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SINDH BARRAGES IMPROVEMENT PROJECT

Rehabilitation and Modernization of Guddu Barrage.

Social Management Framework

December 2014

Sindh Irrigation Department

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List of Abbreviations

Abbreviation	Definition
BHU	Basic Health Unit
Col	Corridor of Impact
CSC	Construction Supervision Consultant
DC	Deputy Commissioner
ESIA	Environmental and Social Impact Assessment
ESMP	Environment and Social Management Plan
ESU	Environment and Social Unit
GoSindh	Government of Sindh
GRM	Grievance Redress Mechanism
ID	Irrigation Department (Government of Sindh)
LAA	Land Acquisition Act (1894)
MEC	Monitoring and Evaluation Consultants
MML	Mott Mcdonald Limited
MMP	Mott Mcdonald Pakistan
NGO	Non-Governmental Organisation
NRP	National Resettlement Policy Pakistan
O&M	Operation and Maintenance
OP 4.12	World Bank Operation Policy 4.12 on Involuntary Resettlement
P&D	Planning and Development
PAPs	Project Affected Persons
PMO	Project Management Office
RAP	Resettlement Action Plan
RoW	Right of Way
RPF	Resettlement Policy Framework
S/he	She or he
SAP	Social Action Plan
SMF	Social Management Framework
SIDA	Sindh Irrigation and Drainage Authority
WSIP	Water Sector Improvement Project

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Table of Contents

EXECUTIVE SUMMARY.....	1
1. INTRODUCTION.....	5
1.1 GENERAL.....	5
1.2 OBJECTIVES AND COVERAGE.....	5
2. PROJECT DESCRIPTION	7
2.1 INTRODUCTION	7
2.2 DESCRIPTION OF CONSTRUCTION WORKS.....	8
2.2.1 SITE ACCESS.....	8
2.2.2 CONSTRUCTION & LABOUR CAMPS	8
2.2.3 CONSTRUCTION OF STAFF COLONY.....	9
2.2.4 REPLACEMENT OF GATES & MINOR STRUCTURAL REPAIR TO REGULATORS	9
2.2.5 RECONFIGURATION OF LEFT POCKET DIVIDE WALL.....	10
2.2.6 SITE RESTORATION.....	11
2.3 RESETTLEMENT SCOPING.....	12
3. SOCIO-ECONOMIC CONDITIONS IN PROJECT AND COMMAND AREAS	13
3.1 ADMINISTRATIVE SETUP.....	13
3.2 DEMOGRAPHY, ETHNICITY AND TRIBES AND SOCIAL COHESION AND CONFLICT	13
3.3 INTER-TRIBAL CONFLICT	13
3.4 HOUSING	14
3.5 LITERACY.....	14
3.6 ECONOMIC CONDITIONS	14
3.7 AGRICULTURE AND LIVESTOCK.....	14
3.8 VULNERABLE GROUPS	15
3.9 WOMEN IN THE PROJECT AREA	15
3.10 NGOs INVOLVEMENT.....	16
3.11 KEY SOCIO-ECONOMIC INFORMATION OF COMMAND AREAS	16
3.11.1 GHOTKI FEEDER CANAL COMMAND AREA	16
3.11.2 BEGHARI SINDH AND DESERT PAT FEEDER CANAL COMMAND AREA.....	16
3.11.3 COMMUNICATIONS IN THE COMMAND AREA	17
4. RESETTLEMENT POLICY FRAMEWORK.....	18
4.1 OBJECTIVES	18
4.2 RESETTLEMENT OF PROJECT AFFECTED PERSONS.....	18
4.3 LEGAL FRAMEWORK	19
4.3.1 PAKISTAN LEGAL FRAMEWORK – LAND ACQUISITION ACT (LAA) 1894	19
4.3.2 WORLD BANK FRAMEWORK - INVOLUNTARY RESETTLEMENT POLICY (OP 4.12).....	23
4.3.3 COMPARISON OF PAKISTAN AND WORLD BANK POLICIES	25
4.3.4 REMEDIAL MEASURES TO BRIDGE THE GAP.....	26
4.4 ELIGIBILITY AND ENTITLEMENT CRITERIA.....	26
4.4.1 CATEGORY OF DISPLACED PERSON	26

4.4.2	ELIGIBILITY CRITERIA.....	27
4.4.3	METHOD TO DETERMINE THE CUT-OFF DATES.....	27
4.4.4	ENTITLEMENTS.....	28
4.4.5	CALCULATION FOR COMPENSATION PAYMENTS.....	33
4.4.6	ALLOWANCES.....	34
4.5	PREPARING RESETTLEMENT ACTION PLAN.....	35
4.5.1	PROCESS FOR SCREENING AND REVIEW OF RAP.....	35
4.5.2	SCREENING FOR INVOLUNTARY RESETTLEMENT.....	35
4.5.3	BASELINE, SOCIO-ECONOMIC DATA, AND RESETTLEMENT SURVEYS.....	36
4.5.4	RESETTLEMENT ENTITLEMENT AND POLICY MATRIX.....	36
4.5.5	IMPLEMENTATION ARRANGEMENTS.....	36
4.5.6	PREPARATION OF MONITORING, EVALUATION AND REPORTING PLAN.....	36
4.5.7	GRIEVANCE AND REDRESS MECHANISM (GRM).....	37
4.5.8	COST ESTIMATES.....	37
4.5.9	PUBLIC CONSULTATION AND PARTICIPATION.....	37
4.5.10	RESETTLEMENT PLANNING.....	38
4.5.11	RAP SUBMISSION AND APPROVAL.....	39
5.	SOCIAL ACTION PLAN.....	40
5.1	INTRODUCTION.....	40
5.1.1	GENERAL.....	40
5.1.2	OBJECTIVES.....	41
5.1.3	PRIORITY NEEDS IN PROJECT AREA.....	41
5.2	SOCIAL DEVELOPMENT ACTION PLAN FOR THE PROJECT AREA.....	43
5.2.1	HEALTH FACILITIES.....	43
5.2.2	EDUCATION FACILITIES.....	44
5.2.3	TRAINING FACILITIES.....	44
5.2.4	VETERINARY CLINIC.....	44
5.3	POTENTIAL IMPACTS AND MITIGATION IN THE COMMAND AREA.....	45
5.3.1	DETAILED NEEDS ASSESSMENT.....	46
5.3.2	INSTALLATION OF HAND PUMPS.....	46
5.3.3	RESTRICTION ON WORKS TO HEAD REGULATORS.....	46
5.3.4	PROVISION OF PUMP BYPASS.....	47
5.3.5	PROVISION OF SEED AND/OR FERTILIZER.....	47
5.4	IMPLEMENTATION SCHEDULE.....	48
6.	COMMUNICATION STRATEGY.....	50
6.1	INTRODUCTION.....	50
6.2	OBJECTIVES OF COMMUNICATION STRATEGY.....	50
6.3	STAKEHOLDER ANALYSIS AND DESIGN STAGE CONSULTATIONS.....	51
6.3.1	PROJECT STAKEHOLDERS.....	51
6.3.2	DESIGN STAGE CONSULTATIONS.....	52
6.4	COMMUNICATION MATRIX.....	53
6.5	COMMUNICATION TOOLS.....	56
6.6	COMMUNICATION APPROACH.....	58
7.	IMPLEMENTATION ARRANGEMENTS.....	59
7.1	INSTITUTIONAL ARRANGEMENTS.....	59
7.2	INSTITUTIONAL RESPONSIBILITIES.....	61
7.2.2	IRRIGATION DEPARTMENT.....	61

7.2.3	CHIEF ENGINEER GUDDU BARRAGE	61
7.2.4	SINDH IRRIGATION AND DRAINAGE AUTHORITY (SIDA).....	62
7.2.5	CONTRACTOR.....	62
7.2.6	CONSTRUCTION SUPERVISION CONSULTANTS	63
7.2.7	MONITORING AND EVALUATION CONSULTANTS (MEC)	63
7.2.8	WORLD BANK	64
8.	GRIEVANCE REDRESS MECHANISM	65
8.1	GENERAL.....	65
8.2	PRINCIPLES, PROCEDURES AND TIME-LINES	65
9.	MONITORING AND EVALUATION	68
9.1	INTRODUCTION	68
9.2	OBJECTIVES	68
9.3	INTERNAL MONITORING.....	68
9.4	EXTERNAL MONITORING AND EVALUATION.....	69
10.	COST ESTIMATE	70
10.1	ARRANGEMENTS FOR FUNDING	70
10.2	COST ESTIMATES	70
	APPENDIX A. ALTERNATIVES CONSIDERED FOR CONTRACTOR OPERATION AREA	72
	APPENDIX B. SOCIO-ECONOMIC CONDITIONS IN PROJECT AND COMMAND AREAS	75
	APPENDIX C. STAKEHOLDER CONSULTATIONS	89
	APPENDIX D. COMMUNICATION MATRIX – SECONDARY STAKEHOLDERS	109

SINDH BARRAGES IMPROVEMENT PROJECT
Rehabilitation & Modernization of Guddu Barrage
Social Management Framework
Executive Summary

Guddu Barrage, located in the district of Kashmore in the north of Sindh Province, was constructed during 1957-1962 and has shown deterioration in the superstructure, weakness of barrage gates and corrosion of head regulator gates. In addition, the current configuration of the barrage is resulting in sedimentation upstream of the barrage which has reduced the capacity of the barrage to pass flood waters resultantly sediment being conveyed to off taking canals affecting their capacity to carry irrigation supplies.

In order to address these issues, a feasibility study for the rehabilitation of Guddu Barrage was recommended under the Sindh Water Sector Improvement Project (WSIP-Phase.1) which aims to improve the efficiency and effectiveness of irrigation water distribution in Sindh. WSIP Phase 1 is funded jointly by the Government of Sindh (GoSindh) and the World Bank (WB).

To complement the Environment and Social Management Plan (ESMP), the Social Management Framework (SMF) is prepared during the feasibility stage with objectives to provide an overall planning and implementing guidance to address social issues arising during the course of the project planning and implementation, including possible land acquisition and resettlement, disruption of water supply due to possible extended canal closure and overall communication with stakeholders. The SMF is composed of (a) Resettlement Policy Framework (RPF), (b) Social Action Plan (SAP), and (c) a Communication Strategy.

Project Description: The Project comprises mainly: (a) replacement of barrage gates and minor structural repair to regulators, , (b) and reconfiguration of left pocket divide wall.(c) Electromechanical equipment replacement,(d) River Training Works (e) Renovation and construction of Staff and O&M Offices / control rooms.

A labour camp will be constructed to accommodate up to 200 staff. The Contractor shall also establish a construction camp (including storage and batching plant), offices and a workshop. Following completion of the project, the Contractor shall hand over the workshop to the Client. The staff colony will be constructed on the right bank of Guddu Barrage. Replacement works will include the replacement of gates and hoist gears and associated electrical switch gear along with minor civil works including patching concrete over exposed reinforcement, resealing of joints and minor repairs to cracks on bridge piers. Gates on the head regulators shall be replaced one at a time, and/or during the canal closure period, leaving the remaining gates operational to reduce disturbance of irrigation supplies. Regarding the reconfiguration of divide wall, it is proposed that before the construction of Left Pocket Divide Wall, the existing divide wall in front of Raine Canal will be removed by using waterborne plant during the 2nd year of construction. The site will be restored after completion of construction works. During the project design, it has been identified by the project team that there may be a possibility of private land acquisition or resettlement due to project activities.

Socio-economic Conditions in the Project and Command Area: The project area comprises districts: Kashmore and Ghotki (parts); The estimated population of the project area is **37,410**. They live in joint family units. Major tribes are Mazari (50 percent) and Mirani (30 percent). Sindhi is the primary languages in the project area, while the literacy rate is as low as 6 percent. Tribal loyalties are strong in the area, and tribal leaders in the project and

surrounding area, many of whom are politicians, are well respected and influential amongst the population. The area was troubled by a conflict between the Mazari and neighbouring Khosa tribe in 2010 and 2011, but following collaboration between the tribal leaders at the end of 2011, the situation has improved.

The major employment in the area is from agriculture sector and as general labourers. As a result of industry on the right bank of Guddu Barrage, a large number of unskilled labourers are available within the project and surrounding area. The education and income level in the project and surrounding area is typically low.

Agriculture is commonly practiced in the project and surrounding area, with a number of small farmers working on owned or rented land growing sugarcane, rice, cotton and vegetables as well as grazing livestock. Women and girls are commonly involved in all aspects of agriculture.

Access to social amenities in the project and surrounding area is low. Electricity supply is available however access to gas supply, drinking water (other than from ground water pumps installed by communities), sewerage, drainage and health care facilities is very limited. A number of schools are available in the project and surrounding area but are generally lacking staff and/or resources.

The command area of the Ghotki and Desert Pat Feeder Canals depend on Guddu Barrage for the supply of irrigation water year round, other than for a scheduled annual maintenance period of up to four weeks. As the ground water in the command area of Desert Pat Feeder is saline and not suitable for drinking, much of the command area also depends on the canal water as their source of drinking water. Guddu Barrage also maintains a supply of irrigation water to the command area of Beghari Sindh Feeder Canal from May to October only.

Resettlement Policy Framework (RPF): The project design team carried out detailed screening and assessment of project potential impacts of land acquisition and resettlement. They indicated that the proposed project is designed to include rehabilitation and repairing works of the barrage structure and replacement of mechanical works and there would not be any civil works involved. These would not require any land acquisition or resettlement. Therefore a RPF is prepared in compliance with World Bank policy to guide resettlement planning for any unanticipated land acquisition and resettlement impacts during the course of the project implementation.

The RPF is prepared in compliance with the laws of Pakistan and the Bank's safeguards policy on involuntary resettlement. In the event that involuntary resettlement issues are identified, Resettlement Action Plans (RAPs) will be prepared consistent with this policy framework and will be submitted to the Bank for approval.

RPF specifies that implementation of any works requiring a RAP shall not commence before necessary measures for resettlement and compensation are in place according to steps identified in this RPF. These measures will include provision for compensation and other assistance required for relocation, prior to displacement, and preparation and provision of resettlement sites with adequate facilities, where required and livelihood restoration measures. RPF also provides details of eligibility criteria, categories of affected persons and methods to establish cut-off dates. An entitlement matrix has been included in RPF to elaborate the types of losses, application, definition of entitled person and entitlement policy. Calculation for compensation payment and provision of different types of allowance i.e. transportation, livelihood, shifting for commercial structures and vulnerable allowances has been specified in RPF.

Following completion of the final designs, a re-assessment of resettlement requirements shall be required. Should this assessment identify any involuntary resettlement, WB Operational Policy (OP) 4.12 calls for the preparation of individual RAPs that must be consistent with this RPF. RPF sets out complete procedures and guidelines for screening of involuntary resettlement and preparation and approvals for RAPs.

Social Action Plan (SAP): SMF also includes a SAP which proposes investment into education, health and veterinary facilities in the project area. These investments are to be implemented by a Non-Governmental Organization (NGO) to be identified by the Project Implementing Agency i.e. Project Management Office (PMO) established in Irrigation Department, GoSindh. SAP also proposes needs assessment to be carried out by the Environment and Social Unit (ESU) of the PMO within the command area of Guddu Barrage as well as a number of measures to reduce the risk of any disruption of irrigation supplies to the command area due to the replacement of head regulator gates to the main canals. Contingency measures are also proposed to be implemented in the event of any disruption to irrigation supplies to reduce the impact of this disruption.

Communication Strategy: A communication strategy has been included in SMF with objectives to facilitate the project implementation by engaging populations in project and command areas (primary stakeholders) through regular consultations. Government departments, private sector, and NGOs are secondary stakeholders that are important intermediaries in the project delivery process or those who influence or are indirectly affected by the project. Government departments include Baluchistan Irrigation Department, as the command area extends to Nasirabad and Jafarabad districts of Balouchistan Province. Communication matrix was developed, which specifies information and message to be conveyed, communication means, timings and the corresponding frequency. Considering low literacy rate in the project area and diversity of spoken languages in command area (Sindhi, Balochi, Urdu and Siraki), consultation is the most effective means of communication, which also ensures feedback from these populations.

Implementation Arrangements: The PMO established under the Secretary of the Irrigation Department (ID), Government of Sindh will monitor and coordinate all project implementation activities including implementation of the SMF and implementation of RAPs. ESU will be responsible for SMF implementation with a dedicated communication section to implement the strategy. If required, RAPs will be prepared and implemented by the Contractor as per the RFP. Internal monitoring will be undertaken by PMO's Monitoring and Evaluation Unit. External, third party monitoring is provided by the Monitoring and Evaluation Consultants of the Project.

Grievance Redress Mechanism: A multistage Grievance Redress Mechanism (GRM) has been proposed in SMF. The Head of PMO will chair a Grievance Redress Committee made up of relevant stakeholders whose aim will be to solve any impediments to implementation of any RAPs as well as redress any grievances which may occur during implementation at the project level. The multistage approach specifies that the complaints will be properly recorded and acknowledgement of a written submission will be issued to the complainant within three working days. If not resolved earlier by the Contractor or Supervisory staff on site, grievances will be tabled for discussion/resolution during Committee meeting within one week of receipt of the written submission. If grievance is not satisfactorily resolved by the Grievance Redress Committee, it will be referred for consideration by the Head of PMO within 1 week. Cases that prove impossible to resolve through the Grievance Redress Committee may be referred to the Appeals to Committee to be appointed by Additional

Chief Secretary (Dev.) Planning and Development (P&D), GoSindh, comprising senior representatives from P&D, ID, and an independent legal expert, this will meet as needed to adjudicate on cases and either send their recommendations for endorsement to the ACS (Dev.)P&D or refer these for legal action. Where feasible, a response will be forthcoming to such appeals within one month of submission. If the complainant is not satisfied, the complaint will have the option to go to the court of law. In recognition of the local norms for conflict resolution, this framework proposes that local landlords are members of the Grievance Redress Committee.

Monitoring and Evaluation: Monitoring shall be carried out both internally and externally. During internal monitoring, the information will be collected from the project site and assimilated in the form of a monthly progress report to assess the progress and results of the SMF implementation, and adjust the work progress, where necessary, in case of any delays or problems. The report shall be submitted to the Head of PMO. The Monitoring & Evaluation Consultants (MEC) to be appointed under the project will have environmental and social experts and shall carryout intermittent third party monitoring of the implementation of the SMF, any RAP against the proposed programme, and the Environmental and Social Management Plan. The MEC shall complete reports on independent audits, circulated to the PMO, ID, GoSindh, WB and CSC, where appropriate. The evaluation of the MEC shall be in the form of a single final report to be issued to the PMO one year following the completion of civil works on the project.

Cost Estimates: The indicative cost estimates for SMF is US\$ 5 million.

1. INTRODUCTION

1.1 General

Guddu Barrage was constructed during 1957-1962 and has shown some deterioration in the superstructure, defects in lifting mechanism on the bridge deck across the lock, weakness of barrage gates and corrosion of head regulator gates. In general some portions of the flood embankments surrounding the barrage are lower than required to withstand current flood water levels. In addition, the current configuration of the approach to the barrage is resulting in sedimentation upstream of the barrage which both reduces the capacity of the barrage to pass flood waters in the Indus and results in sediment being conveyed to off taking canals and in turn reducing their capacity to carry irrigation supplies. A feasibility study for the rehabilitation of Guddu Barrage was recommended under the Sindh Water Sector Improvement Project (WSIP-Phase.1) which aims to improve the efficiency and effectiveness of irrigation water distribution in rural Sindh. WSIP1 is funded jointly by the Government of Sindh (GoSindh) and the World Bank (WB).

Mott MacDonald Limited (MML) in association with MM Pakistan (MMP) was appointed by the Irrigation Department (ID), GoSindh, as Consultant to complete the feasibility study and tender designs for these works. The project proponent for the rehabilitation of Guddu Barrage is the ID, GoSindh.

1.2 Objectives and coverage

The objective of the Social Management Framework (SMF) is to provide an overall planning and implementing guidance to address social issues arising during the course of the project planning and implementation, including possible land acquisition and resettlement, disruption of water supply due to possible extended canal closure and overall communication with stakeholders. The SMF complements the project's Environment and Social Management Plan (ESMP) and is composed of (a) Resettlement Policy Framework (RPF), (b) Social Action Plan (SAP), and (c) a communication strategy.

The project design team carried out detailed screening and assessment of project impacts of land acquisition and resettlement. They indicate that the proposed project is designed to include rehabilitation and repairing works of the barrage structure and replacement of mechanical works and there would not be any civil works involved. These would not require any land acquisition or resettlement. Therefore a RPF is prepared in compliance as required under the World Bank policy to guide resettlement planning for any unanticipated land acquisition and resettlement impacts during the course of the project implementation. The RPF establishes the resettlement and compensation principles and design criteria, planning requirements and implementation arrangements in such eventualities. The RPF is prepared in compliance with the laws of Pakistan and the Bank's safeguards policy on involuntary resettlement.

In the event that involuntary resettlement issues are identified, Resettlement Action Plans (RAPs) will be prepared consistent with this policy framework and will be submitted to the Bank for approval.

The SMF also includes SAP and communication strategy. The SAP is designed to include proactive interventions to offset potential adverse impacts in the command area with

possible extended canal closure in case the barrage rehabilitation works are delayed. These measures will still be implemented even if there are no contractor delays and no consequential impacts. This assistance will contribute to local development in the command areas. The communication strategy is to increase project awareness, provide key project information, including potential resettlement actions, and establish a feedback mechanism, such as consultations.

This framework also describes implementation arrangements, Grievance Redress Mechanism (GRM), and cost estimates in implementing three activities.

2. PROJECT DESCRIPTION

2.1 Introduction

This chapter describes the Project (based on the feasibility designs) providing an outline of the Project works and area. The project has the following three components:

(a) Component A: Rehabilitation of Guddu Barrage (USD 168 million). This component will support all civil and mechanical works proposed for rehabilitation of the barrage and its associated structures. The component will finance the following:

Barrage improvements. The works will include gate replacement works to improve the regulation and the flow of the barrage. This includes replacing all 65 main barrage steel gates (the gates are 18.3 m wide and 6.6 m high and weigh 55 tons each), 25 main canal head regulator gates (the gates are 7.3m wide and 3.8m high and weigh 25 tons each) and hoist gears. It also includes providing new standby generators, electrical cabling and switch gears, replacement of barrage lighting, repairs to the barrage lifting bridge and safety barriers.

Construction of a new left pocket divide wall. A 455 m length of new left pocket divide wall will be constructed at gate 7 to control the passage of sediments in to the canals. The length of the wall on upstream of the barrage is 350 m and downstream is 105 m. The existing divide wall located away from the barrage near Rainee canal will be no longer required and will be dismantled.

Extension of a spur. The existing river training structure located about 4 km upstream of the barrage will be extended for another 2 km in to the river.

Construction of office and staff colony. A new office, a laboratory, a guest house, 32 residences and associated water supply and sanitation structure and social facilities, including a primary school, a dispensary and a mosque, will be built for the barrage operation staff in the premises of barrage colony site located 200 m away from the right bank of the barrage. In addition some temporary facilities such as construction yard, labor camp will have to be constructed by the construction contractor.

Implementation of social and environmental management Plans. The environmental and social management plan (ESMP) includes measures to strengthen conservation measures in dolphin's game reserve, management of hilsa migration, and implementation of monitoring plan. This SMF complements the social aspects of ESMP.

(b) Component B: Improved Barrage Operation, Improvement (USD 9 million). This component will support modernization and improvements to the barrage operation and maintenance. This will include necessary upgrades to the instrument monitoring systems such as piezometers, gate positioning and gauging, training and capacity building for staff, replacement of surveillance and maintenance boats and procurement of hydrographic equipment. The project will provide new covered workshops and a stock of spare parts for maintenance activities. The instrument monitoring system for the barrage will be renovated and the operating staff will be equipped with an upgraded operation, maintenance, and surveillance manual. A detailed Guddu barrage emergency preparedness plan will be prepared. This component will lead to upgrading of the operating facilities with a higher level of control and improved operation & maintenance.

(c) Component C: Project Management Coordination and Monitoring and Evaluation, and training (USD 14 million). This component will support the coordination of all project-related activities as well as training and technical assistance in procurement, financial, social and environmental safeguards and communication. This component will also cover the cost of consulting services including construction supervision, contract administration, and quality control, preparation of any additional designs bidding documents and monitoring and evaluation. Activities will include the establishment of an independent Panel of Experts

(POEs) to review, monitor, evaluate, and help guide the rehabilitation process with regard to the safety of the barrage.

2.2 Description of Construction Works

2.2.1 Site Access

Guddu Barrage is well connected with other parts of the country through Guddu-Kashmore road and the Guddu-Sadiqabad road. The Contractor would use these routes for the transport of the construction material to the site. The local routes to the barrage and proposed labour camps are also available and being used for the rehabilitation activities of the Guddu Thermal Power station. The embankments are also approachable through earthen road ways.

