIRUD-MURGHAB
- HELMAND
- KABUL (INDUS)
- NON DRAINAGE AREA
- NORTHERN

- 300 mm — ISOHYETS
- IRRIGATED AREAS
- LAKES
- RIVERS
- PROVINCE CAPITALS
- NATIONAL CAPITAL
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES

Source: Ministry of Energy and Water (MEW).

FEBRUARY 2011

IBRD 38312

UZBEKISTAN

TAJIKISTAN

TAJIKISTAN

TURKMENISTAN

PAKISTAN

INDIA

ISLAMIC REPUBLIC OF IRAN

Faisabad
Taloqan
Kunduz
Mazar-e Sharif
Sheberghan
Saripul
Samangan
Baghlan
Meymaneh
Qal'eh-ye Now
Herat
Chaghcharan
Bamyan
Charikar
Mahmud-e Raqi
Nuristan
Asadabad
Mehtarlam
KĀBUL
Meydan Shahr
Jalalabad
Pol-e 'Alam
Ghazni
Gardiz
Kowst
Sharan
Tarin Kowt
Qalat
Farah
Lashkar Gah
Kandahar
Zaranj

38° N
36° N
34° N
32° N
30° N
62° E
64° E
66° E
68° E
70° E
72° E
74° E

N

0 50 100 150 200
KILOMETERS

AFGHANISTAN

AFGHANISTAN
IRRIGATION RESTORATION & DEVELOPMENT PROJECT
LOCATION OF PROPOSED IRRIGATION REHABILITATION SCHEMES

- LARGE IRRIGATION SCHEMES
- MEDIUM IRRIGATION SCHEMES

RIVER BASINS:

- AMU DARYA
- HARIRUD-MURGHAB
- HELMAND
- KABUL (INDUS)
- NON DRAINAGE AREA
- NORTHERN
- IRRIGATED AREAS
- LAKES
- RIVERS
- PROVINCE CAPITALS
- NATIONAL CAPITAL
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES

Source: Ministry of Energy and Water (MEW).

FEBRUARY 2011