2.2.2 Construction & Labour Camps

One of the first activities to be completed by the contractor shall be the establishment of the construction and labour camp.

A labour camp will be constructed to accommodate up to 200 staff. The Contractor shall also establish a construction camp (including storage and batching plant), offices and a workshop. Following completion of the project, the Contractor shall hand over the workshop to the Client.

The proposed sites shall include the following facilities:

- Labour camp site
 - Mosque
 - Accommodation
 - Kitchen
 - Dining area
 - Sanitation facilities
 - Recreational/TV. Hall
 - Laundry
 - Liquid & solid waste disposal facilities
 - Generator(s)
 - Dispensary with a qualified full time Doctor and a fully equipped ambulance
- Construction camp site
 - Uncovered material storage
 - Covered material storage
 - Parking for vehicles & plant
 - Batching plant
 - Generator(s)
 - Site offices
 - First aid kit
- Workshop site
 - Workshop
 - Storage area
 - Generator(s)

- First aid kit

2.2.3 Construction of Staff Colony

The works shall be implemented on the right bank of Guddu Barrage (as shown in the following figure).

Figure 2.1: Location of Guddu Staff Colony



2.2.4 Replacement of Gates & Minor Structural Repair to Regulators

These works are confined to Guddu Barrage itself, and the head regulators to Beghari Sindh, Desert Pat and Ghotki Feeder Canals.

The proposed works include:

- Replacement of all gates (including fish ladder gates)
- Replacement of hoist gears and associated electrical switch gear
- Minor civil works including:
 - Patching concrete over exposed reinforcement
 - Resealing of joints
 - Minor repairs to cracks on bridge piers

The methodology for replacement of the barrage and regulator gates envisaged at the tender stage of the project is as below. It is noted that the final methodology shall be devised by the Contractor, and the contractor should not be prevented from developing an alternative

strategy where this is of the benefit to the overall project and does not pose environmental or social risks.

- Construction of a jetty on left bank upstream of the barrage
- Protective sheets will be erected to cover the gas pipelines
- Temporary bulkhead gates shall be launched from a purpose built slipway and guided to a gate bay
- The bulkhead gates will be flooded with water and sunk into position, one upstream and a second downstream of the gate to be replaced
- The gate bay shall be pumped dry using temporary pumps, hoses and a mobile generator
- The lifting equipment shall be removed from the bay. A mobile crane mounted on the barge shall be used to remove larger items
- Scaffolding shall be erected in the bay and the gate cut into sections in situ and removed using the mobile crane
- The new gate and lifting equipment shall be installed, with the use of the mobile crane for larger items. The gate shall be fitted in sections and welded onsite.
- Gates will be painted and dried outside
- Gates will be tested and commissioned and the bulkhead gates removed by pumping out water and allowing them to float

Gates on the head regulators shall be replaced one at a time, and/or during the canal closure period, leaving the remaining gates operational to reduce disturbance of irrigation supplies.

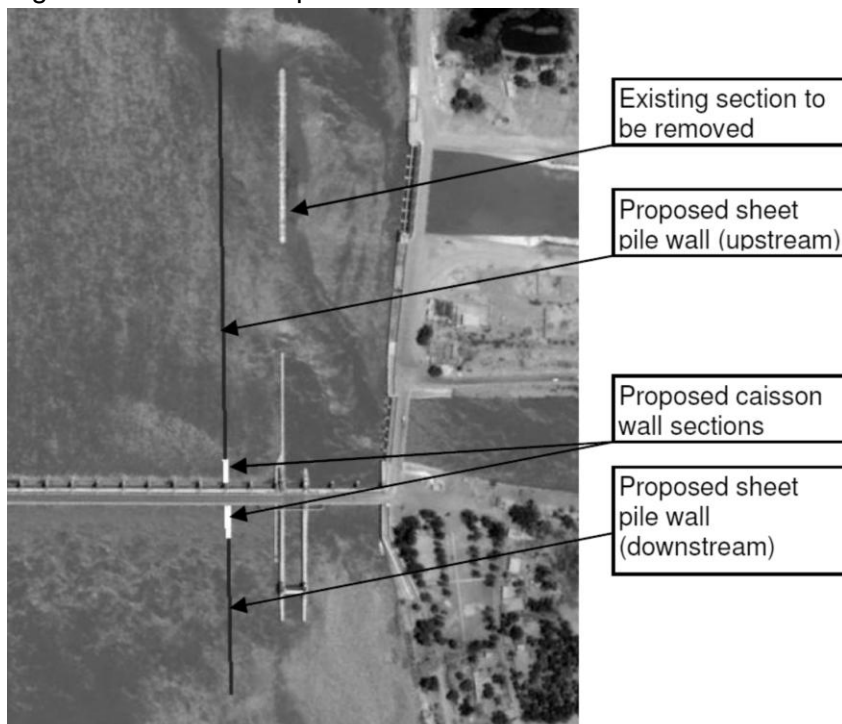
As part of these works, a new workshop shall be constructed by the Contractor for his own use. Following completion of the works, this workshop shall be handed over to the ID.

2.2.5 Reconfiguration of Left Pocket Divide Wall

It is proposed that before the construction of Left Pocket Divide Wall the existing divide wall in front of Rainee Canal will be removed by using waterborne plant during the 2nd year of construction.

The works shall be carried out on Guddu Barrage close to the left bank (within the River Indus) as shown in the following figure.

Figure 2.2: Plan of Proposed Left Pocket Divide Wall



The proposed works include:

- Underwater laying of a concrete slab immediately upstream and downstream of the barrage
- On site casting of concrete caissons
- Launch of caissons (boxes) from slipway and float into position
- Sinking of concrete caissons (boxes) for a distance of 25 m (82 ft) downstream and 15 m (50ft) upstream of the barrage
- Piling of the sheet pile wall from a barge for a distance of 80 m (262 ft) downstream and 335 m (1,100 ft) upstream of the caissons
- Placement of stone protection on bed at location of wall
- Removal of upstream section of existing divide wall

The exact methodology is at the discretion of the contractor and shall be confirmed prior to mobilization.

2.2.6 Site Restoration

On completion of the construction phase the temporary infrastructure will be decommissioned and the sites restored. This will involve:

- Removal of all temporary construction facilities
- Removal of the temporary construction camp (except the workshop which shall be handed over to the ID)
- Closing all the temporary landfills in areas.

- Where vegetation was either removed or damaged to establish temporary facilities, a vegetative cover will be reinstated.
- Removal of all solid waste from site.

2.3 Resettlement Scoping

The following table assesses each component of the works and identifies which components have the *potential* to require resettlement and are therefore of importance to this RPF. Note that subsequent actions have been taken to remove or minimise the resettlement issues identified in the following table and are discussed in Appendix A.

Table 2.1: Scoping Assessment of Resettlement by Work Component

Work Component	Description	Potential Resettlement Required?	Government owned land	Privately owned land	
				Temporary Acquisition	Permanent Acquisition
Construction of Supervision Colony	The land is government owned and no inhabited settlements are present on the site.	No	Yes	No	No
Establishment of Construction/Labour Camps and Workshop	The camp and workshop sites identified by the Government will not require physical displacement, temporary or permanent land acquisition. However, the contractor may choose sites where permanent or temporary land acquisition may be required.	No	Yes – dependent upon chosen site	Possible – dependent upon chosen site	No –
Strengthening of Spurs	The spurs are government owned and there is no encroachment	No	Yes	No	No
Construction of New Spur	The land is government owned, within the flood plain of the Indus.	No	Yes	No	No
Gate Replacement/Minor or Civil Works to Barrage and Regulators	The works are confined to the barrage and head regulators	No	Yes	No	No
Reconfiguration of Left Pocket Divide Wall	Works are confined to the river/barrage	No	Yes	No	No

3. SOCIO-ECONOMIC CONDITIONS IN PROJECT AND COMMAND AREAS

The socioeconomic baselines conditions of the area are briefly described in this section and details are attached as Appendix-B.

3.1 Administrative Setup

The project area is comprises districts Kashmore and Ghotki. Each district is headed by the Deputy Commissioner (DC) who is responsible for the coordination of functions of all the departments in the district. The head of each district department is responsible for the performance of his department and is generally designated as the Deputy Director or District Officer.

3.2 Demography, Ethnicity and Tribes and Social Cohesion and Conflict

The estimated population of the project area is 37,410, comprising 18,218 males and 19,192 females within 64 villages. The majority in the study area live together with their extended family. It is also thought to be more efficient to share basic amenities. During the socio-economic field survey it was observed that about 95 percent of the population is Muslim whereas about five percent consist of Hindu and other minority religions.

The dominant ethnic group in the project area is the Mazari Baloch tribe (50%). Other tribes include the Mirani (30%), Soomro (10%), Solongy (4%), Sheikh (3%) and the Chacher, Arain, Sher, Datsi, Malik, Indhar, Bhatti and Khosa (3%). Ethnic minorities include Pathan and Daya that are living in the vicinity of Kashmore town.

Social organization in all villages is strongly based on Biradari system (caste or tribe), where each caste has a leader. In the Biradari system, although members of a caste do not own property together or share incomes, the honour of individual members affect the standing of the caste within the community. The families belonging to the same caste have strong interactions with one another and generally keep separate identities. Even in marriages of their young, they prefer to marry within their own caste. Although uncommon, cases of marriage between different castes can occur.

The common disputes are usually resolved by the caste leader, while the head of a village shall resolve any major disputes. In case of serious matters, local influential politicians/landlords (who are often also caste leaders) intervene to settle the dispute. Occasionally, when parties do not agree on the decision of the village or caste leaders, matters may go to the police and ultimately a court of law. The police and the court of law are the last options and these are rarely exercised.

3.3 Inter-tribal Conflict

Although conflict within the project area was common place between the Mazari and Khosa castes and the Solangi and Khosa castes within the project area until end of 2011, the project area has remained peaceful since 2012. As well as being dominant in numbers, the Mazari caste is also powerful within the project area, and their number includes a member of the Sindh Provincial Assembly, a member of the Punjab Provincial Assembly and a member

of the National Assembly. The chance for conflict is heightened during elections, when parties shall oppose each other due to their political affiliations which are often aligned with their caste leaders.

3.4 Housing

The riverine human population comprises residential units like mud houses or huts are the most common house type (84%) and are built without any planning or consideration of layout. Only 10% houses are built semi pucca and 6% are pucca (bricks or blocks with iron and cement roof).

3.5 Literacy

The literacy ratio in the riverine population are considerably lower within the project area, at just 6% (2,221 people).

3.6 Economic Conditions

Agriculture is the most widespread source of income in the project area. 25% of the total population income source is as labourers (excluding agricultural labourers) and 5% from government jobs (in departments such as the agriculture department, forest department, post office, police and Pakistan army).

Livestock is a significant, albeit often a secondary, source of income. Crop or fodder is generally sold at a rate of Rs. 4,000 to 5,000 per season. Unsold rice is commonly used as dry fodder, which is comparatively cheap. Agriculture labourers earn between Rs. 200 to 300 per day. Demand for agriculture labour is high during planting and harvesting but is not a continuous source of employment. Small businesses, the private sector and fishing do not represent significant income sources in the project area although 12% of the project area are employed in this sector.

The average income level of those in the project area is approximately Rs 1,293 (US\$12) per month. The income of a large proportion of the project area is below the official poverty line of Rs. 2,305 per capita/month (inflation adjusted) and is categorized as vulnerable.

The only industry within the project area is Guddu Thermal station on the right bank of the Indus at Guddu Barrage. The thermal power plant, Guddu town market and Kashmore town are major sources of employment in the region. Other industries located in the project surrounding are cotton factories, sugar mills and fertilizer factories.

3.7 Agriculture and Livestock

The land tenure system in Sindh has regulated ownership, tenancy and inheritance rights. Recognizing the need for more equitable distribution of agricultural land and security of tenure, the Government of Pakistan has attempted various land reforms, with varying degrees of success. However, natural succession has resulted in some division and fragmentation of land. Agricultural land is mostly inherited and with the passage of time it is divided further and further amongst the children resulting in shrinking sizes. A high rate of land ownership within the project area was reported by respondents during the social survey

- of those farming within the project area, 90% own the land they farm, 5% are tenants and 5% are illegally farming land owned by the ID. The survey of the project area has shown that half of the farmers in the project area own only 1 to 5 acres of land, and only a small portion owns over 25 acres.

Respondents were asked about the revenue record of the land they farm. Those beyond the flood embankments and outside the Corridor of Impact (CoI) reported that they hold land revenue records for the land they farm. Those living and farming between the flood embankments (but beyond the CoI) were allotted land by Prime Minister Nawaz Sharif in 1999 and hold a 99 year lease from this land.

It was observed that the farmers and land owners cultivate their land on the lift irrigation water from River Indus or installed tube wells. 70% of the project population is engaged in irrigated agriculture.

The lands in project and surrounding area are fertile and farmers grow rice, sugarcane, cotton, sorghum and vegetables during the Kharif season (April to November) and wheat, oil seed, pulses and vegetables during Rabi season (April to October). For the purchase of farm inputs and sale of crops the landlords and farmer commonly use one of the surrounding city markets located in Kashmore, Khandhkot, Ubauro, Daharki and Ghotki.

Majority of the farmers hold between three to four animals. Farmers in the project area generally own high quality breeds. Livestock was the main source of milk, meat and ghee of the population. Livestock was also a source of income as people sell livestock in nearby towns. It was reported that a limited area surrounding the river banks are available for animal grazing. It is the tradition here that the individuals feed their animals by providing fodder/rice straw, wheat straw and also grow fodder crop to feed their animals.

3.8 Vulnerable groups

Groups experiencing a higher risk of poverty and social exclusion than the mainstream population are considered vulnerable groups. Vulnerable groups for the project are landless, impoverished (71% of the project area falls below the official poverty line), those with legal right to the land they occupy and handicapped.

3.9 Women in the Project Area

The status of women in the project area is classified as low class. The result of the surveys revealed that women of the project area are fully responsible for household activities and also take an active part in the field and livestock activities, and thus support the household income generation. Women in the area are skilled at embroidery. All women living within the CoI were found to be illiterate except 2% who were found literate. The health and hygiene condition of females and children are very poor. It was reported to the gender specialists that the resolution of social conflicts within the female community is in the form of the 'Panchat System', whereby the village heads, Nazim, political leaders and Union Council members form an assembly to hear and resolve social conflicts at the village level.

Women within the project area are infrequently consulted and men commonly have the decision making power. Men usually make purchases on behalf of the female members of

their family. Rural women mostly remain inside the home or work in the field. In many cases, a husband will not share his plans with his wife. Neither the survey nor the consultations identified any women who owned property.

3.10 NGOs Involvement

During the field survey, among four NGOs only two Non-Governmental Organizations (NGOs) i.e. 'Mojaz Foundation' and 'Soofi Sachal Sarmast Welfare Association' were found working for the flood affected families..

3.11 Key Socio-Economic Information of Command Areas

Guddu barrage controls irrigation supplies to the Ghotki (on the left bank), Beghari Sindh and Desert Pat (on the right bank) Feeder Canal command areas. The following baseline assessment is based mainly on secondary data, and supplemented by details recorded during consultations in the command area as part of the Environmental and Social Impact Assessment (ESIA). A needs assessment is planned during the first year of construction as part of this Social Action Plan (SAP) to provide further details prior to works which shall impact upon the command area (i.e. prior to works to the barrage or head regulators themselves).

3.11.1 Ghotki Feeder Canal Command Area

Ghotki Feeder Canal falls in the administrative limits of Ghotki and Sukkur Districts. Ghotki feeder canal is located in Talukas Ubauro, Daharki, Mirpur Mathelo and Ghotki of District Ghotki, and Taluka Pano Akil and Rohri of District Sukkur. Ghotki Feeder Canal off-takes from Guddu Barrage at left bank of Indus River with a design discharge of 8,490 ft³/s. It feeds a command area of 344,014 acres.

Ghotki district has two gas fields namely Mari gas field and Qadirpur gas field in Daharki and Ghotki talukas respectively. A number of fertilizer and power industries rely on the gas provided at these gas field. Important means of transport and communication in the district are roads and railways.

The project area is fertile land rich in growing cotton, wheat and sugarcane. The other crops in the area are rice, maize, barley, jawar, bajra, tobacco, gram and barley. The main occupation of the people is agriculture. The groundwater is found contaminated with sewerage in some areas. Common flooding in the area has resulted in the spread of malaria, typhoid and dengue within humans and diseases within livestock. Waterlogging is common adjacent to canals increasing the salinity of cultivated areas.

3.11.2 Beghari Sindh and Desert Pat Feeder Canal Command Area

Beghari Sindh Feeder Canal has a design discharge of 14,764 ft³/s. Beghari Sindh is a non-perennial canal and the normal closure period of Beghari Sindh Feeder from October to May, hence extended canal closure period will not make a negative effect in the canal command area. During the Rabi season (November to the end of March) ID opens the canal for 15 to 20 days for the irrigation of wheat crop. Exact time period depends upon the availability of water in Guddu Barrage. Water logging and salinity is commonly reported

within the command area. Hand pumps installed in the Beghari Sindh command area are the main source of water. Agriculture is the main source of income.

Desert Pat Feeder Canal has a design discharge of 10,000 ft³/s. Desert Pat Feeder Canal is perennial canal and supplies water for Irrigation and for drinking purposes as the ground water is very deep and saline and therefore unsuitable for drinking purposes. The population depends on the canal water for drinking, washing, cloth washing and livestock, especially in Nasirabad district of Baluchistan.

The major source of income in the command area is arable agriculture and from livestock. It is common for those who do not own land to keep goats, sheep, donkeys and camels to support their income.

Begari Sindh Feeder and Desert Pat Feeder Canals supply irrigation water to district Kashmore (largest rice producing district in Asia), Sukkur, Shikarpur and Larkana Districts of Sindh Province and Desert Pat Feeder supply irrigation water to Nasirabad and Jaferabad Districts of Balochistan Province.

3.11.3 Communications in the Command Area

During the Canal Command Survey it was found that at every minor and distributary canal the respondents have mobile phones. The use of mobile phones is widely spread in the canal command area. The service languages in the command area are Sindhi, Balochi, Urdu and Siraki. Landless male members have access to their own mobile but most of the women have no access to their own mobile.

Access to radio and TV is also widely spread in the canal command area. The popular channels are Mehran KTN, Dharti, Sindh, Kashash, (sindhi) Awaz, AAj, Sama, Dawn news, Waqat, (Urdu) Kohnoor (Siraki).

4. RESETTLEMENT POLICY FRAMEWORK

4.1 Objectives

The RPF is to guide preparation of RAP should the project activities, including the contractor operations, require resettlement of Project Affected Persons (PAPs) or any land acquisition (temporary or permanent). The framework applies to all components under the project, whether or not they are directly funded in whole or in part by the Bank, to ensure that those adversely affected under the project will have their livelihoods improved or at least restored.

Implementation of any works requiring a RAP shall not commence before necessary measures for resettlement and compensation are in place according to steps identified in this RPF. These measures will include provision for compensation and other assistance required for relocation, prior to displacement, and preparation and provision of resettlement sites with adequate facilities, where required and livelihood restoration measures. In particular, the taking of land and related assets may take place only after compensation has been paid and, where applicable, resettlement sites, new homes, related infrastructure, public services, moving allowances have been provided to displaced persons and measures have been taken to ensure the livelihood restoration. For works requiring relocation or loss of shelter, the policy further requires that measures to assist the displaced persons be implemented in accordance with the RAP.

The policy aims to have the affected persons participating in the process and any compensation to be full, fair and prompt.

The objectives of this policy should be adhered to:

- Involuntary resettlement and land acquisition should be avoided where feasible, or minimized, exploring all viable alternative sub projects design.
- Where involuntary resettlement and land acquisition is unavoidable, resettlement and compensation activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to give the persons displaced by the project the opportunity to share in project benefits. Displaced and compensated persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.
- Displaced and compensated persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

4.2 Resettlement of Project Affected Persons

PAPs are defined under the project as people who are directly affected socially and economically by the Bank assisted investment projects, caused by the involuntary taking of land and other assets resulting in

- relocation or loss of shelter;
- loss of assets or access to assets; or

- loss of income sources or means of livelihood, whether or not the affected persons must move to another location

4.3 Legal Framework

4.3.1 Pakistan Legal Framework – Land Acquisition Act (LAA) 1894

The Land Acquisition Act (LAA) of 1894 is the key legislation that has direct relevance to resettlement and compensation in Pakistan. Each province has its own interpretation of the LAA, and some provinces have also passed provincial legislations. The LAA and its implementation rules require that before implementation of any development project the privately owned land and crops are compensated to titled landowners and/or registered tenants/users etc.

Based on the LAA, only legal owners and tenants registered with the Land Revenue Department or those possessing formal lease agreements are eligible for compensation. Under this Act, users of the Rights of Way (RoW) are not considered "affected persons" and thus not entitled to any mitigating measure, compensation, or livelihood support. Under this Act, only legal owners and tenants officially registered with the Land Revenue Department or possessing formal lease agreements are considered "eligible" for land compensation. Thus, there is no legal obligation to provide compensation to title-less land users, unregistered tenants or encroachers for rehabilitation. However, after independence and with the passage of time various deviations to LAA have been practiced. Projects such as Ghazi Barotha and National Highways Authority road construction have awarded compensation to unregistered tenants and other forms of affected persons (Share-croppers, squatters).

The LAA also does not automatically mandate for specific rehabilitation/assistance provisions benefiting the poor, vulnerable groups, or severely affected PAPs, nor does it automatically provide for income/livelihood losses or resettlement expenses rehabilitation. Though, often this is done; it is the responsibility of affected persons to apply for benefits, rather than the responsibility of the project proponent to automatically provide them.

As mentioned above, exception to the rules can be explained by the fact that the law is not rigid and is broadly interpreted at the provincial level depending on operational requirements, local needs, and socio-economic circumstances. Recourse is often taken to ad-hoc arrangements, agreements and understandings for resettlement in difficult situations. The above is also influenced by the fact that an amendment of the LAA is considered by the Ministry of Environment. A National Resettlement Policy (NRP) has been drafted to broaden LAA provisions and current practice so as to widen the scope of eligibility and tightening up loopholes (i.e. regarding definitions of malpractice, cut-off dates, political influence on routing, etc.). It is just in a draft shape and has not approved yet.

The key sections of the LAA, 1894 are briefly described below.

Section 3

According to this Section 3 of the Act, *Land* is defined as including benefits to arise out of land, and things attached to the earth or permanently fastened to anything attached to the earth

Section 4

Section 4 of the Act requires that a preliminary notification is published in the official Gazette as well as at convenient places in the locality of the *Land* to be acquired. This notice allows an officer appointed by the GoSindh and his/her workmen to enter on to the land for the purposes of surveys, soil tests, setting out, with the exception of occupied houses unless with consent or following at least seven day's written notice of intention.

Requirements for publication of the notification under Act are mandatory, and the acquisition proceedings would stand invalid if requirements of this section are not fully satisfied. The purpose of Section 4 is to enable preliminary investigations/land survey with a view to determine the suitability of the *Land*.

Section 5

If the *Land* notified under Section 4 is found to be suitable, or if no such survey is required at any time, a notice is issued under Section 5 of the Act. As for section 4 the notification is published in the official Gazette as well as at convenient places at or near the *Land* to be acquired. The notice must state the location of the *Land*, purpose of acquisition, area and, where a plan has been prepared, the location where such a plan is available for inspection.

Under section 5, the owners of *Land* or those affected or likely to be affected, may raise objections in writing to the *Collector*¹ within 30 days of notification under section 5. The *Collector* shall give the objector an opportunity to be heard, and after making further enquiry if any, shall submit the case to the Commissioner together with proceedings held by the *Collector* containing his/her recommendations. The decision of the Commissioner is considered final.

Section 6

Under section 6, a Secretary to the Commissioner (or other authorised official) may declare that the land is required for public purpose after considering any objections, if any, under section 5. The declaration shall be published in the official Gazette stating the location of the *Land*, purpose of acquisition, area (size) and, where a plan has been prepared, the location where such a plan is available for inspection. The area (size) declared under section 6 supersedes the area notified under section 4 or 5, where the area declared under section 6 is lesser.

¹The *Collector* is a principal Civil Court in the jurisdiction of the *Land* or a special judicial officer appointed by the Government of Sindh to perform the functions of the Court

Section 7

Following declaration under section 6, the *Collector* shall be directed by the *Commissioner* to take order for the acquisition of the *Land*.

Section 8

Under section 8 of the Act the *Collector* shall mark out the *Land* to be acquired (if not completed under section 4) and prepare a plan showing the measurements of the area (if not previously prepared).

Section 9

Under section 9, the *Collector* places a notification on or near the *Land* to be acquired stating the intention to acquire the *Land* and that claims to compensation should be made to the *Collector*. The notice shall require those with interests in the *Land* to appear personally or by agent before the *Collector* at a stated time and place to state the amount and particulars of their claims to compensation and any objections to measurements made under section 8. The *Collector* may require such statements in writing.

Under section 9, the *Collector* shall also serve notice to the ID of an enquiry under section 11 of the Act for the determination of claims and objections. The ID shall be required to depute an authorised representative to attend the enquiry.

All notices under section 9 must be made not less than 15 days prior to the date of an enquiry under section 11.

Section 10

Under section 10, interested people are required to deliver the names of any other person possessing an interest in the *Land* (including co-proprietor, sub-proprietor, mortgagee or tenant), the nature of such interest and details of any rents and profits received or due in the preceding three years. The date by which the information may be submitted to the *Collector* must be no earlier than 15 days of notice under section 9.

Section 11

Under section 11, the *Collector* shall hold an enquiry into objections received between the date of notification under section 9 and the date of the enquiry. The date of the enquiry must be no earlier than 15 days following the notification under section 9. Objections may relate to measurements made under section 8, the value of the land, the date of notification under section 4 or the interests of those claiming compensation.

The *Collector* shall, through this enquiry, determine the true area of the land, the compensation due and to whom it is due and make the award.

Section 12

The determination of the *Collector* is considered final when filed in his office. The *Collector* shall immediately give notice of the award to interested people and he may take possession of the *Land* which shall thereupon vest absolutely in the government/ or acquiring department.

Sections 13 and 14

Sections 13 and 15 give the *Collector* power to adjourn enquiries, call witnesses and summon evidence.

Section 15, 23 and 24

Sections 15, 23 and 24 define the methodology for determination of compensation to be awarded. Section 23 requires the following to be considered:

- Market value of the *Land* at date of publication of section 4 plus 15%. Market value shall be determined taking into account transfer of land similarly situated and in similar use. Consideration of potential value of the *Land* if put to a different use shall only be considered if it can be shown that land similarly situated and previously in similar use has, before the date of notification under section 4, been transferred to such a use.
- Damage to standing crops or trees
- Damage caused by severing *Land* to be acquired from the person's other land
- Damage to other property or earnings caused during acquisition
- Reasonable expenses due if the affected person is required to change residence as a result of the acquisition
- Any bona fide diminution of profits of the *Land* between date of declaration under section 6 and date of possession by *Collector*

Under section 24, the following shall not be taken into consideration when determining compensation:

- The degree of urgency of the acquisition
- Disinclination of affected person to part with *Land* acquired
- Any improvements to the *Land* made following notification under section 4
- Any increase to the value of the *Land* , or other land owned by an affected person likely to occur from the use to which the acquire land will be put following acquisition.

Section 17

In emergency cases the *Collector*, when directed by the Commissioner, may make notification under section 9 of any waste or arable land any time following notification under section 4. The *Collector* may take possession following 15 days of notice under section 9 of the Act, from which time the land shall rest with the Government. In such a case the value of

compensation may be made by the *Collector* considering those issues usually exempt from valuation under section 24 of the Act.

Under section 17, sections 5, 6 and 11 (relevant to objections and enquiries) need not be applied in an emergency situation.

In the case where, following an emergency, immediate possession of *Land* is required for the purposes of maintaining traffic over a public road, the above process may be applied without the requirement to wait 15 days following notice under section 9 of the Act. In other words, the *Collector* (with approval from the Commissioner) may take possession of the required *Land* immediately following notification under section 9.

While there is no need for permanent land acquisition under the current designs, should permanent land acquisition be required (due to a subsequent change in the design or scope of works), the land shall be acquired under LAA as detailed in this section without the use of the Emergency Clause in section 17.

4.3.2 World Bank Framework - Involuntary Resettlement Policy (OP 4.12)

The World Bank's experience indicates that involuntary resettlement under development projects, if unmitigated, often gives rise to severe economic, social, and environmental risks: production systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments where their productive skills may be less applicable and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost. This policy includes safeguards to address and mitigate these impoverishment risks.

The overall objectives of the Policy are given below:

- Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.
- Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.
- Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
- The Policy defines the requirement of preparing a resettlement plan or a RPF, in order to address the involuntary resettlement.

For the proposed project, livelihood of some persons may be affected due to their dislocation from their existing location. In view of this, the World Bank Operational Policy (OP) 4.12 will

be triggered. The Bank Policy on Access to Information² also applies. This RPF, therefore, has been developed in accordance with these policies.

This policy covers direct economic and social impacts from Bank-assisted investment projects that may be caused by:

- The involuntary taking of land resulting in
 - Relocation or loss of shelter;
 - Loss of assets or access to assets; or
 - Loss of income sources or means of livelihood, whether or not the PAP must move to another location.
- The involuntary restrictions of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.

According to the World Bank policy, the following measures should be adopted regarding project affected people:

- Informed about options and rights pertaining to resettlement matters
- Consulted on choices offered and provided with technically and economically feasible resettlement alternatives
- Provided prompt and effective compensation at full replacement cost for losses of assets attributable directly to the project
- Provided assistance like moving allowances during relocation; and offered support after displacement, for a transition period, based on a reasonable estimate of the time likely to be needed to restore their livelihood and standards of living
- Provided with development assistance
- Provided counselling in respect of credit facilities, trainings, or job opportunities; and
- Provided with measures to assist the displaced persons in their efforts to improve their livelihoods, or at least to restore, in real terms.

4.3.2.1 Criteria for Eligibility

Under the WB OP, the PAPs may be classified in one of the following three groups.

1. Who have formal legal right of land (including customary and traditional rights) recognized under the laws of the country
2. Who do not have formal legal rights of land at the time of census begins but have a claim to such land or assets provided that such claims are recognized under the laws of the country or become recognized through a process identified in the resettlement policy.
3. Who have no recognized legal right or claim of the land they are occupying

² Effective on July 1, 2010. See <http://documents.worldbank.org/curated/en/2010/07/12368161/world-bank-policy-access-information>

Persons covered under criteria 1. and 2. above are provided compensation for the land they lose. All PAPs meeting any of the above criteria are provided compensation for any lost assets as well as additional resettlement assistance as required by the WB OP 4.12.

4.3.3 Comparison of Pakistan and World Bank Policies

Pakistan’s environmental and social assessment procedures are in general based on and in line with the environmental guidelines of the World Bank. However there are some contradictions between the Pakistan legislation and the World Bank safeguards particularly regarding land acquisition and the resettlement of PAPs.

The WB OP explicitly makes adequate provision for the PAPs who are either displaced or suffer losses, as a result of the development project to be catered for. Livelihoods of persons to be affected must be protected, but in cases where it is inevitable, minimal displacements should occur. In such cases where displacement is unavoidable, compensation should be paid to the PAPs to help them to restore their social, economic and environmental livelihoods.

The LAA, 1894 makes provision for compensation to be paid only to PAPs having suffered any loss who can produce a form of title that is legal in the form of occupancy / ownership or a legally binding tenancy agreement to the land in question. However, the WB policy requires all forms of losses, regardless of rights to land, be catered for to some degree.

The WB OP requires that the affected persons be assisted during their transition period in the resettlement site and efforts made to restore their livelihoods, whereas LAA, 1894 does not include such a requirement. Table given below highlights the main comparisons between the LAA, 1894 and the WB OP on Involuntary Resettlement.

Table 4.1: Comparison of LAA and World Bank Policy

Pakistan’s Land Acquisition Act, 1894	WB Involuntary Resettlement Policy
Compensation only for titled landowners or holders of customary rights.	Lack of title should not be a bar to compensation and/or rehabilitation.
Crop losses compensation provided only to registered landowners and share-crop/lease tenants.	Crop losses compensation provided to landowners and share-crop/lease tenants whether registered or not
Land valuation based on the median registered land transfer rate over the previous 3 years.	Land valuation based on current market rate/replacement value
Land Acquisition Collector (LAC) is the only pre-litigation final authority to decide disputes and address complaints regarding quantification and assessment of compensation for the affected assets	Disputes, complaints and grievances are resolved informally through community participation in the Grievance Redress Committees, Local governments, and NGO and/or local-level community based organizations (CBOs)
The decisions regarding land acquisition and compensations to be paid are published in the official Gazette and notified in convenient places so that the people affected are aware	Information related to quantification and costing of land, structures and other assets, entitlements, and amounts of compensation and financial assistance are to be disclosed to the affected persons prior to taking possession of their assets.
No provision for income/livelihood rehabilitation measure, allowances for severely affected APs and vulnerable groups, or resettlement expenses	The WB policy requires rehabilitation for income/livelihood, for severe losses, and for expenses incurred by the PAPs

4.3.4 Remedial Measures to Bridge the Gap

In principle, Pakistan's law and WB policy adhere not only to the objective of compensation for affected families, but also to the objective of rehabilitation. However, Pakistan's law is unclear on how rehabilitation is to be achieved and in practice the provision of rehabilitation is left to ad hoc arrangements taken by provincial governments and the specific project proponents. To clarify these issues and reconcile eventual gaps between Pakistan's Law and WB Policy, this RFP for the rehabilitation of the Guddu Barrage project has been prepared which ensures the following:

- Compensation for any privately owned land lost as a result of the works
- Compensation for lost assets regardless of rights to land on which they are sited
- Valuation of assets and land at the prevailing market rate
- Resettlement assistance shall be offered to all PAPs, regardless of legal entitlement to the land they occupy
- Provision of additional allowances for vulnerable PAPs
- Provision of additional allowance for those who may suffer commercial losses
- Establishment of a Grievance Redress Committee as part of any RAP

4.4 Eligibility and Entitlement Criteria

A criteria for the eligibility of PAPs and entitlements due has been prepared as part of this RFP.

4.4.1 Category of Displaced Person

The likely displaced persons can be categorized into following groups, namely:

Affected Individual. An affected individual is one who suffers loss of assets or investments, land and property and/or access to natural and/or economical resources as a result of the sub- project and to whom compensation is due. For example, an affected individual is a person who farms, or who has built a structure on land that is now required by a sub project for purposes other than farming or residence by the initial individuals. Affected individuals could be title holders (those who have formal legal right of land), squatters (those occupying land for residential or commercial purposes), or encroachers (those farming, logging, grazing, or making some other extractive use of the land)

- **Affected Household.** A household is affected if one or more of its members is affected by project activities, either by loss of property, land, loss of access or otherwise affected in any way by project activities. This provides for: (a) any members in the households, men, women, children, dependent relatives and friends, tenants; (b) relatives who depend on one another for their daily existence; (c) other vulnerable people who cannot participate for physical or cultural reasons in production, consumption, or co-residence.
- **Affected Local Community.** A community is affected if project activities affect their socio-economic and/or social-cultural relationships or cohesion.
- **Vulnerable Households.** Vulnerable households may have different land needs, or reduced ability to absorb changes, or needs unrelated to the amount of land available to

them and may include: (a) unmarried women living alone, (b) elderly, (c) infirm or ill, (d) orphans, and (e) those living below poverty line. The income levels have been considered in relation to the poverty line of Pakistan.

4.4.2 Eligibility Criteria

Each category of vulnerable person or household must be compensated according to the nature of the economic loss suffered by loss of access to or use of the land acquired by the sub-project.

The Bank's OP 4.12 suggests the following three criteria for eligibility;

1. Those who have formal legal right of land (including customary and traditional rights) recognized under the laws of the country
2. Those who do not have formal legal rights of land at the time of census begins but have a claim to such land or assets provided that such claims are recognized under the laws of the country or become recognized through a process identified in the resettlement policy.
3. Those who have no recognized legal right or claim of the land they are occupying

Those covered under 1) and 2) above are to be provided compensation for the land they lose, and other assistance in accordance with the policy. Persons covered under 3) above are to be provided with resettlement assistance in lieu of compensation for the land they occupy, and other assistance, as necessary, to achieve the objectives set out in this framework, if they occupy the project area prior to a cut-off date established by an RAP and acceptable to the Bank. Persons who encroach on the area after the cut-off date are not entitled to compensation or any other form of resettlement assistance. All persons included in 1), 2) or 3) above are to be provided with compensation for loss of assets other than land.

It is clear that all affected persons irrespective of their status or whether they have formal titles, legal rights or not, are eligible for some kind of assistance if they occupied the land before the entitlement cut-off date. The entitlement cut-off date refers to the time when the assessment of persons and their property in the project area is carried out, i.e. the time when the project area has been identified and when the socio-economic study is taking place. Thereafter, no new cases of affected people will be considered. Persons who encroach upon the area after the socio-economic survey (census and valuation) are not eligible for compensation or any form of resettlement assistance.

4.4.3 Method to Determine the Cut-off Dates

The entitlement cut-off date refers to the time when the assessment of persons and their property in the sub-project area is carried out, i.e. the time when the Col has been identified and when the site-specific socio-economic study is taking place. . The establishment of a cut-off date is required to prevent opportunistic invasions/rush migration into the chosen land areas thereby posing a major risk to the sub-project. Therefore, establishment of a cut-off date is of critical importance and must be defined in the RAP as well as publicised at resettlement locations and discussed during consultations with PAPs. Where there are clearly no identified owners or users of land or assets, the relevant revenue Officer of District

will be consulted. The cut-off date for land and non-land related compensation will be the date of the start of the census survey.

4.4.4 Entitlements

Entitlement provisions for PAPs are given in Table 4.2. In accordance with WB OP 4.12, the entitlement matrix is based on the following principles:

- Entitlement for those with rights (formal or recognisable) to the land they occupy:
 - Cash compensation for lost land, or provision of alternative land with formal rights (agricultural land or housing sites)
 - Cash compensation for lost assets, or provision of alternative assets (including housing)
 - Moving allowance
 - Transition allowance
 - Compensation for loss of earning in the case of loss of business
- Entitlement for those without rights to the land they occupy:
 - Cash compensation for lost assets
 - Provision of alternative site to reconstruct lost structural assets, or cash compensation adequate to gain formal rights to alternative land adequate for reconstruction of lost structural assets
 - Moving allowance
 - Compensation for loss of earning in the case of loss of business

Where alternative entitlements are offered, the final decision on the suitable entitlement shall be made during consultations with the PAPs to whom the entitlements are due. All compensation will be at replacement value without deducting depreciation and salvage value. Cash compensation will be indexed for inflation.

Additional cash compensation is also offered to PAPs who are considered vulnerable.

Table 4.2: Entitlement Matrix

Type of Loses	Application	Definition of Entitled Person	Entitlement Policy
1 Structures (residential, religious or institutional) and hand pumps	Partial loss of structure and the remaining structure still viable for continued use	Owner of the affected structure with or without valid title or customary right to land at which it is sited	Cash compensation for affected part of the structure at replacement value; and Allowance to cover repair cost of the remaining structure.
		Tenant / leaseholder in the partially affected structure	Cash compensation to cover proportional reimbursement for un-expired lease period
	Entire loss of structures or where only partial impact, the remaining structure is rendered unviable for continued use	Legal owner of the affected structure with valid title or customary right to land at which it is sited	Cash compensation for entire structure at replacement value, Or: Structure of at least equivalent standard acceptable to PAP and right to the land at which it is sited Transition allowance equivalent to two-month rent (current rate) Transport allowance for moving to new location (current rate)
		Tenant / leaseholder in the partially affected structure	Transition allowance equivalent to two-month rent (current rate) Transport allowance for moving to new location (current rate)
		Owner of affected structure without title or right to land at which it is sited	Cash compensation for entire structure at replacement value Transport allowance for moving to new location (current rate)
	2 Structures (commercial)	Partial loss of shop/cabin and the remaining structure still viable for continued use	Owner of the affected structure with or without valid title or customary right to land at which it is sited
Tenant / leaseholder in the partially affected structure			Cash compensation to cover proportional reimbursement for un- expired lease period Compensation for loss of income as per #8
Entire loss of shop/cabin or where only		Owner of the affected structure with or	Cash compensation for entire structure at

		partial impact, the remaining structure is rendered unviable for continued use	without valid title or customary right to land at which it is sited	replacement value, Or: Structure of at least equivalent standard acceptable to PAP Shifting allowance to cover relocation of business (current rate) Compensation for loss of income as per #8
			Tenant / leaseholder in the affected structure	Transition allowance equivalent to two months' rent (current rate). Compensation for loss of income as per #8
3	Land (residential, commercial, industrial, religious or institutional - excluding assets)	Partial loss of land with remaining land sufficient for continued use/habitation	PAPs with valid title or customary or usufruct rights Tenant of lost land	Cash compensation for affected portion of land at replacement value Reimbursement for un-expired lease period
			PAPs without title (Squatter/ Informal Settlers)	N/A
		Loss of land without sufficient remaining land for continued use/habitation	PAPs with valid title or customary or usufruct rights Tenant of lost land	Cash compensation for affected portion of land at replacement value as if land under private ownership Or: Provision of equivalent area of land acceptable to the PAP Transport allowance for moving to new location (current rate) Reimbursement for un-expired lease period
			PAPs without title (Squatter/ Informal Settlers)	N/A
4	Land (agricultural - excluding standing crops)	Partial and permanent loss of land with remaining holding economically viable (greater than 0.5 acres)	PAPs with valid title or customary or usufruct rights Tenant of lost land	Cash compensation for impacted land at replacement value as if land under private ownership Reimbursement for un-expired lease period
			PAPs without title (Squatter/ Informal Settlers)	N/A

		Permanent loss of entire land holding, or partial loss where remaining holding is less than 0.5 acres	PAPs with valid title or customary or usufruct rights	Cash compensation for affected portion of land at replacement value as if land under private ownership or: Provision of equivalent area of land with equivalent productive potential acceptable to the PAP
			Tenant of lost land	Reimbursement for un-expired lease period
			Farmer of lost land (this may be the owner, tenant or encroacher)	Livelihood allowance equal to three months income from lost land (current rate)
			PAPs without title (Squatter/ Informal Settlers)	N/A
5	Loss of access to common resources	Loss of access to common resource and amenities	Households	PAPs will be entitled to: <ul style="list-style-type: none"> • Replacement of common property resources/amenities • Access to equivalent amenities/services.
6	Loss of crops	Loss of planted crops that could not be harvested	Owner of affected crop (regardless of land ownership rights)	Cash compensation equivalent to market value of lost/damaged crops (value based on previous yield and value of harvested crop)
7	Loss of trees	Trees felled during implementation of works where land is privately owned	Owner of land on which tree is planted	Cash compensation equivalent to market value of on the basis of type, age and productive value
		Trees felled during implementation of works where land is government owned	Project Proponent	Replantation of cut trees included as part of civil works contract
8	Loss of trade/ occupation or business incomes	Loss of trade/occupation or business due to dislocation or loss of asset (except agricultural land or crops – see #4 or #5 respectively)	Owner or employee of affected business	Livelihood allowance equivalent to: <ul style="list-style-type: none"> • three months incomes/ wages in case of permanent closure • income/wages over closure period in case of temporary closure
9	Temporary Losses	Severely affected structures	PAPs made to shift temporarily from their present location	Entitlement will be in terms of rent allowance to cover the cost of alternate accommodation for the period of temporary displacement.
		Temporary acquisition of land or asset	PAPs with valid title or customary or usufruct rights to land or asset	No compensation if returned to the original user in acceptable condition
				Monthly rent as per market value
				Compensation for damage or repair to original condition

			Tenant	Proportional reimbursement of lease for period of acquisition
10	Loss of public infrastructure	Infrastructure	Relevant agencies	Compensation at replacement cost
11	Any loss above	Vulnerable allowance	PAP classed as vulnerable regardless of legal entitlement to land	Payment of additional vulnerable allowance

4.4.5 Calculation for Compensation Payments

Individual and household compensation will be made in kind and/or in cash (refer to Table 4.3). Although the type of compensation may be an individual's choice, compensation in kind will be preferred, if available, when the loss amounts to more than 20 percent of the total loss of assets. Compensations for land and other assets (buildings and structures) are determined as follows:

Table 4.3: Forms of Compensation

Compensation	Notes
Cash Payments	Compensation will be calculated and paid in the national currency. Rates will be based on the market value of land and/or assets when known, or estimated when not known, plus compensation for the value of standing crops.
In-Kind	When loss amounts to more than 20 percent of the total assets lost, in-kind compensation will be preferred, if available. Compensation may include items such as land, houses, and other buildings, building materials, seedlings, agricultural inputs and financial credits for equipment.
Assistance	Assistance may include moving allowance, transportation and labour.

4.4.5.1 Land Valuation and Compensation

Under the present designs, no permanent land acquisition is required. Should there be any design changes during construction which necessitate permanent land acquisition and RAP preparation, the following procedure will be adopted, as per the LAA:

- The Executive Engineer of Guddu Barrage will write to Revenue Department, GoSindh for permanent land acquisition in the interest of welfare of the country.
- Revenue Mukhtiarkar will give a notice to land owner to produce the documents that prove land ownership (Form-7)
- The land owner will provide the copy of the Form-7 to Mukhtiarkar to prove ownership
- Revenue Department will notify the State Land Department that the particular area is required for state welfare works permanently and hence section 4 and 6 of the LAA shall be applied to that area under state land laws.
- The state land department will issue the notification of acquisition of the area.
- Following application of section 4 and 6 of the LAA, the Revenue Deputy Commission will decide the price of land as per the provisions of the LAA and pay the cheque to land owner in lieu of the required land.

Private land (if acquired for the project) will be compensated at the replacement cost Land will be valued following a valuation process consistent with LAA 1894 and the provisions of RPF. For land valuation, land valuation committees will be formed comprising members from ID, local administration, PAPs and Project NGO (if any) with a mandate to fix the rates based on market survey and negotiation with the communities. Compensation will be based on the market rates on the cut-off date along with 15 percent over and above the cost of the land and other requirements of Sections 23 and 24 of LAA and RPF.

4.4.5.2 Buildings and Structures

Building, houses and structures will be compensated at the replacement cost. Buildings/houses and structure valuation survey will be conducted by a joint team comprising members from ID and Consultants to assess the value of the houses and other infrastructural facilities. In this regard meetings will also be held with locals as well as local administration. The schedule rates for the compensation of different types of losses, such as residential and, commercial structures, fruit trees, community owned and religious structures and other such assets will be used as a base which will be escalated with the help of market survey. These unit rates will be discussed and agreed upon with local communities and the affected persons. The following procedures/methods will be used for the proper assessment of unit compensation values of different items/assets located as standard for valuation of assets.

- Houses are valued at replacement value/cost based on cost of materials, type of construction, labour, transport and other construction costs.
- Hand pumps and other utilities are valued at current installation cost.
- The relocation cost is the amount needed to displace and relocate temporary assets at prevailing market prices without adding costs for transaction.

4.4.6 Allowances

In addition, transportation, livelihood, shifting, and vulnerable allowances would be provided to PAPs as applicable. The amount will be set at current rate.

- **Transportation.** Transport charges will be inquired from the local transporters and provided to PAPs at current rate. The rent of one truck load was PKR five thousand within a radius of 10 km. Transportation of one family to a new location requires two trucks to shift their belongings.
- **Livelihood.** A livelihood allowance equal to the minimum wage in Pakistan for three months will be provided to support the affected families losing their sources of livelihood in order to restore their business at new location without any economic pressure.
- **Shifting for commercial structures.** The allowance will be determined at current rate and paid to affected owners of commercial structures.
- **Transition.** At current market rate, a transition allowance equivalent to two-month rent will be provided to owners of affected commercial structures.
- **Vulnerable allowances.** Those to be resettlement and with an income below the Official Poverty Line are classed as vulnerable within this RPF. Their incomes are fragile and any change in their socio-economic equilibrium also comprehends negative effects. For such households, in addition to the compensation for their affected assets, an additional **vulnerability allowance** equal to one-month minimum wage will be provided.

4.5 Preparing Resettlement Action Plan

Following completion of the final designs, a re-assessment of resettlement requirements shall be required. Should this assessment identify any involuntary resettlement, OP 4.12 calls for the preparation of individual RAPs that must be consistent with this RPF.

To address the impacts under this policy, the RAP must include measures to ensure that the displaced persons are;

- Informed about their options and rights pertaining to resettlement
- Consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives
- Provided prompt and effective compensation at full replacement cost for losses of assets and access attributable to the sub project.

4.5.1 Process for Screening and Review of RAP

The first stage in the process of preparing the individual RAP is the screening process to identify the land/areas that are being impacted. The RAP will contain the analysis of alternative sites undertaken during the social assessment.

This section sets out a “harmonized” step by step process that the Guddu Barrage Rehabilitation project will take to determine whether the project will result in physical or economic displacements following any changes to the detailed design or scope of works, and therefore whether a RAP is required and if so, how to prepare and implement one.

4.5.2 Screening for Involuntary Resettlement

The screening process presented below will ensure that subprojects presented to Guddu Barrage Rehabilitation project for funding comply with the requirements of OP 4.12 The goal of screening is to identify and consider resettlement issues as early as possible.

Screening is used to identify the types and nature of potential impacts related to the activities proposed under the Project and to provide adequate measures to address the impacts. Screening for resettlement issues shall be part of the environmental and social screening.

Where resettlement is identified, the chosen locations will be the subject of a study and the preparation of a document as follows:

- A socio-economic study (this study will include determination of impacts);
- Preparation of individual RAP.

4.5.3 Baseline, Socio-economic Data, and Resettlement Surveys

An important aspect of preparing a RAP is to establish appropriate and accurate baseline socio-economic data and census to identify the persons who will be affected by the project, to determine who will be eligible for compensation and assistance, and to discourage inflow of people who are ineligible for these benefits.

To identify the affected population and the possible adverse impacts, primary information will be collected through detailed resettlement assessment survey. This data will include:

- Inventory of houses, population and other assets will be developed by an inventory Performa and will be filled through resettlement assessment survey by the team;
- Focus Census to enumerate the affected people and to register them according to location including the land holdings;
- Household Income and Living Standard Survey for assessment of lost and affected household, enterprises and community's living standard level;
- Village Level Survey for all affected people as necessary covering the factual position regarding the social amenities, electricity, telephone, water supply, education facilities etc and other community resources;
- Buildings/Houses Valuation Survey to assess the value of the houses and other infrastructural facilities. In this regard meetings will be held with locals as well as local administration;
- Women Status Survey to establish the baseline data for ascertaining the women status; and
- Consultation with affected population for effective mitigation measures and planning.

4.5.4 Resettlement Entitlement and Policy Matrix

A matrix will be developed and establish RAP implementation, institutional and compensation framework. For the restoration of the living standards of the PAP, provision will be made so that people should be provided proper compensation and assistance to restore their livelihoods.

4.5.5 Implementation Arrangements

For effective implementation, RAP will describe the implementation arrangements. Identification of critical path actions, preparation of RAP implementation arrangements, compensation procedures and resettlement process will be described for an efficient and smooth implementation of RAP.

4.5.6 Preparation of Monitoring, Evaluation and Reporting Plan

The mitigation measures are effective only if properly monitored. For this purpose, proper Monitoring, Evaluation and Reporting plan will be prepared.

4.5.7 Grievance and Redress Mechanism (GRM)

Under the GRM, RAP will describe the options available to affected persons for grievance redressal they may have about the process, the identification of eligible people for compensation, the valuation and compensation and any other complaints they may have against the entire process. The GRM will be based on the RPF.

4.5.8 Cost Estimates

Cost estimates will be made for compensation and estimated resettlement works. Additionally tentative cost of proposed institutional frame work, mitigation measures, monitoring, evaluation and reporting will also be estimated.

4.5.9 Public Consultation and Participation

Projects involving the community owe their success to community participation and involvement from the planning stage to implementation. Hence public consultations shall be mandatory for all projects requiring land acquisition, compensation and resettlement for the project.

During screening there must be adequate consultation and involvement of the local communities and the affected persons. Specifically, the affected persons must be informed about the intentions to use the earmarked sites for the project activities, facilities and structures.

The affected persons must be made aware of:

- Their options and rights pertaining to resettlement and compensation;
- Specific technically and economically feasible options and alternatives for resettlement sites;
- Process of, and proposed dates for, resettlement and compensation;
- Effective compensation rates at full replacement cost for loss of assets and services; and
- Proposed measures to maintain or improve their living standards.

During public consultation, there is the need to resolve conflicts. Grievance redress is very important to the success of implementation of RAP. Grievance redress is covered in more detail in Chapter 8 of this RPF.

Methodology. Public consultation and participation are essential because they provide an opportunity for informing the stakeholders about the proposed project. Public consultation and participation create a sense of ownership for the project, providing an opportunity for people to present their views and values and allowing consideration and discussion of sensitive social mitigation measures.

Public consultation and participation will afford the PAPs an opportunity to contribute to both the design and implementation of the program activities. In so doing, the likelihood for conflicts between and among the affected and with the management committees will be reduced.

In recognition of this, particular attention shall be paid to public consultation with PAPs, households, homesteads (including host communities) as well as NGOs when resettlement and compensation concerns are involved.

As a matter of strategy, public consultation shall be an on-going activity taking place throughout the entire project cycle. Hence, public consultation shall take place during the:

1. Project inception and planning
2. Screening process feasibility study,
3. Preparation of project designs
4. Resettlement and compensation planning
5. Drafting and reading/signing of the compensation contracts.
6. Payment of compensations
7. Resettlement activities and
8. Implementation of after-project community support activities

Items 1 to 3 have been completed by the consultants, while items 4 to 8 should be implemented following any changes to the project which result in resettlement.

Public consultation and participation shall take place through local meetings, request for written proposals/comments, completion of questionnaires/application forms, public readings and explanations of the project interventions and requirements.

Public documents shall be made available in appropriate languages at the local levels. RAPs should be translated to local languages and made freely available at a public place accessible to the PAPs to which it is relevant. Public consultation measures shall take into account the low literacy levels prevalent in the rural communities, by allowing enough time for discussions, consultations, questions, and feedback.

4.5.10 Resettlement Planning

The RAP will be prepared by the ID, in consultation with the design consultant and the contractor. The Plan will include the following components:

- Description of the project
- Potential Impacts
- Project Objectives
- Relevant findings of the socio-economic study, including census survey of PAPs and their assets/livelihood lost
- Legal framework
- Institutional framework
- Eligibility
- Valuation of and compensation of losses
- Resettlement Entitlement and Policy Matrix

- Site selection, site preparation, and relocation
- Housing, infrastructure and social service
- Environmental protection and management
- Summary of Consultations
- Integration with host populations
- Grievance procedures
- Implementation Arrangements
- Monitoring and Evaluation (M&E)
- Implementation schedule
- Costs and budget

4.5.11 RAP Submission and Approval

The RAP(s), once prepared, shall be submitted to the ID, who shall in turn submit the document to the World Bank. Both the ID and World Bank are required to review the RAP, and if applicable, approve the document to prevent delay in implementation. Once approved, RAP should be disclosed on ID and/or the project website in English and Urdu.

5. SOCIAL ACTION PLAN

5.1 Introduction

5.1.1 General

Following the social assessment in the project area, the socio-economic baseline of the project area (riverine population) was found to be typified by a population living largely below the poverty line, with poor access to health care, education, social amenities and utilities. The main income in the project area is through arable agriculture, although livestock rearing is common within the villages situated in the project area. The skills base within the project area is generally low and limited mainly to skills required for agriculture or general labour within Guddu thermal power station. Women within the project area are heavily involved in agricultural and livestock rearing tasks, as well as domestic duties, and their skills base is generally lower than their male counterparts (detailed in Appendix B).

The award of major construction contracts under the Guddu Barrage Rehabilitation Project shall have a major positive impact on the employment of the population of the project area. It is estimated that the employment of over 400 unskilled workers shall be required over the construction phase of the project area, many of whom can be recruited from the project area, and its surrounding districts. Indeed, the employment of local labourers is to be included as a provision within the contracts under the project and communication of employment opportunities are included in the communication plan for the project (see communication strategy in Chapter 6).

The Environmental and Social Impact Assessment (ESIA) for Guddu Barrage Rehabilitation Project has identified that this generation of employment opportunities, and the economic development which shall be induced in the project area (due to the influx of migrant workers and increased demand for local produce, goods and services) shall result in a major benefit impact to the project area. However, this shall be a short term impact which shall expire following the completion of the construction phase of the project.

Likewise, the socio-economic baseline of the command area of Guddu Barrage (the areas irrigated by Ghotki, Beghari Sindh and Desert Pat Feeder Canals which offtake from the River Indus at Guddu Barrage) is dominated by agricultural activity and livestock rearing. Unlike the majority of the project area, agriculture and livestock rearing in the command areas are entirely dependent upon continued supplies of irrigation water (detailed in Appendix B).

Guddu barrage controls the supply of irrigation water to the command areas of the Ghotki, Beghari Sindh and Desert Pat Feeder Canals. The water supplied to Desert Pat Feeder canal is also used for drinking water supply by those in the Nasirabad and Jaffarabad districts of Balochistan, in all other canals, the water is used for irrigation purposes only. The canals are routinely closed during the low-agricultural seasons for repair and maintenance, lasting around one month. During this time, there would be no irrigation water. This is an established practice

since the irrigation system was established. As designed, the replacement of the gates under the project to the head regulators of the Ghotki, Beghari Sindh and Desert Pat Feeder Canals will be carried out during the routine canal closure time, to ensure there is no disruption to regular water supply. However, there is always a risk of unanticipated delay of gates replacement for one reason or the other, and such delays could risk a disruption of regular irrigation supplies to the command areas. The interventions under the SAP are proactive measures to offset such impacts in situations of such unanticipated and unavoidable delays. If everything moves according to schedule and there are no such delays, these project measures would be additional efforts from the project to support local communities.

5.1.2 Objectives

The objectives of the SAP are to (a) enhance the long term positive impacts to the socio-economics of the project areas beyond the construction stage and (b) ensure that an appropriate procedure and mitigation measures are in place during the construction phase of the project to ensure that any disruption to the drinking water and agricultural irrigation water are avoided, and if unavoidable the mitigations are mitigated and needs are met throughout the project.

5.1.3 Priority Needs in Project Area

5.1.3.1 Priority Needs of Male Community in the Project Area

During consultation meeting with the male groups they prioritized their needs. The ranking of prioritized needs is derived from the individual rankings of priorities generated from the discussion with the separate groups in each village. During the male consultation meetings in 64 villages, 15 different types of problems were identified and the priorities for each village are detailed in the following table.

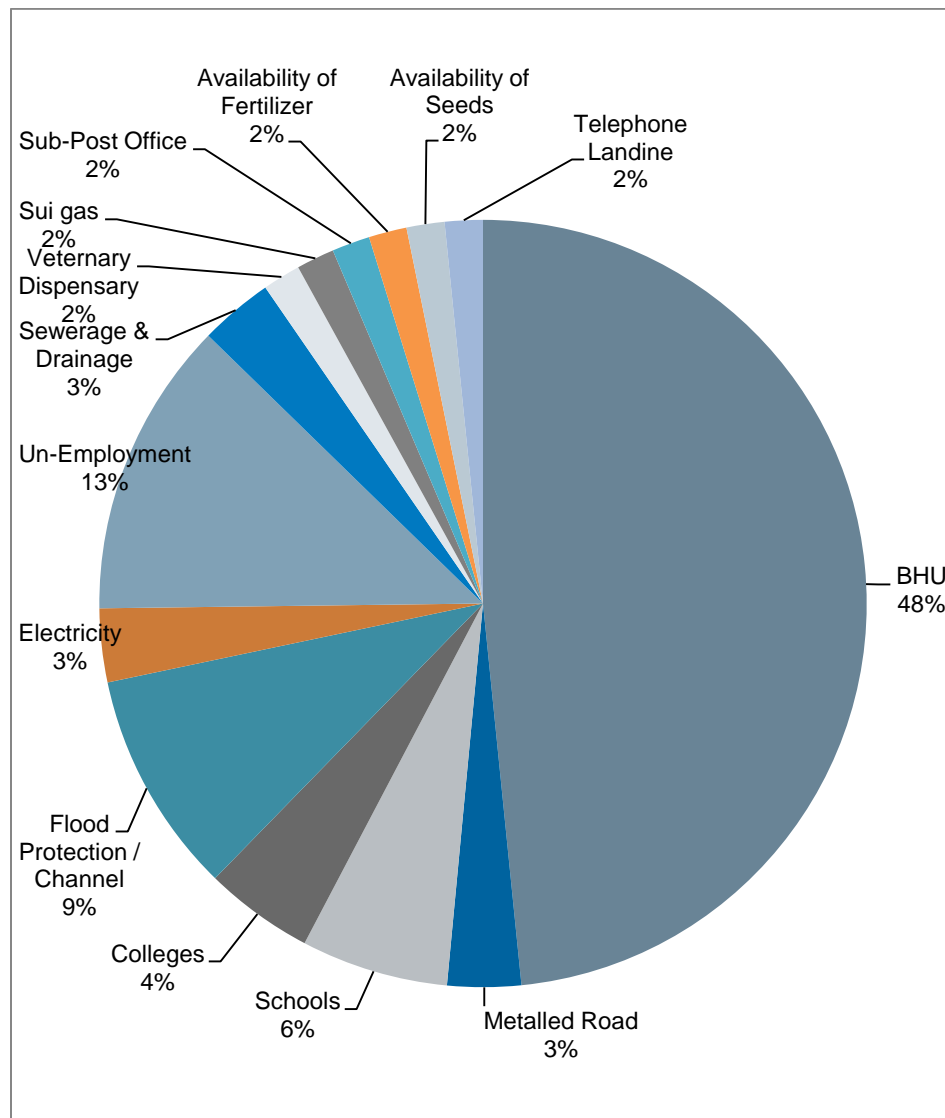
Table 5.1: Prioritized Needs as Identified by Male Groups

Priorities	BHU	Metalled Road	Schools	Colleges	Flood Protection	Electricity	Un-Employment	Sewerage & Drainage	Veterinary Dispensary	Sui Gas	Sub-Post Office	Availability of Fertilizer	Availability of Seeds	Telephone/ Landline	No response	Total
1st Priority	31	2	4	3	6	2	8	2	1	1	1	1	1	1	0	64
Percentage	48	3	6	4	9	3	12	3	2	2	2	2	2	2	0	100
2nd Priority	10	7	4	5	8	3	16	1	2	1	0	2	1	1	3	64
3rd Priority	6	4	3	4	11	5	7	3	4	2	9	2	0	0	4	64
4th Priority	2	6	1	9	2	7	0	3	0	5	0	4	1	1	23	64

The Basic Health Unit (BHU) was ranked as the first priority demanded in 31 villages, 8 villages ranked employment as a priority while 6 villages demanded flood protection bunds to protect

their villages and Kharif crops. Provision of schools was the fourth priority of the men in the project area. The first priority needs of male groups are shown graphically below.

Figure 5.1: First Priority Needs as Identified by Male Groups



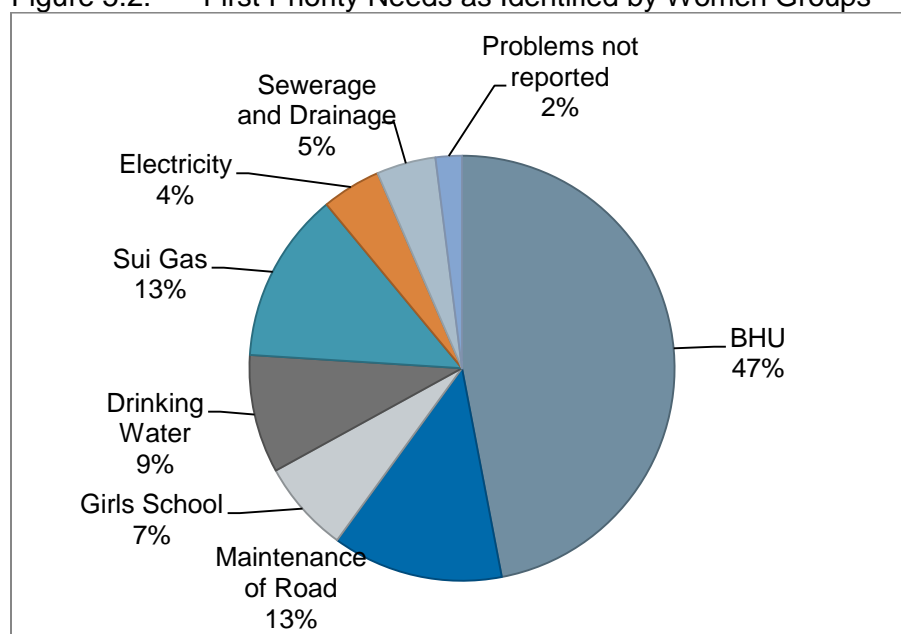
5.1.3.2 Priority Needs of Female Community in the Project Area

During consultation meeting with the women groups they prioritized their needs. The ranking of prioritized needs are derived from the individual rankings of priorities generated from the discussions with the separate groups in each village, the priorities for each village are detailed in the following table.

Table 5.2: First priority needs as identified by women group

Priorities	BHU	Maintenance of Road	Girls School	Drinking Water	Sui Gas	Electricity	Sewerage and Drainage	Problems not Reported	Total
1st Priority	21	8	1	4	6	2	2	1	45
Percentage	47	13	7	9	13	4	5	2	100
2nd Priority	14	5	6	3	6	2	1	8	45
3rd Priority	9	3	4	5	3	1	2	18	45
4th Priority	4	4	0	7	2	1	0	27	45

Figure 5.2: First Priority Needs as Identified by Women Groups



5.2 Social Action Plan for the Project Area

The needs detailed in the following sections have been identified within the project area and are included within the SAP for the project area. An NGO experienced in provision of the following shall be engaged by the Project Management Office (PMO) to implement the SAP within the project area.

5.2.1 Health Facilities

The provision of health facilities has been identified as a priority of the population of the project area. This SAP has considered the provision of BHUs and dispensaries. However, in

consideration of the large population of the area, it is proposed that a BHU is provided at Guddu to serve the project area.

5.2.2 Education Facilities

A lack of access to adequate education was also identified in the project area. 11 primary small government schools were identified in the project area, however, in many cases there is a lack of staff and/or furniture at these schools. Given the difficulties inherent with managing investment to a number of multiple schools within the project area, it is proposed to provide sponsorship to private schools which currently exist at Guddu town in order to allow the attendance of children in the project area free of charge. The equal attendance of boys and girls at these schools should be ensured.

5.2.3 Training Facilities

The primary source of income in the project area is from agriculture. As a result, the economy of the project area is extremely sensitive to agricultural productivity, which is in turn extremely sensitive to natural, climatic conditions. The provision of vocational and basic training facilities in the project area are proposed to introduce further diversification of income sources in the project area in order to increase the resilience of the economy in the project area. Such facilities should focus on training of women who are currently, in general, engaged exclusively in agricultural (whereas men in the project area are commonly engaged as general labourers).

5.2.4 Veterinary Clinic

The socio-economic baseline identified that livestock rearing is a significant, albeit secondary, source of income within the project area. On average, the majority of households within the project area own three or four animals – most commonly, cows, buffalo and goats are owned. Poor health of livestock was reported as an issue during consultations in the project area, and as such the establishment of a veterinary clinic is proposed in the project area.

5.2.5 Developing detailed SAP

The above assessment only identified the sectoral level interventions, which is not sufficient to operationalize the SAP for sharing the project benefits with the communities and social uplift of the area. For SAP operationalization, these sectoral level interventions should be transformed into specific schemes/projects with details of their location, number, and other parameters necessary for their design and implementation. As the overall responsibility for operationalizing the SAP lies with the PMO, PMO will identify these specific project/schemes with the help of an NGO. PMO will develop ToR and select an NGO experienced in such assessment with good track record. NGO will undertake the need assessment, based on detailed consultations with the project and command area populations, including women, small and marginal land holders, landless, and other vulnerable groups. They will recommend the specific SAP schemes/projects, including detailed implementation and monitoring plans and budget. The detailed SAP should also include operation and maintenance plans, which would require

consultations and engagements with local or state government departments. PMO will ensure collaboration with the government departments and finalize the recommendations given by NGO. ToR and the final SAP should be cleared by the Bank.

5.3 Potential Impacts and Mitigation in the Command Area

This section of SAP aims to mitigate the impact of any disruption outside the routine canal closure time to irrigation supplies in the Ghotki, Beghari Sindh or Desert Pat Feeder Canals caused by replacement of the gates of the head regulators to these canals.

Ghotki and Desert Pat Feeder Canals are closed for a period of up to four weeks for maintenance each year in the month of April. The exact closure dates are set and communicated by the ID on an annual basis. The contractor shall be required to complete the replacement of gates on the head regulator structures during these annual closure periods. In assessing the impact to the water supply in the command area, the risk of gate replacement works over running beyond the closure period is recognised. **Beghari Sindh is a perennial canal being closed annually from October to May** – as such the contractor shall have ample time to complete the replacement of the gates without extending this closure period.

In an extreme case where the gates on the regulator are inoperable outside of the closure period (for example: due to some unexpected issues during gate replacement), the supplies of water may be insufficient to satisfy the requirements of crops growing in the command area until such a time as the new gates are commissioned. This may result in reduced yields for kharif crops for a single growing season in the command area, and thus reduce the income of these farmers which shall have a negative impact on the socio-economics of the impacted area. **As the growing season does not begin until June each year, the impact due to arable agriculture shall only be realised if the closure extends beyond May.**

However, if water supplies in Desert Pat Feeder are reduced beyond the scheduled closure period of this canal, a number of the ponds which have been filled for drinking water supply may be emptied, and residents in the area shall be forced to transport water from neighbouring communities, placing additional stress on these communities, especially women and children who shall most likely be responsible for fetching this water. **Therefore, the impact to domestic and livestock water supplies shall be realised in the event of an extension of the closure period beyond the scheduled four weeks in Desert Pat Feeder.**

From inspection of the works programme, the contract for barrage works shall be awarded in the 3rd quarter of 2015. The contractor shall be construction his own facilities and fabricating bulkhead gates from the 4th quarter of 2015 until 3rd quarter of 2016. The contractor shall not be able to commence works to replace gates on the head regulators or barrage until fabrication of bulkhead gates is complete, therefore, gate replacement shall commence from the 3rd quarter of 2016 and is expected to be complete by the end of the 4th quarter of 2019. As the contractor shall be only be permitted to replace gates in the scheduled closure period, **the replacement of the head regulator gates shall be completed in the 2nd quarter of 2017,**

2018 and 2019 (years 3, 4 and 5). It is during these times that the risk to irrigation supplies in the command area shall exist.

The following actions are proposed in this SAP to reduce the risk of, and mitigate the impact due to, disruption of irrigation flows to the command area:

5.3.1 Detailed Needs Assessment

The ESU of the PMO shall complete a detailed needs assessment within the command area of the Ghotki, Beghari Sindh and Desert Pat Feeder Canals. This needs assessment shall be completed within the first year following mobilisation of the contractor for the first contract (construction of supervision colony) of the project. The needs assessment shall focus on the following:

- Identification of areas in command area where canal waters are relied upon for drinking, domestic and/or livestock purposes
- Need for, and suitability of, provision of hand pumps in order to provided increased resilience against water shortages in the extent of an extended closure period of any canal
- Cropping patterns in the command area
- Need for provision of seeds and/or fertilizer in case of canal closure extending into June.
- Consultations as detailed in the communication matrix including dissemination of this SAP and contingencies in place to ensure irrigation supplies.

5.3.2 Installation of Hand Pumps

Dependent upon the results on the needs assessment, hand pumps shall be installed within the command area immediately following completion of the needs assessment. Where the installation of hand pumps is required and suitable (i.e. sweet ground water is available) this shall increase the resilience of any community relying upon canal water for drinking and domestic purposes in the event of a reduction in supply of irrigation flows during construction. As such, this activity must be completed prior to works to replace gates of the head regulating structures.

5.3.3 Restriction on Works to Head Regulators

The following requirements shall be included within the contract documents for the contractor completing works to the head regulator gates. These requirements shall reduce the risk of any extension of closure of the canals:

- The contractor shall be prohibited from interrupting the water supply to any canal or reducing it below the allocated discharge outside the closure period of these canals.
- The Contractor shall programme the Works to utilise the closure periods for the replacement of the head regulator gates.

- The Contractor shall submit a construction programme to the Engineer for approval on mobilisation. This programme shall only be approved if it is shown that replacement of the gates is only scheduled for the closure period of the canals.

Above all, the works planned by the Contractor must ensure that the supply to Balochistan does not fall below the requirement of the Indus River System Authority.

In addition, the risk of over-running of the head regulator gate replacement beyond the scheduled programme shall be mitigated by limiting the contractor to replacement of only up to a third of the gates on any head regulator at any one time - i.e. no more than one third of the gates on any head regulator should be out of commission at any one time. By following this protocol, should the contractor experience a problem during the replacement of the gates which cannot be solved before the end of the closure period the reduction in irrigation flows shall be minimised.

The Client shall continue to publicise the scheduled closure dates within the command area prior to the closure period of these canals. Should the situation arise that re-commissioning of any gate is not complete prior to the end of the scheduled closure period, the announcements shall be made via local radio, television, newspaper and SMS as far in advance as reasonably practicable. Provision for this is included in the communication strategy for the project (see Chapter 14).

5.3.4 Provision of Pump Bypass

The Sindh ID shall identify submersible pumps, delivery pumps and generators, from within their existing stock (it is understood this stock was increased in 2010 and 2011). The identified equipment shall be capable of delivering approximately 150 ft³/s from the River Indus to the Desert Pat Feeder Canal and bypass the head regulator of this canal. This equipment shall be reserved for use at Guddu Barrage from May to July in 2017, 2018 and 2019 (or years 3, 4 and 5), as an emergency provision in case required.

Where adequate equipment cannot be identified from the existing stock, additional pumping equipment may be procured.

In the case of the closure period extending beyond the scheduled closure period (i.e. closure extending into May or beyond), this equipment shall be mobilised to supply Desert Pat Feeder Canal with a limited water supply for drinking, domestic and/or livestock use.

5.3.5 Provision of Seed and/or Fertilizer

Dependent upon the results of the need assessment, late variety seeds and/or fertilizer shall be distributed to the command areas of Ghotki, Beghari Sindh and Desert Pat Feeder Canals **in the event of the closure period extending into and beyond June**. The details of variety and quantity of seed and fertilizer shall be determined by the PMO based on the needs assessment. A plan for the provision and distribution of the seed and fertilizer should be prepared by the

PMO following completion of the needs assessment. The plan should include the identification of source of seed and fertilizer as well as funds for provision and distribution to farmers.

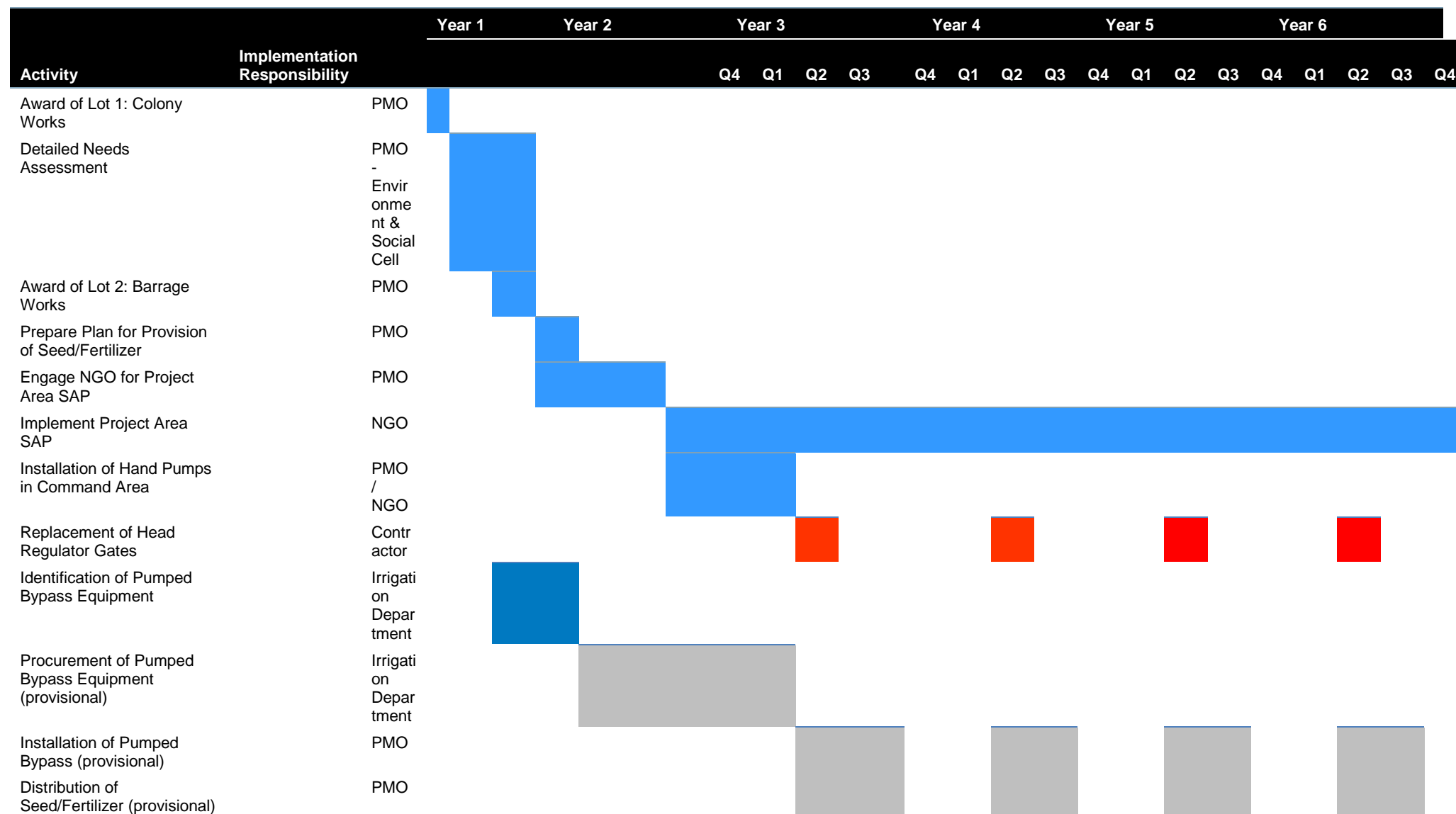
5.4 Implementation Schedule

The following table details the programme and responsibilities for implementation of the SAP. The overall responsibility for monitoring and administering the SAP shall lie with PMO, including engagement of any third parties (such as NGOs).

It is proposed that in the first instance, the PMO shall approach the Sindh Rural Support Organisation to complete the tasks assigned to NGOs within the following programme.

Note: The programme above assumes appointment of the Lot 1 contractor in the first quarter of year 1 (i.e. January).

Table 5.3: Programme and Responsibilities for Implementation of SAP



6. COMMUNICATION STRATEGY

6.1 Introduction

As a part of SMF, the communication strategy is developed to effectively engage populations in project and command areas through consultations and other forms of communication. This is to facilitate implementation of various social impact mitigation plans, such as SAP, RAP (if required), and traffic management plan. The strategy is also to ensure communication with key stakeholders and wider public.

6.2 Objectives of Communication Strategy

The objectives of the strategy is to establish meaningful mechanisms to engage, build confidence and cooperation and promote the active participation and communication of diverse stakeholders in planning at different levels and stages of Guddu Barrage rehabilitation project. The stakeholders include populations in project and command areas, state and local government, private sector and NGOs in those areas, and general public. In supporting the implementation of SMF and other action plans, the strategy is to:

- To put in place a mechanism for regular monitoring and evaluation of communications, educations level, perceptions of stakeholders on Guddu Barrage rehabilitation project.
- To reflect primary stakeholders and determine appropriate institutions for development of primary stakeholders.
- To ensure easy and speedy access to information for stakeholders and their needs are met
- To respond to the grievances, complaints, feedback of stakeholders

At the project level, the objectives of the strategy are as follows:

- To raise over all awareness of project, its activities, intents and outputs.
- To promote benefits and the positive aspects of project.
- To Identify and address the stakeholders concerns about the Rehabilitation of Guddu Barrage within their area of project jurisdiction.
- To provide public access to information, understanding and communication products i.e. newsletter, brochure, internet on the Barrage Rehabilitation process and its outputs.
- To educate stakeholders about the ID/ Stakeholders functions, roles and responsibilities in relation to water sector institutions/ Structures and Operation and Maintenance (O&M).
- To enhance the degree of ownership and commitment of national governments, partners and other stakeholders of Guddu Barrage rehabilitation project
- To establish Informed and improved decision-making in Guddu Barrage Rehabilitation project through multi-stakeholder collaboration.

6.3 Stakeholder Analysis and Design Stage Consultations

6.3.1 Project Stakeholders

In case of Guddu Barrage rehabilitation project stakeholders have been identified and categorized at two levels: primary and secondary stakeholders. Primary stakeholders are the people/individuals/organizations in project and command areas, who are local and will be positively or negatively affected by the project activities. Most of the primary stakeholders belong within the Col of the Guddu Barrage and they are dependent on project location for their livelihood. The primary stakeholders are detailed in the following table:

Table 6.1: Primary Stakeholders

Corridor of Impact	Project Area	Command Area
Head of household	Farmers (tenant and owners)	Farmers
Project affected family members	Shop owners	Livestock Owners
Female Project Affected Persons	General population	Families in Naseerabad district
	Laborers	Fauji Fertilizer Plant
	Fishermen	Engro Fertilizer Plant
	Landlord	PanoAkil Cant.
	Religious Leaders	Sugar Mills
	Motorists	

The Secondary stakeholder defined as those people, groups, individuals or institutions that are important intermediaries in the project delivery process or those who influence or are indirectly affected by the project. Secondary stakeholders may live nearby or use the resources from project area. Those people / organization who have interest in sustainable development, research or can help carry out advocacy to influence decision making and implement SAP. The secondary stakeholders include local government departments, private sector, NGOs, and donor agencies and partner organizations (detailed in the table below). Because the command area extends to Nasirabad district in Balouchistan Province, the Balouchistan ID is also one of key stakeholders.

Table 6.2: Secondary Stakeholders

Project Implementation	Irrigation Department	Provincial Government	Local Government	NGOs
PMO	Sindh Irrigation and Drainage Authority	Rural development department	District administration of Kashmore	Mojaz foundation
Sindh irrigation department	Balochistan irrigation department	Sindh environmental protection agency	District administration of Larkana	Soofi Sachal Sarmast welfare association
Chief engineer Guddu Barrage		Forestry department	District administration of Jacobabad	Kainat development association
Contractor		Agricultural department	District administration of Sukkur	HANDS
Construction supervision consultants		Fisheries department	District administration of Nasirabad, Balouchistan	
Monitoring and evaluation consultants		Sindh wildlife department	Public works department	
Project Coordination and Monitoring Unit,			Board of revenue	

Details of individuals and organizations in each of these groups are drawn through a public participation and consultation process by consultants and Sindh Irrigation and Drainage Authority (SIDA). The consultations with various stakeholders were carried out in accordance with the World Bank Operational Policy (OP 4.01) on public consultation.

6.3.2 Design Stage Consultations

As part of project cycle, public consultations were undertaken by M/s. MMP (the Barrage Study Consultants) following the World Bank policy for the ESIA of Project. Initial consultations were carried out during September to November 2011 whereas the second round was completed in November 2013. The process was initiated in 2011 with the awareness campaign by the Consultants. Consultations with stakeholders were started at commencement of the design stage of the project. Views were taken from primary and secondary stakeholders regarding proposed interventions for the project. Information about positive and negative impacts associated with constructional and operational stage and proper mitigations of adverse impacts were shared. The purpose of consultation was to disseminate project information among the project stakeholders and obtain their feedback regarding local knowledge of baseline, mitigation measures, perception of local populations (inclusive of small and marginal farmers, landless, and women) regarding impact significance and their views on project interventions. The details of consultations and key findings can be found in Appendix C. Key findings of consultations are as follows:

- Employment of the local community shall be made during construction.
- Farmers in off taking canals command area may be impacted due to disruption in canal supplies during construction activities.
- Farmers and general population dependent on Desert Pat Feeder may be affected by extended canal closures.
- Industries in the project jurisdiction may have impact but ground water is available which can be used.
- Contractor must observe the cultural norms of the area
- Limitations to the mobility of woman and children was a concern
- International contractor should be preferred to ensure a high quality of works.
- It was communicated that the law and order situation has been steadily improving in the area since 2011, but that care was still required to be exercised by project personnel. The politicians all offered their assistance and support in providing security, and recommended that this should be arranged through the police and army (rangers) situated at Guddu Barrage.
- Should there be land acquisition by the project, the general view of the community seemed to be that they wanted compensations for their losses but they were not confident to be

compensated by the authorities. The community was also unaware of GRM. They requested compensations as per market rates for lost assets. It was also requested that compensation should be made prior to execution of embankments work.

- Compensation for damage of business structures, religious sites and graveyards during construction should be available.

6.4 Consultation and Communication Matrix

The below consultation and communication matrix lays the process of consultation and communication with primary stakeholders. It outlines the strategic direction who will be consulted or communicated, when, how and which stage of the project. The communication messages and project benefits included in the matrix have been defined on the basis of early stage stakeholders consultations and involvement process by the consultants. Appendix D provides the matrix for the secondary stakeholders.

Table 6.3. Consultation and Communication Matrix – Primary Stakeholders

Primary Stakeholder	Information/message	Communication means	Timing/Frequency	Responsibility
Populations in project area	Project awareness/ information (colony location, access, project benefits, etc.)	TV, radio, newspaper (Sindhi, Baluchi, Punjabi, Urdu)	Regularly	PMO
	Employment opportunities	TV, radio, newspaper (Sindhi)	2 weeks before recruitment / job opening	PMO
	Semi-skilled employment opportunities	TV, radio, newspaper (Sindhi, Urdu, Baluchi, Punjabi)	One month before recruitment/job opening	PMO
	Traffic management (including maps of alternative routes)	TV, radio, newspaper, Sign boards, SMS for subscribers (Sindhi, Urdu, Baluchi, Punjabi)	Daily (when there is traffic disruption)	PMO
	Community health and safety	Consultations, signs, radio	Regularly	PMO Contractor (Community Liaison Officer) local NGOs
	Social action plan at needs assessment and design stage	Consultations	PY1	Consultant, PMO
	Social action plan implementation support, including canal closure, information on activities	Consultations, brochures, TV, radio, newspaper (Sindhi)	Quarterly (PY1-3)	PMO
	In case land acquisition is required	Consultations with affected land owners on project impact, terms of acquisition, agreeable payment, etc. prior to RAP preparation, endorsement, and implementation (to be detailed in RAP)	TBD	PMO
Farmers in command area (including small and marginal farmers, tenants and share croppers)	Project awareness (general project information, implementation, etc.)	Consultations TV, radio, newspaper, brochure (Sindhi)	Quarterly (PY1-2)	PMO
	Employment opportunities	TV, radio, newspaper (Sindhi)	2 weeks before opening	PMO
	Regular canal closure (gate replacement, potential extended canal closure)	Consultation (feedback on impact on crops in PY3) TV, radio, newspaper (Sindhi)	PY2-3 Every March	PMO
	Extended canal closure	Consultations, TV, radio, newspaper, SMS (Sindhi)	Around April 20, if extended	PMO
	Social action plan preparation, including needs assessment and design, contingency planning	Consultations	PY1	Consultant, PMO

	Social action plan implementation support, including information on activities, mobilization, participation, etc.	Consultations, brochures, TV, radio, newspaper (Sindhi)	Quarterly (PY1-3)	PMO
Farmers in Desert Pat Feeder command area (in Baluchistan) (including small and marginal farmers, tenants and share croppers)	Project awareness (general information, canal closure, social action plan, etc.)	Consultations TV, radio, newspaper, brochure (Baluchi)	Quarterly (PY1-2)	Sindh and Baluchistan Irrigation Departments PMO
	Regular canal closure (gate replacement, potential extended canal closure)	Consultation (feedback on impact on crops in PY3) TV, radio, newspaper (Baluchi)	PY2-3 Every March	PMO
	Extended canal closure	Consultations, TV, radio, newspaper, SMS (Baluchi)	Around April 20, if extended	PMO
	Social action plan preparation, including needs assessment, design, contingency planning	Consultations	PY1	Consultant, PMO
	Social action plan implementation support, including information on activities, mobilization, participation, etc.	Consultations, brochures, TV, radio, newspaper (Baluchi)	Quarterly (PY1-3)	PMO
Women in project and command areas	Project awareness (general information, canal closure, social action plan, etc.)	Consultations TV, radio (Sindhi and Baluchi), brochures with pictorial messages	PY1 Quarterly (PY1-2)	PMO, SIDA
	Mobility of women and children (traffic management plan, community health and safety)	Consultations specifically targeted to women	Quarterly	PMO, Contractor
	Social action plan preparation, including needs assessment, design, contingency planning	Consultations specifically targeted to women	PY1	PMO, Consultant, SIDA
	Social action plan implementation support, including information on activities, mobilization, participation, etc.	Consultations, brochures, TV, radio, newspaper (Sindhi and Baluchi)	Quarterly (PY1-3)	PMO, Consultant, SIDA
Fishermen	Project awareness (general information, canal closure, social action plan, dolphin rescue plan, etc.)	Consultations TV, radio (Sindhi), brochures with pictorial messages	PY1 Quarterly (PY1-2)	PMO

Regular canal closure (gate replacement, divide wall realignment)	Consultations (including feedback on water contamination, etc.) TV, radio, newspaper (Sindhi)	Every March (PY2-3) Every March	PMO, Consultant
Extended canal closure	Consultations (including feedback on water contamination) paper, SMS (Sindhi)	Around April 20, if extended	PMO
Social action plan preparation, including needs assessment, design, contingency planning	Consultations	PY1	Consultant, PMO
SAP implementation support, including information on activities, mobilization, participation, etc.	Consultations, brochures, TV, radio, newspaper (Sindhi)	Quarterly (PY1-3)	PMO

6.5 Communication Tools

The communication matrix laid out various communication tools. The specific use of tools, such as SMS and consultations, are detailed in below table. In addition, there also is a canal wire, which is owned by ID and operated through a telephone operator, who is available 24 hours. He keeps a documented record of all messages and conveys messages and receives feedback through telephone. Currently due to lack of funds and interests the system is not efficient as it was earlier. In facilitating feedback from various stakeholders and mainstreaming the two-way communication mechanism, including GRM (detailed in Chapter 8) in ID, the communication strategy is to support revitalizing and upgrading the canal wire by connecting the system to internet and other wireless communication system.

Table 6.4. Communication Tools

Sr. No.	Tools	Remarks
1	SMS	Cheapest and effective tool to communicate immediate and urgent messages. Communities along the COI were also found having mobile phones. Not only men even women were showed their interest in receiving SMS. Project awareness, alternative routes and job opportunities can be communicated through SMS.
2	TV Programs	Media Briefings, dialogues with general public and Experts on Guddu Barrage and related water projects. TV advertisements to share traffic management plans. TV can be used to share alternative routes, heavy work load timings and maps in order to facilitate primary and secondary stakeholders. Even in case of extended canal closure one minute breaking bulleting can also be on aired through TV
3	Documentaries	Pre and post construction documentaries of Different stages of work. These documentaries would be a historic record for ever. These can be used as reference for the rehabilitation of Sukkur and Kotri barrages.

		These documentaries can also be used in engineering universities, showing engineering students a practical view of Gate replacements and other key construction activities.
4	News Letters	Quarterly news letters to share project activities with stakeholders The newsletter will be published in local languages to share information with primary stakeholders where as a copy of English version will be uploaded on website for secondary stakeholders. A wide range of public and interested organizations can .access the English copy through website and give their feedback.
5	Awareness Material	Awareness on Social and environmental aspects. This will include historic knowledge and importance of project location. The blind Indus dolphins have always been an attraction for tourists. The information and awareness material will educate on dolphin rescue plan, and other important information regarding conservation dolphins and environment within project area. To raise awareness in a innovative way 02 photo/ painting contest will be organized for barrage and dolphins best photo/ painting. School children up to 10-15 will be invited to take part in the contest and winners will be awarded with educational gifts. The wining Photo / Painting will be published in local & national newspapers and uploaded on the website. The wining photo can also be the title page of project Annual report.
6	FM/Radio Programs	Short and long radio programs. Stakeholders views, general awareness and a effective tool to share information with Women. Radio is most common means of communication within local communities and favorite amongst women. It is easily accessible to communities, either they are at work or in home they were found habitual to keep mini radios with them.
7	Advertisements	Print media will be used for the advertisements. Advertisements will be published in Local and National newspapers. Other than special news editions and promotions bulletins. Advertisements will include EOIs, resettlements, official announcements, show cause notices and other official notices for general public and stakeholders.
8	Visits of journalists	To establish positive relationship with media and cultivate positive attitude to general public and stakeholders.
9	Consultations, workshops, seminars and conferences	Feedback of different Stakeholders and Building capacity of stakeholders Best tool to involve and keep updated women stakeholders Regular meetings with primary stakeholder in order to ensure proper resettlements, relocations and displacement of PAPs according to our national and World Banks triggered policies. There will be separate consultations with women and men.
10	Trainings of staff (National)	learning from other relevant organizations for effective performance and delivery
11	Website	Information sharing and feedback on a big scale
12	Email updates	The email update will be based upon the news on project progress, developments and planned activities. It will also invite comments, inputs and review of Barrage work from experts. The email updates will be sent to those stakeholders who wish to receive and give feedback in this format.
13	Wireless Communication	Wireless communication (VHF) is owned by Irrigation Department and operated through a operator, who is available 24 hours. He keeps a documented record of all messages and conveys messages and receives feedback through telephone. Currently due to lack of funds and interests the system is not efficient as it was earlier. The system could be linked to internet and other wireless communication in obtaining stakeholder feedback and tracking their redressal.

6.6 Communication Approach

Guddu Barrage rehabilitation project is a unique project to Sindh province its economy and social wellbeing. Therefore, participatory approach has been adopted to design the communication's strategy focusing on full participation of stakeholders at all stages of project. It ensures that stakeholders are not only informed of the impacts on them, or the wider organization, but are also timely communicated about changes and consulted, involved and encouraged to take ownership to handle changes.

A PMO with appropriate experts (technical, social, environmental, communications) and sufficient resources has been proposed to implement the project. The PMO will be reporting to Secretary Irrigation and it will be playing an intermediary /coordination role between Chief Engineer Guddu Barrage and other partner agencies. The PMO will adopt following approach.

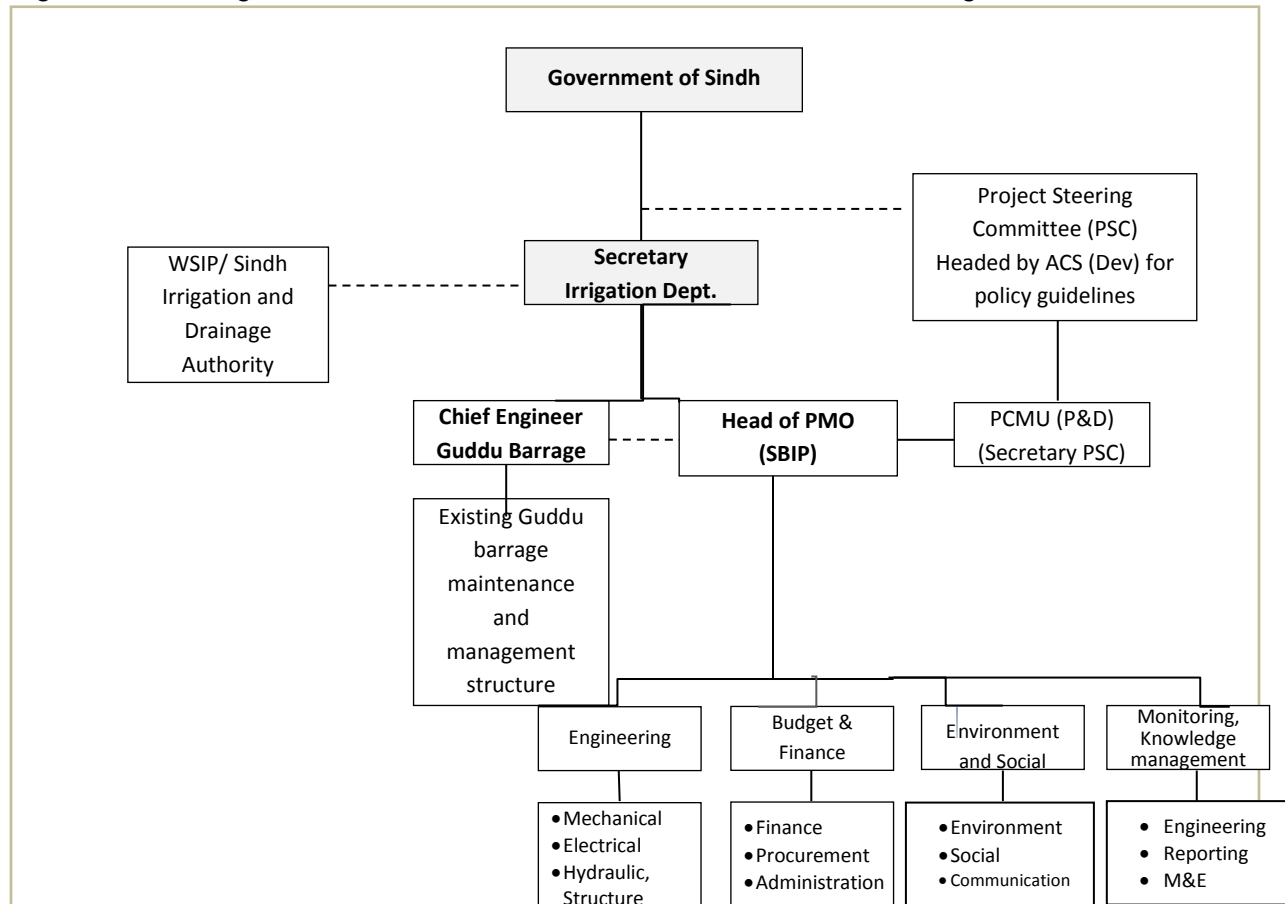
- Ensuring consistency of message throughout the project partners and stakeholders, all internal and external communications will be centrally co-ordinate through the Communications unit of PMO
- Regular meetings of stakeholders will be held through Communications unit of PMO to ensure a flow of information throughout the organization and to co-ordinate the communications requirements of different groups.
- All print and design materials will be produced centrally by the office of Communications unit of PMO under Project Director Guddu Barrage.
- All communications materials produced will adhere to the guidelines recommended by the Project Director.
- The concerns of primary stakeholders will directly be communicated through Communications unit of PMO. All media queries may jointly be addressed with Communication unit and Head of PMO for appropriate response. Head of PMO will decide who , when and how will respond to the electronic, print media and journalists.
- No any employee will provide any information about the project or relating to its work to members of the Media without the prior permission or involvement of Communications unit of PMO and no any employee of the project will conduct an interview with members of the media without permission of Project Manager and the communication section would be responsible to seek such approvals and permissions.
- All communications materials, where practicable, shall be produced in local languages i.e. sindhi, urdu, balochi to properly address the communications needs of stakeholders.

7. IMPLEMENTATION ARRANGEMENTS

7.1 Institutional Arrangements

The PMO will be responsible to implement SMF, including SAP, communication strategy, and any RAP that may be prepared. The organizational chart for the implementation is shown below:

Figure 7.1: Organisational Chart for Environment and Social Monitoring



The ESU has delegated responsibility to implement SMF. ESU will be headed by Environmental, Social, and Communication Specialists. The overall aim of the ESU is to ensure unhindered handover of the site to the contractor and prevention of costly delays in construction by managing the project's environment and social impacts. ESU's key responsibilities are the following:

- Regular consultations with populations in project and command areas during project implementation. Ensure participation by small and marginal landowners, tenants and share croppers, women, labourers, and fishermen.
- Oversee needs assessment, design, and implementation of SAP. Also, oversee RAP preparation and implementation, if temporary or permanent land acquisition is required. Translate detailed action plans in Sindhi for disclosure.

Implementing Communication Strategy. In facilitating SMF implementation, a communication section will be established within ESU headed by Communication Specialist. Communications section would be the implementing agency for this communication strategy under administrative control and supervision of the Head of PMO. The communications section would be strengthened by 07 key professional positions as under:

- Communication specialist
- Assistant manager communication
- Information educations & communications officers
- Technical officer/ IT officer
- Communication assistant
- Graphic designer/photographer
- Office boy

A mixture of male and female members of staff shall be appointed to the Communication Section within the PMO. Female staff member(s) are required to ensure access to female members of the community (PAPs, local community) during consultations.

The communication section would be responsible to ensure effective participation of all stakeholders as per communication matrix at different stages of project cycle. The key responsibilities of the team of communication section will be as under.

- Preparing plan of action for implementing communication strategy.
- Regular community consultation
- Design, modify and finalize all IEC materials pamphlets, brochures, posters newsletters and reproduce them in required numbers
- Establish positive relations with media for information dissemination through electronic and print media
- Assist PMO/ Hold consultations, meetings, seminars, and workshops with various stakeholders (primary, secondary) at different levels.
- Seek and receive regular feedback from primary stakeholders.
- Assist PMO/Prepare quarterly, half yearly and yearly progress report.

Environment and Social Specialists will be working closely with Communications section. Communication section will be playing central role in engaging stakeholders, keeping them updated and dialogues with media / diverse stakeholders. All the planned activities for stakeholder's consultations will be communicated through communication specialist. All communication materials for the project, related to implementation of SAP, EMP, Traffic Management Plan, and advertisement of employment opportunities/EOIs/RFPs and all type of environmental / social /technical information & education materials, will be produced through communication specialist. Translation of key project documents in local languages, reporting of project progress to donors and other agency, organizing workshops/ seminars and receiving

feedback from stakeholders would be communicated with coordination & collaboration of communications unit.

Designing and Implementing Social Action Plan. The project will contract a NGO in undertaking detailed needs assessment in project and command areas, developing and implementing a SAP. ESU will develop ToR and facilitate these activities, in particular coordinating with ID in initiating these activities in Baluchistan. ToR and SAP should be approved by ID and the World Bank.

7.2 Institutional Responsibilities

SMF implementation will be supported by several government offices and consultants.

7.2.1 Project Management Office (PMO)

The PMO established under the secretary of the ID will monitor and coordinate all project implementation activities. While ESU has delegated authority in SMF implementation, including RAP preparation and implementation, the Director PMO shall be overall responsible for these implementations.

7.2.2 Irrigation Department

The project proponent is the ID. The ID shall be responsible for approval of this SMF and any subsequent RAPs.

7.2.3 Chief Engineer Guddu Barrage

The Guddu Barrage rehabilitation & modernization project will solely be executed and implemented/ by the PMO. The Chief Engineer Guddu Barrage will handover site to PMO prior to the execution of project. Chief Engineer Guddu Barrage will supervise the project and be involved during the regular canal and extended canal closure if required. Communications regarding canal closures, its impact and mitigation will be carried out with close coordination of Chief Engineer Guddu Barrage. Any emergency i.e. unexpected flood due to heavy rainfall in monsoon or shortage of water due to drought would be communicated through Chief Engineer Guddu.

7.2.4 Sindh Irrigation and Drainage Authority (SIDA)

SIDA is under the ID and has been one of responsible agencies in building capacity of farmer organizations (FOs) in the Bank-financed Water Sector Improvement Project. They will facilitate consultations with farmers in project and command areas, including women and vulnerable households.

7.2.5 Contractor

The Contractor shall be responsible for implementation of the works as per the designs and specifications and approval of the Construction Supervision Consultant (CSC). Of relevance to this SMF, the Contractor shall:

- Request approval from the CSC for implementation of all works prior to commencement of such works
- Notify the CSC of any land acquisition requirements

Notifying employment opportunities and monitoring job creation. The Contractor(s) shall be required to appoint and employ a full time Human Resources Officer who shall have a key role in identifying local job opportunities at the beginning of a contract. The Human Resources Officer shall be required to pass on the details of available jobs to the Communication Specialist for dissemination and advertisement of the job opportunities in project and command areas. The Human Resources Officer shall also be required to report on the number of job vacancies filled by those from project and command areas separately.

Notifying extension of canal closure. The Contractor shall also be responsible for informing the PMO and CSC of any extension to the closure period which may be required due to delay in the replacement of head regulator gates or otherwise. Should an extension to the closure period be required, the Contractor shall be required to inform the PMO and CSC no later than the end of the third week of the scheduled closure period.

Preparing and implementing RAP for temporary and permanent land acquisition. The Contractor shall also be responsible for all temporary land acquisition required for the completion of the works for which the Contractor shall be required to carry out consultations with land owners and lease holders. The Contractor shall be contractually obliged to enter into written, signed and witnessed agreements with the land owners, or lease holders, for the use of their land.

Employing Community Liaison Officer to facilitate health and safety, and traffic management. The Contractor(s) shall be required to appoint and employ a full time Community Liaison Officer. This Officer shall, in conjunction with the PMO, be responsible for consultations with local communities to raise awareness of health and safety measures to be undertaken by communities in the project area (especially during embankment works) and discuss the mobility of women and children in the project area (and identify alternative routes where applicable).

7.2.6 Construction Supervision Consultants

The CSC shall supervise the Contractors on behalf of the PMO with respect to implementation of civil works as well as social and environmental safeguards.

The CSC shall be responsible for ensuring no works are carried out by the contractor prior to implementation of an RAP where this has been identified to be required. The CSC shall provide an interface between the contractor implementing the works and the PMO implementing the RAP, in particular:

- Advance approval of all works to be implemented by the Contractor
 - The CSC shall not approve the Contractor's implementation of any works which require physical displacement or land acquisition prior to the implementation of the relevant requirements of an RAP
- Monitoring the Contractor's implementation of civil works to ensure no unnecessary resettlement is required
- Identification of any necessary civil works which shall require resettlement or land acquisition beyond that which is envisaged within the RPF (such as due to a design change or change in site conditions) and:
 - Notify the Contractor to temporarily cease work in the relevant areas
 - Notify the PMO of potential resettlement or temporary/permanent land acquisition requirements and the need to prepare an RAP according to the provisions of Chapter 4 of this SMF.
 - Notify the Contractor not to proceed with such civil works until implementation of an RAP (if required) by the PMO
- Notify the PMO of any encroachment into the Col during implementation of the works (for resolution by the PMO)
- The CSC main involvement in communication shall be reporting on progress of the various project components. Such progress shall be reported to the PMO for their onward dissemination through newsletters, website, radio updates etc.
- The CSC shall be responsible for monitoring progress during the replacement of head regulator gates to identify any deviances from the Contractor's program which may result in an extension to the planned closure period. Any such occurrence shall be discussed between the CSC, Contractor and PMO and further actions agreed upon.

7.2.7 Monitoring and Evaluation Consultants (MEC)

It is recommended that the MEC shall be introduced into the institutional structure for the project. The MEC shall be an independent body responsible for external environmental and social monitoring for the Guddu Barrage Rehabilitation Project. The MEC will have environmental and social experts and shall carry out intermittent third party monitoring of the implementation of any RAP as well as the Environmental and Social Management Plan (see ESIA for Guddu Barrage Rehabilitation Project for further details).

The Terms of Reference for the MEC should be completed by the PMO and should include reporting of independent audits, circulated to the PMO, ID, GoSindh, WB and CSCs where appropriate.

Should RAPs be prepared, the MEC shall be responsible for overall monitoring of the implementation of RAPs as well as monitoring actions taken in respect to any chance find items or design changes which may alter the land acquisition requirements.

The MEC shall provide feedback to PMO on the project's performance and impact so that corrective actions can be taken in a timely manner.

7.2.8 World Bank

The World Bank reviews and approves any RAPs which may be necessary and provides overall support to the implementation of SMF.

8. GRIEVANCE REDRESS MECHANISM

8.1 General

A grievance (complaint) can be defined as any expression of dissatisfaction which needs a response. Broadly, a grievance can be defined as any discontent or dissatisfaction with any aspect of the project or organization. Grievance Redress is a platform provided by the governance institution to the citizens to voice their dissatisfaction about poor or inadequate performance of the institution (whether as a whole, or individual stakeholders) and hold it, or them, accountable.

It will clearly not be possible, through the proposed grievance handling system, to address each and every grievance or dispute that may afflict a group of people, whose divisions or disagreements may not only pre-date the project activities, but lie beyond the scope of the project. For this reason, the grievance system as proposed will primarily (but not exclusively) handle issues that emerge from Guddu Barrage Rehabilitation Project activities, or can be plausibly described as a consequence of these activities. Grievances arising from potential resettlement activities shall be prominent within the scope of the GRM. The same mechanism shall also be used to hear grievances relating to environmental and social management and performance of the project. Accordingly, the mechanism described in this Framework is as per the mechanism prescribed in the ESIA for the project.

Grievances may arise from the implementation of the Guddu Barrage rehabilitation activities such as strengthening of bunds, acquiring of borrow areas and traffic congestion. Most grievances would arise from PAPs or organisations.

8.2 Principles, Procedures and Time-Lines

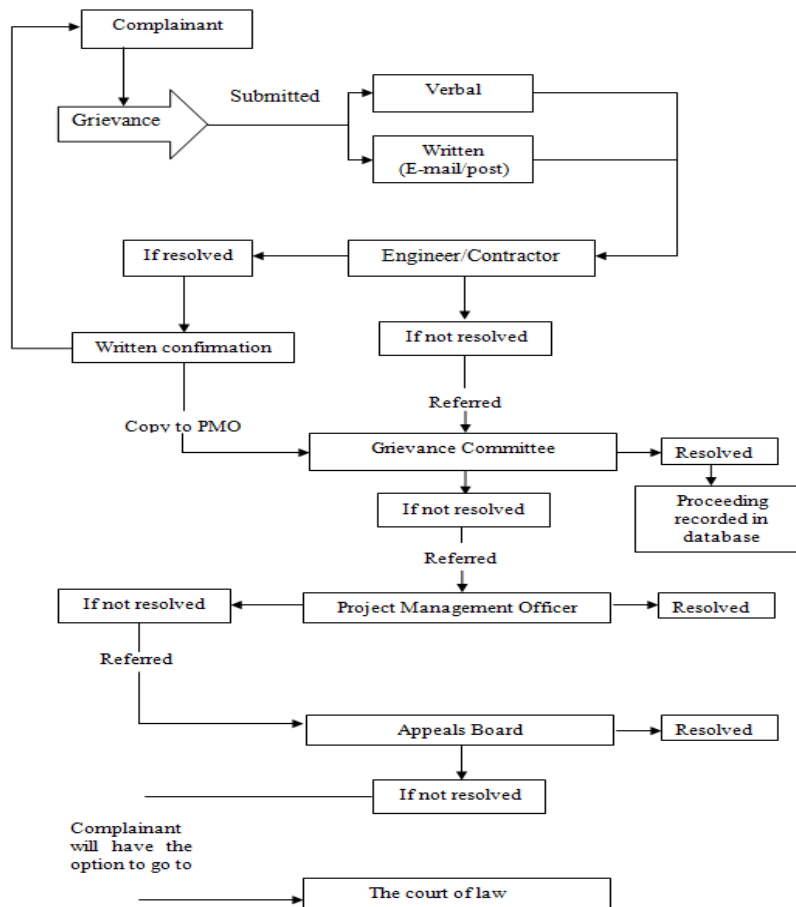
Bearing in mind the range of possible grievances, following three basic standards shall underpin the proposed systems for handling these:

1. All grievances submitted in writing to staff assigned under PMO will be formally recorded, and a written acknowledgement issued.
2. Grievances will be dealt with on a referral basis; those that the Contractor or the Supervision Consultant are unable to resolve will be referred to the Grievance Committee, with a final provision for appeal to Head of PMO if an issue cannot be resolved with the Committee.
3. Every effort will be made to address or resolve grievances within the following fixed time-lines, which will be an indicator against which the performance of the handling system is evaluated:
 - Acknowledgement of a written submission will be issued to the complainant within three working days.
 - If not resolved earlier by the Contractor or Supervisory staff on site, grievances will be tabled for discussion/resolution during Committee meeting within one week of receipt of the written submission.

- If not satisfactorily resolved by the Grievance Redress Committee, the grievance will be referred for consideration by the Head of PMO within 1 week.
- Cases that prove impossible to resolve through the Grievance Redress Committee may be referred to the Appeals Board to be appointed by ACS (Dev.) Planning and Development (P&D) Department, GoSindh, comprising senior representatives from P&D, ID, and an independent legal expert, this Board will meet as needed to adjudicate on cases and either send their recommendations for endorsement to the Chairman P&D or refer these for legal action. Where feasible, a response will be forthcoming to such appeals within two weeks of submission.
- If the complainant is not satisfied, the complaint will have the option to go to the court of law.

The Head of PMO may delegate responsibilities under this mechanism to the Director Safeguards where appropriate, but the Head of PMO shall remain responsible for any decision made by the Director Safeguards on his behalf. The GRM is shown in the following figure.

Figure 8.1: Grievance Mechanism



The recommended members of the Grievance Redress Committee (GRC) are shown in the following table.

Table 8.1: Grievance Redress Committee

Representative	Position
Head of PMO	Chairman
Director Safeguards	Secretary
Community Representative(s) – see below	Member(s)
Irrigation Department Representative	Member
Construction Supervision Consultants Representative	Member
Contractors Representative	Member
Representative of M&E	Member
SIDA Representative through Ghotki Area Water Board	Member

Community representatives shall include local landlords in recognition of their role in local conflict resolution in the project area. During social baseline assessments, the following landlords were identified and consulted – these same landlords should be approached by the PMO to be included in the committee:

- Mr Punho Khan Mazari
- Mr Jam Abdul Baki
- Mr Jam Mujeeb Ullah
- Mr Nazir Ahmed Dasti
- Mr Shamsheer Mazari

A representative from SIDA has been included in the committee due to the previous experience of SIDA in the implementation of RAPs on the Sindh Water Sector Improvement Project.

During the implementation of the SMF, the role of the Grievance Redress Committee shall not just be a reactionary role as they shall be responsible for ensuring progress in the implementation of the Framework. The committee shall meet quarterly but may need to meet on monthly basis during initial stages of potential RAP implementation. The aim of these meetings shall be to provide advisory services regarding resettlement issues, and identify, discuss and resolve any blockers to successful implementation of an RAP in a timely manner.

9. MONITORING AND EVALUATION

9.1 Introduction

The World Bank requires the proper monitoring of implementation of the SMF, including RAPs that may be required, and reporting on their effectiveness, including the disbursement of compensation, effectiveness of public consultation and participation activities. The objective of monitoring is to provide feedback on implementation of the SMF and to identify problems and successes as early as possible to allow timely adjustment of implementation arrangements. For these reasons, monitoring and evaluation activities should be adequately funded, implemented by qualified specialists and integrated into the overall project management process.

9.2 Objectives

The overall objective of monitoring and evaluation is to maximise the benefits of the SMF, in particular if RAPs are prepared in case of temporary or permanent land acquisitions. The purpose of resettlement monitoring is as follows:

- Ensure that actions and commitments described in the RPF and any subsequent RAPs are implemented fully and on time;
- Ensure the preparation of RAPs where required;
- Identification of blockers (and subsequently solutions) to the implementation of the RPF and RAP;
- Complaints and grievances lodged by PAPs are followed up and that, where necessary, appropriate corrective actions are taken up and implemented; and
- If necessary, changes in RAP procedure are made to improve delivery of entitlements to PAPs.

Monitoring shall be carried out both internally and externally.

9.3 Internal Monitoring

Internal monitoring shall be carried out by the Monitoring and Evaluation Unit within the PMO in three distinct phases. The information will be collected from the project site and assimilated in the form of a monthly progress report to assess the progress and results of the SMF implementation, and adjust the work progress, where necessary, in case of any delays or problems. The report shall be submitted to the Head PMO.

In monitoring RAP implementation, full details of the monitoring shall be defined in any RAP that may be required and shall include details of monitoring during the preparation, resettlement and operational stage as well as performance indicators.

9.4 External Monitoring and Evaluation

The MEC will have environmental and social experts and shall carry out intermittent third party monitoring of the implementation of the SMF, any RAP against the proposed programme, and the Environmental and Social Management Plan (see ESIA for Guddu Barrage Rehabilitation Project for further details).

The MEC shall complete reports on independent audits, circulated to the PMO, ID, GoSindh, WB and CSCs where appropriate.

MEC shall also be responsible for evaluation of the SMF implementation, including the resettlement activities, such as an overall review of the success of an RAP. With respect to resettlement activities, the MEC shall be responsible for overall monitoring of the implementation of any RAP as well as monitoring actions taken in respect to any chance find items or design changes which may alter the resettlement requirements. As well as monitoring physical resettlement of PAPs, the MEC shall also monitor temporary and permanent land acquisition. Evaluation shall include indicators related to the long-term impacts (effects/benefits) of the project on people's lives in the project affected area, including an updated socio-economic assessment, comparison with the baseline socio-economic assessment and an assessment of the socio-economic impact. The evaluation shall also extend to the host communities. .

The evaluation of the MEC shall be in the form of a single final report to be issued to the PMO one year following the completion of civil works on the project. The report shall also include details of any outstanding issues and actions required to resolve such issues. The MEC shall provide feedback to PMO on the project's performance and impact so that corrective actions can be taken in a timely manner.

MEC shall be responsible for independent monitoring of the SMF implementation, including any resettlement activities.

The MEC shall submit bi-annual (six monthly) reports to the PMO, copied to the PCMU. These reports shall detail the following:

- Monitoring methodology
- Monitoring activities
- Results of monitoring
- Recommendations/proposals

The first report shall be submitted within three months of the appointment of the MEC, and subsequent reports submitted every six months following this.

Draft Terms of Reference (ToR) for the MEC shall be included in the RAP.

10. COST ESTIMATE

10.1 Arrangements for Funding

Funding for resettlement activities shall be arranged by the ESU of PMO via the Finance Department, through the following activities:

- Opening of a bank account to deal with compensation and its disbursement
- Submission of resettlement budget to Finance Department (GoSindh) for transfer of funds to bank account
- Physical disbursement of compensation to PAPs

10.2 Cost Estimates

Given the programmatic nature of the social interventions, it is not possible to conduct an accurate and reliable costing exercise at this time. For budgeting purpose, below are some broad cost estimates for possible land compensation and resettlement, SAP and communication activities. Detailed costing and budgeting will be carried out during the RAP preparation and SAP design phase. The total budget is estimated for US\$ 5 million, including US\$ 1 million for resettlement, US\$ 3.5 million for SAP and US\$ 0.5 million for communication strategy. Sindh Irrigation Department will be responsible for its financing, including additional cost beyond this budget.

Table 10.1: Cost Estimates

Component	Estimated Cost (US\$ Million.)
Resettlement Policy Framework (RAP preparation, possible land compensation)	1.00
Social Action Plan	3.50
Communication Strategy	0.50
Total	5.00

Appendices

Appendix A. Alternative Considered for Contractor Operation Area

Appendix B. Socio-economic Baseline in Project and Command Areas

Appendix C. Stakeholder Consultations

Appendix D. Communication Matrix – Secondary Stakeholders

APPENDIX A. ALTERNATIVES CONSIDERED FOR CONTRACTOR OPERATION AREA

A.1 Establishment of Contractor’s Labour Camp, Construction Camp and Workshop

The sites detailed in the following table and sections have been identified. None of the sites result in physical displacement.

Table A-1: Potential Sites for Contractors Facilities and Workshop

Site	Location	Proposed Facilities			Acquisition Requirements		
		Labour Camp	Construction Camp	Workshop	No Acquisition	Permanent Acquisition	Temporary Acquisition
1	Left bank of River Indus just upstream of Rainee Canal	X	X	X		X	X
2	Left bank of Guddu Barrage			X	X		
3	Left bank of Beghari Sindh Feeder Canal, approximately 2.5km from the barrage	X			X		
4	Left bank of Beghari Sindh Feeder Canal, approximately 4km from the barrage	X			X		

A.2 Area 1: Upstream Left Bank

Area 1 is situated on the left bank of the River Indus just upstream of the Rainee Canal. The area is situated in privately owned land, but, as the land is low lying and commonly waterlogged, the area remains barren. In order for this land to be suitable for the colony, it would first need to be filled to raise the ground level and reduce the flood risk.

This site allows the contractor to house all facilities together increasing working efficiency and reducing traffic in the project area. The location is relatively close to the barrage, however it is not close enough to be able to benefit from the security provided by the Ranger and Police situated at the barrage, and therefore the contractor would need to make his own arrangements for security.

A.3 Area 2: Downstream Left Bank

Area 2 is situated on the left bank of the River Indus immediately downstream of Guddu Barrage. The area is partially on government owned land, but extends into privately owned land, where Mirani tribe live. To mitigate any resettlement, this site is considered suitable for the establishment of the workshop only on the government owned land. .

As the site is close to the barrage, it could benefit from the security provided by the Ranger and Police situated at the barrage.

A.4 Area 3: Left Bank of Beghari Sindh Feeder Canal

This option is situated on the left bank of Beghari Sindh Feeder Canal approximately 2.5km from the barrage. The area consists of two existing, but currently unused, privately owned labour camps. Minimal works would be required to make this area suitable for inhabitation by the contractor's workforce.

This site is only adequate for inhabitation by the contractor's staff, and separate sites to situate the construction camp and workshop shall be required. The contractor would need to arrange his own security for this site.

A.5 Area 4: Left Bank of Beghari Sindh Feeder Canal

Similar to area 3, this area is situated on the left bank of Beghari Sindh Feeder Canal, but is approximately 4km from the barrage. The area consists of a single privately owned labour camp, for which minimal works would be required to make it suitable for inhabitation by the contractor's workforce.

The contractor would need to arrange his own security for this site.

Again, separate sites elsewhere would be required for the construction camp and workshop.

A.6 Conclusion

The final decision for the location of the labour camp is to be made by the Contractor, a variety of options have been presented here in recognition that the contractor may wish to locate all facilities on one site to reduce the management burden. The contractor may choose any of the options above for the establishment of his camps.

However, following consultation with the ID, the location of the workshop which forms part of the permanent works, has been chosen at area 2. As only a small area shall be required for this single facility, neither land acquisition nor physical displacement shall be required. As a result, no permanent land acquisition or physical displacement shall be associated with the establishment of the contractor's camps or workshop.

Notwithstanding the above, it is considered that the use of area 1 shall be favoured by the contractor, as it allows the contractor to house all facilities in one compound close to the barrage, simplifying security arrangements and reducing traffic flow in the project area. However, area 1 is not suitable for the workshop due to the requirement for permanent land acquisition. The proposed camp shall cover an area of approximately four acres and is shown in the following figure:

Figure A-1: Preferred Site for Construction and Labour Camp



APPENDIX B. SOCIO-ECONOMIC CONDITIONS IN PROJECT AND COMMAND AREAS

B.1 Administrative Setup

The project area is divided in four districts: Kashmore; Ghotki; Rajanpur and Rahim Yar Khan. Each district is headed by the Deputy Commissioner (DC) who is responsible for the coordination of functions of all the departments in the district. The main district departments include: administration; judiciary; police; education; health; communication and works; agriculture; forestry; irrigation; telecommunication; and livestock and fisheries. The head of each district department is responsible for the performance of his department and is generally designated as the Deputy Director or District Officer.

B.2 Populations

The estimated population of the project area is 37,410, comprising of 18,218 males and 19,192 females within 64 villages. Details of the population of project area are given in the following table.

Table B-1: Population of the Project Area

Age Group	Male	Female	Total
> 5	2,514	2,592	5,106
6-9	1,794	1,851	3,645
10-18	3,253	3,361	6,614
19-65	10,364	11,102	21,466
Above 65	293	286	579
Total	18,218	19,192	37,410

B.3 Ethnicity and Tribes

The dominant ethnic group in the project area is the Mazari Baloch tribe (50%). The Mazari Sardars are the controlling authority in the project area and hold the majority of the agricultural land. Other tribes include the Mirani (30%), Soomro (10%), Solongy (4%), Sheikh (3%) and the Chacher, Arain, Sher, Datsi, Malik, Indhar, Bhatti and Khosa (3%). Ethnic minorities include Pathan and Daya that are living in the vicinity of Kashmore town.

B.4 Family System

The majority of those in the study area live together with their extended family (parents living with married children and their families). Families believe this is a more economical way of living as they often work together on the same land and are able to share their joint incomes to support the entire family, including elderly relatives who are unable to work. It is also thought to be more efficient to share basic amenities such as water, electricity, housing and food rather than for each immediately family to purchase or source their own.

B.5 Religion

During the socio-economic field survey it was observed that about 95 percent of the population is Muslim whereas about five percent consist of Hindu and other minority religions.

B.6 Social Cohesion and Conflict Resolution

The population of the project area tend to live alongside their extended families (elderly parents, families of the siblings) within a single compound bounded by a perimeter wall as it is believed to be more convenient and economical. The sharing of resources is beneficial in terms of joint incomes, manpower (agricultural practices) and basic amenities such as water, electricity, housing and food etc. Individual residential structures typically comprise of nuclear families (i.e. husband, wife and their children), although occurrences of the head of the household living with his siblings family or elderly parents is not uncommon.

Social organization in all villages is strongly based on Biradari system (caste or tribe), where each caste has a leader. In the Biradari system, although members of a caste do not own property together or share incomes, the honour of individual members affect the standing of the caste within the community. The families belonging to the same caste have strong interactions with one another and generally keep separate identities. Even in marriages of their young, they prefer to marry within their own caste. Although uncommon, cases of marriage between different castes can occur.

As in other parts of Pakistan, disputes on a variety of different issues are common place. Disputes, such as right to vote, marriage settlements and other matters, are usually resolved by the caste leader, while the head of a village shall resolve any major disputes. It was found during the survey that 90 percent of the conflicts were resolved at a village level. Those living within communities of the project area feel obliged to accept the decision of their caste or village leader.

In case of serious matters, local influential politicians/landlords (who are often also caste leaders) intervene to settle the dispute. Occasionally, when parties do not agree on the decision of the village or caste leaders, matters may go to the police and ultimately a court of law. The police and the court of law are the last options and these are rarely exercised.

B.7 Inter-tribal Conflict

Although conflict within the project area was common place between the Mazari and Khosa castes and the Solangi and Khosa castes within the project area until end of 2011, the project area has remained peaceful since 2012. There were no reported security incidents within the Col itself during the conflict. However, for the purpose of development planning, it is important to appreciate the history surrounding this conflict.

Guddu Barrage is located at Sindh-Punjab Border in District Kashmore. The area is dominated by castes originating from the Baloch district. The most common caste in the project area is

Mazari, the other castes are Khosa, Domaki, Bajarani, Jakhrani and Sundarani. Each caste has their own caste leader. The caste leaders are mostly landlords and political leaders.

As well as being dominant in numbers, the Mazari caste is also powerful within the project area, and their number includes a member of the Sindh Provincial Assembly, a member of the Punjab Provincial Assembly and a member of the National Assembly.

Conflicts have been common in recent years (especially in 2010 and 2011) between the Mazari and Khosa castes and the Solangi and Khosa castes, however conflict has reduced since 2011. The chance for conflict is heightened during elections, when parties shall oppose each other due to their political affiliations which are often aligned with their caste leaders.

The root causes of the conflicts between the Mazari and Khosa castes within the project area appear to be similar in nature to conflicts within a single caste, including:

- The purchase and sale of land
- Theft of irrigation water
- Theft of food grain and fodder
- Theft of animals
- Marriage settlements between families
- Disputes between women and children
- Disputes over voting during elections

Without the defined resolution system which exists within a single tribe, these disputes appeared to escalate and manifest as physical fights between parties, resulting in the injury or murder of individuals of one caste by another. Following such incidents, the leaders of each caste (including landlords and politicians) entered into dispute and revenge killings between the castes became common. These killings were carried out by an isolated group from each caste.

The conflict peaked in 2010 and 2011, and at the end of 2011, influential figures from Districts Ghotki, Kashmore, Rahim Yar Khan and Rajanpur arranged a meeting between all local landlords and politicians to understand the causes of the conflict. Following this meeting, local politicians and landlords reached agreements and compromises to resolve their grievances. The meeting also set a precedent for meetings between leaders of different castes in order to resolve inter-caste conflict and it is reported that this is now commonplace following intertribal conflicts.

Following the agreements reached at the end of 2011, those who carried out the killings in each caste were no longer aligned with the caste leaders in the region and as a result, were viewed as criminals by the communities. It was reported that the Mazari and Khosa castes, supported by the police, sought out and eliminated these criminals.

While the security situation within the project area is now viewed as greatly improved since its peak in 2010/2011, there still appears to be distrust by communities of the Mazari caste towards new comers to the project area.

Without support and introduction from caste and village leaders, strangers to a village from a different caste are viewed as suspicious by the receiving community.

B.8 Housing

The majority of the population live in small settlements of five to twenty houses scattered all over the project area. Mud houses or huts are the most common house type (84%) and are built without any planning or consideration of layout. All mud houses usually have a boundary wall enclosing enough space for cattle and storage. Only 10% houses are built semi pucca (mud, bricks, iron, or cement and bricks, with roof of wood and grass) and 6% are pucca (bricks or blocks with iron and cement roof). The roof of a mud house consists of wooden beams of all shapes and sizes, cover of thick date-palm mats and a layer of mud with clay plaster at the top. It was observed that all the people were living in self-owned houses.

B.9 Literacy

A person who can read and write statements with an understanding, in any language prevalent in Pakistan, is considered as literate. The literacy ratio is measured as the number of literate people compared to the population of the age of 10 years and above.

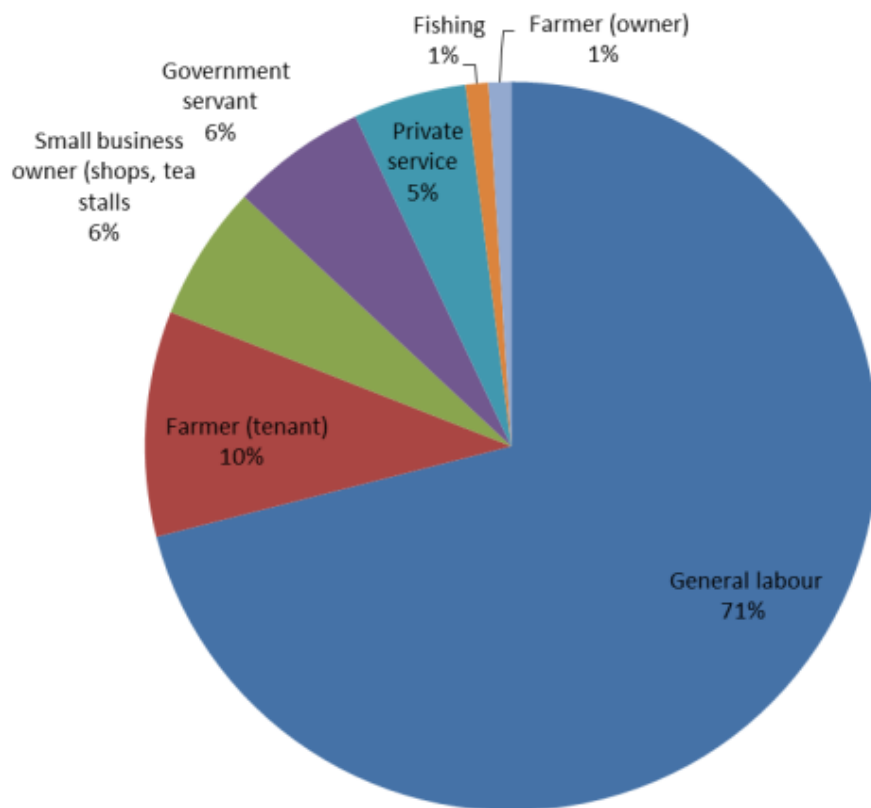
According to the population Census of 1998, in Kashmore; Ghotki; Rajanpur and Rahim Yar Khan Districts 23.66 %, 29.01%, 20.7% and 33.1% respectively of the population are literate. However, the literacy ratio is considerably lower within the project area, at just 6% (2,221 people).

B.10 Economic Conditions

B.10.1 Employment

Employment in the project area is divided as follows:

Figure B-1: Employment in the Project Area



B.10.2 Livelihoods

Agriculture is the most widespread source of income (70%) in the project area. 25% of the total population income source is as labourers (excluding agricultural labourers) and 5% from government jobs (in departments such as the agriculture department, forest department, post office, police and Pakistan army).

Livestock is a significant, albeit often a secondary, source of income. The majority of the households in the project area own 3 or 4 animals. Cows, buffalo and goats are most commonly owned. Livestock is a prestigious symbol and an additional source of income for the farming community, providing milk, ghee and meat.

Crop or fodder is generally sold at a rate of Rs. 4,000 to 5,000 per season. Unsold rice is commonly used as dry fodder, which is comparatively cheap. Agriculture labourers earn between Rs. 200 to 300 per day. Demand for agriculture labour is high during planting and harvesting but is not a continuous source of employment.

Small businesses, the private sector and fishing do not represent significant income sources in the project area although 12% of the project area are employed in this sector.

B.10.3 Income Levels

The average income level of those in the project area is approximately Rs 1,293 (US\$12) per month. The income by profession is shown in the following table.

Table B-2: Average Income Level by Profession

Profession	Average Monthly Income Per Household (Rs)	Average Income Per Capita (Rs./Month)
Farming / Owners	10,708	1,460
Farming / Tenant	7,776	1,099
Commercial (Shop, General Store, Cold Corner, Tea Stall, etc.)	9,913	1,373
Government Service	14,064	1,849
Private Service	8,821	1,199
General Labour	7,817	1,277
Livestock	7,286	1,437
Fishing	7,598	1,125
Total Average	8,475	1,293

The data above indicates a low level of household income although the better off families are generally those associated with the agriculture sector.

The income of a large proportion of the project area is below the official poverty line of Rs.2305 per capita/month (inflation adjusted) and is categorized as vulnerable.

B.10.4 Industry

The only industry within the project area is the generation of electricity (Guddu Thermal station) on the right bank of the Indus at Guddu Barrage. However, a large number of industries have been established outside the project areas in the related four districts. The thermal power plant, Guddu town market and Kashmore town are major sources of employment in the region. There is no other industry at the Guddu Barrage.

Cotton factories are located in Sadiqabad and Rajanpur. There are five sugar mills, two in Sadiqabad District Rahimyar Khan and three are located in Ghotki District. There are five fertilizer factories three located at Sadiqabad (FFC-I, FFC-II, Fatima Fertilizer Factory), while FFC-III and Engro Chemical are located at District Ghotki.

B.11 Agriculture

B.11.1 Land Tenure System

The land tenure system in Sindh has regulated ownership, tenancy and inheritance rights. The system has undergone several changes since British rule, when land was given away in large tracts to local influential community members. Recognizing the need for more equitable

distribution of agricultural land and security of tenure, the Government of Pakistan has attempted various land reforms, with varying degrees of success. With “Wadaras” (Large Landlords) unwilling to surrender their rights, haris (Landless Tenants) not in a position to exercise their rights, and the state lacking the “Will” to implement its writ, the situation has not improved. However, natural succession has resulted in some division and fragmentation of land. Agricultural land is mostly inherited and with the passage of time it is divided further and further amongst the children resulting in shrinking sizes.

A high rate of land ownership within the project area was reported by respondents during the social survey - of those farming within the project area, 90% own the land they farm, 5% are tenants and 5% are illegally farming land owned by the ID.

B.11.2 Revenue Record

Respondents were asked about the revenue record of the land they farm. Those beyond the flood embankments and outside the Col reported that they hold land revenue records for the land they farm. Those living and farming between the flood embankments (but beyond the Col) were allotted land by Prime Minister Nawaz Sharif in 1999 and hold a 99 year lease from this land.

B.11.3 Irrigation

It was observed that the farmers and land owners cultivate their land on the lift irrigation water from River Indus or installed tube wells. 70% of the project population is engaged in irrigated agriculture.

B.11.4 Cropping Pattern

The lands in project and surrounding area are fertile and farmers grow rice, sugarcane, cotton, sorghum and vegetables during the Kharif season (April to November) and wheat, oil seed, pulses and vegetables during Rabi season (April to October). Kharif crops are often flooded by the high floods in the river Indus and Rabi crops are usually sown on the residual flood moisture. Sugarcane is a cash crop and is the most commonly grown crop in the project and surrounding area due to the availability of the surrounding sugar mills making it easy to sell. The most commonly grown crops are wheat, rice, sugarcane and fodder for livestock.

B.11.5 Farm Size

The survey of the project area has shown that half of the famers in the project area own only 1 to 5 acres of land, and only a small portion owns over 25 acres as shown in the following table.

Table B-3: Landholding Status

Sr. No.	Category	Landholding Size (Acres)	No. of Landholder	Percentage
1	Very Small	1.0-5.0	1400	50.78
2	Small	5.1 -12.5	937	33.99
3	Medium	12.6 – 25	350	12.69
4	Large	Over 25	70	2.54
Total			2,757	100

B.11.6 Farm Backward and Forward Linkages

For the purchase of farm inputs and sale of crops the landlords and farmer commonly use one of the surrounding city markets located in Kashmore, Khandhkot, Ubauro, Daharki and Ghotki. The farm inputs and outputs are transported through Trucks Trailer and Tractor Trolley. The animals from the project area transported to Hyderabad and Karachi by Trucks. Sugarcane is cash crop of the area. Due to the presence five sugar mills in the project area, demand for sugar cane is high - as a result, sugar cane accounts for approximately 65% of cultivation in Ghotki and Rahimyar khan districts.

B.11.7 Animal Husbandry

Livestock and animal rearing was the second largest occupation after agriculture in the project area. Majority of the farmers hold between three to four animals, of which cow, buffalo and goats are most common. Farmers in the project area generally own high quality breeds. Livestock was the main source of milk, meat and ghee of the population. Livestock was also a source of income as people sell livestock in nearby towns. Animal feed is available in the shape of green and dry fodder. Donkeys, horses and camels are used for travelling and load carrying. The livestock population in the project area is given in the following table.

Table B-4: Detail of animals in the project area

Sr. No	Location	Buffalo	Cow	Sheep	Goat	Horses	Donkeys	Total
1	Upstream Right side	603	1192	115	625	6	67	2608
2	Upstream Left Side	1493	2620	110	2060	9	99	6391
3	Downstream right side	1032	1870	120	1439	13	91	4565
4	Downstream left side	320	520	30	270	4	11	1155
Total		3448	6202	375	4394	32	268	14719

People were asked whether they have grazing land for feeding their animals. The participants replied that a limited area surrounding the river banks are available for animal grazing. Some villages have fallow or uncultivated area for animal grazing. It is the tradition here that the individuals feed their animals by providing fodder/rice straw, wheat straw and also grow fodder crop to feed their animals.

B.12 Vulnerable groups

Groups experiencing a higher risk of poverty and social exclusion than the mainstream population are considered vulnerable groups. Vulnerable groups are often considered to include ethnic minorities, migrants, disabled people, handicapped, widows, orphans, and homeless people, those struggling to earn minimum standard of living, abused, isolated elderly people and children.

B.12.1 Landless

During the field survey it was found that landlords and *sardars* own the majority of the project area. There were found some medium size and some small size owners in the area. The majority of the rural people are landless and working as tenants to land lords owning large areas of land.

B.12.2 Impoverished

Approximately 71% of the project area falls below the official poverty line (inflation adjusted) of Rs.1406 per capita/month. The percentage of those living under the poverty line by profession is given in the following table.

Table B-5: Population in Project Area Living Below Poverty Line

Profession	% Below Poverty Line
Farming / Owners	47%
Farming / Tenant	86%
Commercial (Shop, General Store, Cold Corner, Tea Stall, etc.)	69%
Government Service	34%
Private Service	81%
General Labour	72%
Livestock	61%
Fishing	100%
Average	71%

B.12.3 Those without legal entitlements to land they occupy (encroachers)

The flood in the river Indus during 2010-2011 made many people homeless, their houses were flooded/ damaged and their animals also affected by the flood. During the floods, many of those vacated homes in the project area have encroached and illegally occupied the river banks and flood bunds by constructing religious structures, houses and establishing small business.

B.12.4 Handicapped

During the baseline survey, two handicapped boys were identified, one in village Gidu Mirani on the left side of the barrage and the other at Seendal Mazari on the upstream left side. Two polio

cases were found in village Bakshan Shah (downstream right side) and one in village Budho Khan Sheikh (downstream right side).

There are no ethnic minorities or migrant groups living within the project area.

As the population of the project area live within extended family units, widows, orphans and elderly people are living with, and are supported by members of their extended families (such as uncle, grandfather, brother, son or cousin) and are not considered vulnerable.

B.13 Women in the Project Area

The status of women in the project area is classified as low class. The result of the surveys revealed that women of the project area are fully responsible for household activities and also take an active part in the field and livestock activities, and thus support the household income generation.

Women within the project area are infrequently consulted and men commonly have the deciding power. Men usually make purchases on behalf of the female members of their family. Rural women mostly remain inside the home or work in the field. In many cases, a husband will not share his plans with his wife. Neither the survey nor the consultations identified any women who owned property.

B.13.1 Skills in embroidery

Women in the area are skilled at embroidery. Many women spend their free time in embroidering. There is the opportunity for women to use these skills for the source of income.

B.13.2 Role of women

The result of the surveys revealed that the household and farming activities were carried out by the women in the project area as under:

Table B-6: Women Role in Household Activities (Multiple Responses)

Sr. No.	Activity	Percentage %
1	Food Preparation	100
2	House Keeping	100
3	Child Caring	100
4	Collecting drinking Water	100
5	Collecting Fire wood	70

Table B-7: The Women's participation in case of Farm activities are as under

Sr. No.	Activity	Percentage %
1	Milking Animal	100
2	Home Poultry	100
3	Weeding	60

4	Vegetable Sowing/ Harvesting	60
5	Crop Harvesting	50
6	Livestock Raring	35

B.13.3 Decision making

The women of the project area have no any role in the decision making like marriage of children, sale and purchase of property, sale and purchase of animals, decision regarding schooling of children and to attend social factions. It was found during the field survey that the oldest male member of the family has a power of decision making. He determines the family interests and makes decisions with regard to the family, and in some cases the mother may also take part in decision after the death of her husband.

B.13.4 Education level

All women living within the Col were found to be illiterate. Only 2% of the women in the project area were found to be educated, and of these none had attended school beyond middle school. Of the total educated population of the project area, only 16% are female.

B.13.5 Health

The health and hygiene condition of females and children are very poor. Many diseases are identified within the Col, i.e. skin diseases, diarrhoea, hepatitis, typhoid, and flue. Many women are suffering from anaemic diseases.

B.13.6 Social Conflict Resolution

It was reported to the gender specialists that the resolution of social conflicts within the female community is in the form of the 'Panchat *System*', whereby the village heads, Nazim, political leaders and Union Council members form an assembly to hear and resolve social conflicts at the village level.

B.14 NGOs Involvement

During the field survey it was observed that only one NGO, 'Mojaz Foundation', was active in the vicinity of the project area (operating from Kashmore town). Mr. Ramesh Arora is the Chief Executive and Mr. Abdul Samad is the Project coordinator of the Mojaz. Foundation The NGO was working for flood affected families of the Rajanpur District in Punjab province. They provide shelter to the flood affected population by providing tents and wooden Dwellings.

Soofi Sachal Sarmast Welfare Association was working at Kandh kot city for the welfare of the flood affected people. Kainat Development Association was also working for flood affected people. During 2010- 2011 there was a breach in the River Indus on its right side near Kandh Kot and a vast area was flooded. NGOs Operating in the District Kashmore are shown in Table

B-8. These NGOs were working for the flood affected families but now they are looking for additional funds.

Table B-8: NGOs Operating in the District Kashmore

NGO	Working Areas	
Mojaz	Flood / Emergency Relief	Construction of Water Tanks
	Hand pump	Construction of Washrooms
	Development	Soling
Soofi Sachal Sarmast Welfare Association	Flood / Emergency Relief	Development
Kainat Development Association	Education	Food
	Construction of Washrooms	

In 2011, one NGO (HANDS) was observed working with communities in Mawa Khan and Solongy villages close to Guddu Barrage. However, it was noted in 2013 that the NGO was no longer active in the area.

B.15 Key Socio-Economic Information of Command Areas

Guddu barrage controls irrigation supplies to the Ghotki (on the left bank), Beghari Sindh and Desert Pat (on the right bank) Feeder Canal command areas. The following baseline assessment is based mainly on secondary data, and supplemented by details recorded during consultations in the command area as part of the ESIA.

A needs assessment is planned during the first year of construction as part of this Social Development Action Plan to provide further details prior to works which shall impact upon the command area (i.e. prior to works to the barrage or head regulators themselves).

B.15.1 Ghotki Feeder Canal Command Area

Ghotki Feeder Canal falls in the administrative limits of Ghotki and Sukkur Districts. Ghotki feeder canal is located in Talukas Ubauro, Daharki, Mirpur Mathelo and Ghotki of District Ghotki, and Taluka Pano Akil and Rohri of District Sukkur.

Ghotki Feeder Canal off-takes from Guddu Barrage at left bank of Indus River with a design discharge of 8,490 ft³/s. It feeds a command area of 344,014 acres. The system has deteriorated overtime becoming inefficient in delivering desired water supplies for agriculture and suffering from sedimentation in the upper reaches.

Ghotki district has two gas fields namely Mari gas field and Qadirpur gas field in Daharki and Ghotki talukas respectively. Mari gas field is comparatively bigger than Qadirpur by production. At present 65 wells are functioning and producing 400 million ft³ gas per day. A number of industries rely on the gas provided at these gas field, including a number of fertilizer factories (Engro Chemical Fertilizers, Fauji Fertilizer, Fatima Fertilizer Companies are situated at Machi Goth, Taluka Sadiqabad and District Rahim Yar Khan respectively), as well as power plants

(Engro Energy Plant situated in Ghotki, Liberty Power Plant and Fauji Foundation Power Plant are situated in Mirpur Mathelo, and the WAPDA Thermal power plant situated on the right bank of Guddu Barrage). Important means of transport and communication in the district are roads and railways. The main Pakistan Railway Line Karachi to Peshawar passes through this district and the district is also connected with the National Highway running from Karachi to Peshawar.

The project area is fertile land and served by a network of canals. The area is very rich in growing cotton, wheat and sugarcane. The other crops in the area are rice, maize, barley, jawar, bajra, tobacco, gram and barley. The main occupation of the people is agriculture. The following details were also recorded during consultations in the area:

- The groundwater is contaminated with sewerage in some areas
- Common flooding in the area has resulted in the spread of malaria, typhoid and dengue within humans and diseases within livestock
- Waterlogging is common adjacent to canals increasing the salinity of cultivated areas.

B.15.2 Beghari Sindh and Desert Pat Feeder Canal Command Area

Beghari Sindh Feeder Canal has a design discharge of 14,764 ft³/s. Beghari Sindh is a non-perennial canal and the normal closure period of Beghari Sindh Feeder from October to May, hence extended canal closure period will not make a negative effect in the canal command area. During the Rabi season (November to the end of March) ID opens the canal for 15 to 20 days for the irrigation of wheat crop. Exact time period depends upon the availability of water in Guddu Barrage. Water logging and salinity is commonly reported within the command area.

Hand pumps installed in the Beghari Sindh command area are the main source of water. Agriculture is the main source of income.

Desert Pat Feeder Canal has a design discharge of 10,000 ft³/s. Desert Pat Feeder Canal is perennial canal and supplies water for Irrigation and for drinking purposes as the ground water is very deep and saline and therefore unsuitable for drinking purposes. The population depends on the canal water for drinking, washing, cloth washing and livestock, especially in Nasirabad district of Baluchistan.

The system in the Desert Pat command area has deteriorated overtime and has become inefficient in delivering required water supplies for agriculture. Farmers commonly use pumps to lift water from the canals for their use. The major source of income in the command area is arable agriculture and from livestock. It is common for those who do not own land to keep goats, sheep, donkeys and camels to support their income.

Begari Sindh Feeder and Desert Pat Feeder Canals supply irrigation water to district Kashmore, Sukkur, Shikarpur and Larkana Districts of Sindh and Desert Pat Feeder supply irrigation water to Nasirabad District of Balochistan.

The population of Kashmore District was 662,462 persons. Kashmore is bordered by Ghotki and Shikarpur other districts in Sindh. The district is also bordered by Rajanpur and Rahim Yar Khan in Punjab, and Sui and Dera Bugti in Baluchistan. Kashmore is divided into three Talukas, Tangwani, Kandhkot and Kashmore. Kashmore is the largest rice producing district in Asia.

B.15.3 Communications in the Command Area

During the Canal Command Survey it was found that at every minor and distributary canal the respondents have mobile phones. The use of mobile phones is wildly spread in the canal command area. The service languages in the command area are Sindhi, Balochi, Urdu and Siraki. Landless male members have access to their own mobile but most of the women have no access to their own mobile.

Access to radio and TV is also wildly spread in the canal command area. The popular channels are Mehran KTN, Dharti, Sindh, Kashash , (sindhi) Awaz, AAj, Sama, Dawn news, Waqat, (Urdu) Kohnoor (Siraki).

APPENDIX C. STAKEHOLDER CONSULTATIONS

C.1 Introduction

The Government of Pakistan (GOP) as well as international donors (e.g. World Bank) place great importance on involving primary and secondary stakeholders for determining the environmental and social impacts associated with project implementation. Through a process of consultation, the knowledge and views of affected persons, NGOs, the private sector and other interested parties is taken into account in decision making. The process includes the participation of PAPs.

The consultation process presented in this ESIA was carried out in accordance with the national as well as provincial regulatory requirements and the W B policies on stakeholder consultation. The purpose of consultation was to disseminate project information among the project stakeholders and obtain their feedback regarding local knowledge of baseline, mitigation measures, perception of PAPs regarding impact significance and their views on project interventions.

As per Bank policy, comprehensive stakeholders' consultations were organised for the ESIA of Guddu Barrage Rehabilitation Project. The World Bank requires that project affected groups and NGOs are consulted at least twice, first shortly after environmental screening and second following the preparation of a draft EIA report. Initial consultations were carried out from September to November 2011 and a second round completed in November 2013. The process was initiated in 2011 with the awareness campaign by the Consultants. Consultations with stakeholders were started at commencement of the design state of the project. The decreasing capabilities of the barrage to pass super flood and reduction in design discharge of canals due to siltation were discussed. Views were taken from primary and secondary stakeholders regarding proposed interventions for the project. Information about positive and negative impacts associated with constructional and operational stage and proper mitigations of adverse impacts were shared.

The ESIA has been prepared after consultation with local communities, social capitals, NGOs and concerned government departments/organizations to ensure that their views and concerns have been taken into account in the study.

C.2 Objectives

The consultation with various stakeholders was carried out in accordance with the World Bank Operational Policy (OP4.01) with the objectives:

- To provide opportunity to those who will be impacted by the Guddu barrage Rehabilitation Project with information, including the issues, alternatives and solutions.
- Soliciting community concerns and recommendations regarding the proposed project to be addressed/incorporated into the project design to the extent possible

- To work directly with stakeholders throughout the process to ensure concerns and aspirations are consistently when making decisions.
- Sharing with the local communities the mitigation measures included in the project design to address the potential impacts.
- Promoting good will towards the project among communities for resolution of social and environmental problems

C.3 Identification of Stakeholders

Stakeholders are people, groups, NGOs, Community Based Organisation (CBOs), or institutions that may be affected by, can significantly influence, or are important to the achievement of the stated purpose of a proposed intervention. Generally, stakeholders are classified into three groups:

C.3.1 Primary Stakeholders

People or groups who are directly affected (positively or negatively) by the project are called Primary Stakeholders. In case of Guddu Barrage Rehabilitation Project the Primary Stakeholders may include;

- The general population / residents, as well as any institutions, Government departments, NGOs or CBOs within primary impact zone (Project Area –see section 3.4.2) who may be subject to direct or indirect impact on their residences or access to their workplaces during the construction period, or by any kind of project action, or who may have other interests in the project.
- Farmers of canal command area of Beghari Sindh Feeder, Desert Pat Feeder and Ghotki Feeder Canals who will be potentially impacted by this project, positively in the long term through increased efficiency and functionality of the barrage.

C.3.2 Secondary Stakeholders

People or groups who are directly affected (positively or negatively) by the project are called Primary Stakeholders. In case of Guddu Barrage Rehabilitation Project the Primary Stakeholders may include;

- The general population / residents, as well as any institutions, Government departments, NGOs or CBOs within primary impact zone (Project Area –see section 3.4.2) who may be subject to direct or indirect impact on their residences or access to their workplaces during the construction period, or by any kind of project action, or who may have other interests in the project.
- Farmers of canal command area of Beghari Sindh Feeder, Desert Pat Feeder and Ghotki Feeder Canals who will be potentially impacted by this project, positively in the long term through increased efficiency and functionality of the barrage.

C.3.3 Key Stakeholders

Those who can significantly influence a project, or who are critical to the success of a project are considered key stakeholders Key stakeholders may be from both primary and secondary

stakeholders. Key stakeholders in case of Guddu Barrage Rehabilitation Project may be local leaders, influential community members and other local representatives including Imams, and teachers of local schools.

C.4 Stakeholder Consultations (First Round)

C.4.1 Primary Stakeholders: Primary Impact Zone

C.4.1.1 Methodology

This process was started by the Consultants during September 2011 through meetings in 20 villages and consultations with an additional 11 villages during November 2011. In this process, 526 people were consulted in 31 villages as detailed in Table C-1. Mainly key informants were consulted for these meetings which were carried out in an open and frank atmosphere conducive to appreciation of the basic elements of the project and development of relocation concept. Full details of all those consulted can be found in Appendix B of ESIA. During these consultations, the primary stakeholders were briefed on the project components in details.

C.4.2 Primary Stakeholders: Fishermen

During Socio-Economic field survey it was observed that there were six fishing families residing in the Col upstream right side of Guddu Barrage. Their source of livelihood was fishing downstream of the barrage. There were other families fishing in the lakes upstream of the barrage.

The fishermen of Guddu Barrage area were interviewed during October 2013 to record their views on fishing practice.

Fisherfolk is the representative organization of fishermen in Sindh. A consultation workshop was held with the office bearers and members of Fisherfolk at Guddu fish market where representatives of other stakeholder organizations were also present (list of persons attending the consultation workshop and other persons contacted is given in Table C-2).

C.4.3 Secondary Stakeholders: Institutional Stakeholders

Meetings with institutional stakeholders including government departments and NGOs were organised to discuss project interventions and their potential impacts on the local communities. Those consulted during initial consultation are detailed in Table C-3.

In these meetings, stakeholders were informed about the salient features of the project, its location and activities. Institutional stakeholders showed their concerns and gave suggestions/recommendations for the implementation of the project.

C.4.4 Secondary Stakeholders: Worldwide Wildlife Fund –Pakistan (WWF-P)

The river stretch between Guddu and Sukkur Barrages has been declared as the Indus Dolphin Reserve to conserve Indus dolphin population (see section 6.3.3.5 of ESIA for further details). Guddu Barrage pond area is however outside this Reserve. WWF-P is undertaking an Indus dolphin Conservation project that is based at Sukkur. This consultation was also carried out as part of an exercise to investigate opportunities for the development of fisheries around Guddu barrage as part of this project. The Indus Dolphin Conservation project was visited in September 2012 to discuss the impact of enhancement of fisheries operations and fish stocking on Indus dolphin populations. The issue was discussed at length with the in charge of the project Mr. Liaqat Ali Khokhar.

Various options for enhancing the fish stocking and increased fish production were discussed. The consensus was that the increased fish production would be beneficial for dolphin populations as this would also be a measure to enhance the food supply for the dolphin

C.5 Second Round of Consultations

In compliance with Banks' Policy, second round of consultations were carried out at the draft final report stage. The proceedings of these consultations are summarised as under:

C.5.1 Primary Stakeholders: Project Affected Persons and Primary Impact Zone

C.5.1.1 Methodology

In addition to the first stage consultations completed in 2011 within the primary impact zone, second stage consultation events were also carried out in November 2013 in the project area as well as in surrounding villages. These consultations included major consultation events in seven villages, as well as household level consultations carried out during socio-economic surveys and asset surveys in 64 villages within the project area (Table C-4)

Summarised details of second stage consultations with the PAPs are included in Table C-5 and further detail is given in the following section.

Major Consultation Events

Major consultation events were typically attended by up to 20 community members and were held in the following villages:

- Punho Khan Mazari Village
- Nazir Ahmed Dasti
- Jam Mujeeb Jhak
- Sardar Saleem Jan Mazari,
- Sardar Shamsheer Khan Mazari
- Sardar Atif Hussain Mazari
- Rais Mohammad Bux Indhar (Bhung Sharif)

These villages were chosen due to the presence of influential landlords and political figures present there, in order to inform them about project works and gain their support for the social investigations and future construction works. The presence of landlords at these consultations was key as the landlords are very influential within the communities. The aims, objectives and project interventions were briefed to the participants and feedback was noted.

Full details of the major consultation events, including attendees can be found in Appendix B.2 of ESIA.

Minor Consultation Events

The consultations were carried out on the upstream right and left side of the barrage during the months of October 2013 to December 2013. All the villages within the project area were visited and some villages outside the project area were randomly selected where the participants were informed and their views about the project activities taken. The names of overall villages visited are included in Table C-4.

C.5.1.2 Findings

During the major consultations, landlords from different tribes were briefed on the details of the project, and their views and opinions sought. This was an important aspect of the consultations as these landlords are influential people within each community, and if their buy-in to the project is won, much of their community members are expected to follow. The landlords that are also politicians within the project and surrounding area who were contacted are as follows

- Mr Punho Khan Mazari
- Mr Jam Abdul Baki
- Mr Jam Mujeeb Ullah

The politicians consulted are all from the Mazari tribe (being the most dominant tribe in the project and surrounding area). Landlords from both the Mazari and Dasti tribes were consulted. The landlords and politicians who were contacted expressed their approval for the project.

Regarding the implementation of the works, the community expressed their views/concerns:

- The embankments should be raised and strengthened properly.
- International contractor should be preferred to ensure a high quality of works.
- Employment of the local community should be made during construction.
- Limitations to the mobility of woman and children was a concern.
- Contractor must observe the cultural norms of the area.
- Each consultation also discussed the law and order situation.

It was communicated that the law and order situation has been steadily improving in the area since 2011, but that care was still required to be exercised by project personnel. The politicians all offered their assistance and support in providing security, and recommended that this should be arranged through the police and rangers stationed at Guddu Barrage.

All landlords appeared receptive and keen to maintain contact with the project officials and requested introduction to the contractor when appointed.

C.5.2 Primary Stakeholders: Women in Primary Impact Zone

C.5.2.1 Methodology

The barrage consultants engaged two female gender specialists to focus on consultations with and socio-economic baseline data collection from women within the project area.

Female Consultation Events

The gender specialists organised four women gatherings in the villages of the project area in order to carry out public consultations to raise awareness of the project and elicit feedback from the female community members. The women of the area were informed about the project activities. The details of locations are given in Table C-3. During the field visits the gender specialist also participated in social gatherings of local women community.

Female Consultation Meetings

The gender specialists also carried out consultations with women in 45 villages within the project area (see Table C-6 for details). The aims of these meetings were to collect socio-economic baseline data from the female community as well as raising awareness of the project interventions and seeking feedback from the women in the project area. Detailed concerns raised and responses given during these consultations are given in Table C-11.

MM Pakistan also arranged a free medical camp at Mukhtiar Khan Mazari village (Figure C-8) with the cooperation of a local Lady Doctor (Sadia Jabeen) and a Ladies Health visitor (Khursheed Fatima). The camp served to raise awareness of the project as well as to get information of prevailing diseases in the area. Diseases such as Cough, Diarrhoea, and Malaria were observed and free medicines were given to the patients.

C.5.3 Primary Stakeholders in Canal Command

C.5.3.1 General

Those living adjacent to the canals within the command area of Guddu Barrage were also identified as project stakeholders as they represent major beneficiaries of the project interventions (as increased efficiency of the irrigation system is a major aim of the project).

C.5.3.2 Objectives

Public consultation plays a vital role in studying the effects of the Project on the stakeholders and in the successful implementation and execution of the proposed projects. Public involvement is a compulsory feature of socio-economic assessment, which leads to better and more acceptable decision-making. The general objectives of the Consultation process are:

- Provide key project information to the stakeholders, and to solicit their views on the project
- Its potential or perceived impacts,
- Information dissemination, education and liaison,
- Identification of problems and needs,
- Collaborative problem solving,
- Develop and maintain communication links between the project proponents and Stakeholders,
- Reaction, comment and feedback on proposed Guddu Barrage Project,
- Ensure that views and concerns of the stakeholders are incorporated into the project design and implementation with the objectives of reducing or offsetting negative impacts and enhancing benefits of the proposed Guddu Barrage project,
- Create a sense of ownership among the stakeholders regarding the rehabilitation works,
- Increase public confidence about the proponent, reviewers and decision makers.
- To ensure the transparency in all project activities.

C.5.3.3 Methodology

As the command area of Ghotki, Desert Pat and Beghari Sindh Feeder Canals covers an area of approximately 1.05 million hectares (2.6 million acres), including 205 separate canals, it was not possible to visit all stakeholders. Instead, consultations were held on 20% of the canals within this command area. Consultations were split between canals off-taking from the head, middle and tail of each Feeder Canal at a ratio of 5:8:12 respectively. As shortages of irrigation supplies are most common within the tail end canals, the focus of the consultations were on these tail canals as they shall be most sensitive to the project benefits and risks.

On Ghotki Feeder Canal, where Farmer Organizations (conglomeration of farmers representing the interests of a single canal) have been formed, the Consultants carried out consultations with the Farmer Organization for the selected canal. On Beghari Sindh and Desert Pat Feeder, where Farmer Organizations do not exist, individual villages were visited.

Ghotki Feeder Canal Command Area

Ghotki Feeder Canal falls in the administrative limits of Ghotki and Sukkur Districts. Ghotki feeder canal is located in Talukas Ubauro, Daharki, Mirpur Mathelo and Ghotki of District Ghotki, and Taluka Pano Akil and Rohri of District Sukkur.

Ghotki Feeder Canal off-takes from Guddu Barrage at left bank of Indus River with a design discharge of 240 Cumecs. It feeds a CCA of 855,231 ha. The grass root stakeholders consultation at Ghotki Feeder Canal were held at 17 (out of the total 73) distributary/minors canals as given in Table C-7.

In addition, the Sindh Aabadgar Board of the Ghotki & Kashmore Districts was consulted during visiting to Ghotki Command Area. This Board is comprised of elected farmers and landlords who represent farmers in the districts. The Board members meet once a month in the district committee room to discuss problems related to agriculture such as water shortage, fertilizer supply, improved seeds, pesticides etc.

Beghari Sindh Feeder Canal Command Area

Beghari Feeder Canal Fall in the administrative limits of Kashmore, Shikarpur, Jacobabad and Larkana Districts and offtakes from Guddu Barrage at right bank of Indus River with a design discharge of 418 cumecs. Beghari Sindh is a non-perennial canal and the normal closure period of Beghari Sindh Feeder is from October to May, hence extended canal closure period will not make a negative effect in the canal command area. During the Rabi season (November to the end of March) ID opens the canal for 15 to 20 days for the irrigation of wheat crop. Exact time period depends upon the availability of water in Guddu Barrage. Consultations were carried out at 19 (out of the total 91) canals on Beghari Sindh Feeder Canal, as detailed in Table C-7.

Desert Pat Feeder Canal Command Area

Desert Pat Feeder Canal falls in the administrative limits of Kashmore District of Sindh and Naseerabad District of Baluchistan and offtakes from Guddu Barrage at the right bank of Indus River with a design discharge of 376 Cumecs. Desert Pat Feeder Canal is perennial canal and supplies water for Irrigation and for drinking purposes as the ground water is very deep and saline and therefore unsuitable for drinking purposes. The population depends on the canal water for daily uses and for livestock. Consultations were carried out on 7 (out of the total 41) canals in the command area as detailed in Table C-7.

C.5.3.4 Findings

The main findings of the consultations are summarised below. Full details of the responses including pictorial records are provided in Appendix B OF ESIA.

Positive Perception

The following positive feedback was received during consultations in the command area:

- The project is necessary under the current situation of irrigation water scarcity.
- Irrigation water will increase with rehabilitation of Guddu Barrage.
- Availability of irrigation water will leave positive impacts on crop production and farmers income.
- Community showed satisfaction about the overall project activities.
- Tail end farmers were happy that irrigation water will reach at tail end.
- Income will increase and it will help in poverty alleviation.

Negative Perception

The negative feedback received which is to be addressed in the communication plan, social management plan and implementation of civil works is summarised below:

- Extended canal closure will leave severe impacts on crops, humans and livestock.
- Community of Desert Pat Feeder mentioned that population is dependent on canal water for drinking and an extended closure period would be damaging

- Extended canal closure will affect the health of domestic animals dependent on canal water for drinking purposes and will also affect their milking efficiency.
- Extended canal closure will affect agriculture labourers and small farmers.
- Female participants pointed out that their household activities will be badly affected, e.g. watering animal, washing clothes, and fetching water from canal distributaries.
- Farmers pointed out that green fodder for their animals cannot survive for more than one and half month without irrigation water.
- Some of the farmers demanded for assistance in case of crop damages.

C.5.4 Secondary Stakeholders: Institutional Stakeholders

Meetings with institutional stakeholders were organized from October 2013 to January 2014 to discuss specific issues associated with the proposed project and their potential impacts on the local and regional environment, especially on social and economic environment. In these meetings, the stakeholders were informed about the salient features of project and location of the activities. The purposes of the meetings were to:

- Inform the officials of the existence, nature of the project and the scope of work involved in the execution of the project.
- Provide a forum for the initial definition of critical environmental and social issues.
- Establish their interpretation, as official stakeholders, of the key sector development issues and linkages to the local and regional environment and social development.
- Confirmation of the suitability of the initial list of communities selected for consultation.
- Facilitation of field work.

The consultation meetings were held with stakeholders listed in Table C-8. The participants were briefed about the environmental and social aspects of the project, the expected issues and proposed mitigations. The responses of the contacted persons are given in section C-8.

C.5.5 Secondary Stakeholders: Industry

As part of the consultation process of ESIA, consultations were also carried out with representatives of the fertilizer industry, power plants, and sugar mills in the command area of Ghotki Feeder Canal.

C.5.5.1 Fuji Fertilizer Company (FFC) (Plant III) Mir pur Mathelo

The Mechanical Engineer of FFCIII Mr Shakeel Ahmed Memon reported that, to meet the fertilizer plant water requirements, water is lifted from Masu Wah canal (offtaking from Ghotki Feeder Canal) with the permission of ID. FFC pay the agreed water charges to the ID. The company has also installed fresh groundwater tube-wells for drinking as well as for the fertilizer plant. If the canal closure will be extended 15 days after the normal closure period it will not affect the normal working of the fertilizer plant. Groundwater will be used to meet the plant and staff colony water requirements.

Details of those consulted at the Fuji fertilizer plant are included in Table C-9.

C.5.5.2 Engro Fertilizer Daharki

The Mechanical Engineer of Engro Fertilizer Mr Sheikh said that they lift water from Mahi Wah for the fertilizer plant. As for the Fuji fertilizer plant, the company has installed fresh ground water tube-wells for drinking as well as for the Fertilizer Plant. If the canal closure will be extended 15 days after the normal closure period it will not affect the normal working of the Plant. Ground water will be used to meet the plant requirement.

Details of those consulted at the Engro fertilizer plant are included in Table C-9.

C.5.5.3 Fauji Foundation Plant, Daharki

The Mechanical Engineer of Foundation Power Plant Mr. M. Amjad Hussain said that they installed fresh ground water Tube-wells in the Toe of Lower Dahar Wah for drinking as well as for the Plant. If the canal closure will be extended 15 days after the normal closure period, the ground water quality will be changed and that will damage the power plant. If the canal closure period will be extended more than one week the ground water quality will be changed and could not be used for the Plant.

Hence and alternative arrangements of the flow of water should be made so that Foundation Power Plant should not suffer. As you know there is an acute shortage of power in the country. Details of those consulted at the Foundation power plant are included in Table C-9.

C.5.5.4 Tanga National Barhad (TNB) Power Plant Ghotki

The Mechanical Engineer of Power Plant Qazi Kareem Ullah said that they installed fresh ground water Tube-wells in the vicinity of Ghotki Feeder canal for drinking as well as for the Plant. If the canal closure will be extended 15 days after the normal closure period, it will not affect the normal working of the Plant. Fresh ground water will be used to meet the plant requirement. Details of those consulted at the TBN power plant are included in Table C-9.

C.5.5.5 Sugar Mills

The Public relation Officer of Qadir pur Sugar Mill, Waseem Chachar, and Sudheer Ahmed Public relation Officer of Allied Sugar Mill said that all the Sugar Mills have installed fresh ground water Tube-wells and used the ground water for drinking and the Sugar Mill requirement. Extended canal closure will not affect the operation of the Sugar Mills. Details of those consulted from the Qadirpur Sugar Mill and Allied Sugar Mill are included in Table C-9.

C.5.5.6 Pano Akil Cantonment

Major Shahid Abbasi informed the Guddu Barrage Consultant that they installed fresh ground water Tube-wells and used the ground water for drinking and other uses. They use the canal water for agriculture, Garden, loans etc. If the canal closure will be extended 15 days after the normal closure period, it will not affect the crops. Details of those consulted from the Pano Akil Cantonment are included in Table C-9.

C.5.6 Information Disclosure

The ID will disclose the summary of the ESIA to all the stakeholders before a public hearing, as part of public consultation process. The summary of the reports will be made available to the stakeholders at sites designated by Sindh-EPA in accordance with PEPA-1997. In addition, a Non-Technical Summary of the ESIA will be translated into the Urdu language by the project proponent and made available to the local communities in the Project area. This will ensure that local communities are aware of project key impacts, mitigation measures and project implementation mechanism. These summaries will also be disclosed through the official Website of ID and the World Bank.

C.5.7 Details of Consultees

The details of attendees at the consultations discussed in the preceding sections are given in the following tables.

Table C-1: Details of Focus Group Meetings Arranged for Stakeholder Consultations

Sr. No.	Village/Settlement/Goth/Basti/Disty/Minor	Location	Date	No. of Participants
1	Goth Muhammad Aalam	Within Primary impact Zone	17-09-2011	14
2	Goth Muhammad Yaqoob Soomro	-do-	17-09-2011	15
3	Goth Abdul Hakim	-do-	17-09-2011	15
4	Basti Taj Muhammad	-do-	18-09-2011	15
5	Basti Rasul Bukhsh Sheikh	-do-	18-09-2011	15
6	Basti Allah Dewaya	-do-	19-09-2011	25
7	Sher Khan Nabi Bukhsh	-do-	19-09-2011	14
8	Basti Gul Nawaz Khan	-do-	26-10-2011	10
9	Basti Shah Gaji	-do-	20-09-2011	21
10	Basti Jam Rahim Bakhsh	-do-	20-09-2011	16
11	Basti Bakht Ali	-do-	23-11-2011	23
12	Basti Bukhshan shah	-do-	14-09-2011	15
13	Mawa Khan	-do-	15-09-2011	30
14	Goth M. Sachal Solangi	-do-	15-09-2011	14
15	Goth Mehan Khan Mazari	-do-	15-09-2011	15
16	Goth Edan Khan	-do-	16-09-2011	14
17	Jaro Khan	-do-	16-09-2011	19
18	Goth Ali Nawaz	-do-	22-09-2011	7
19	Goth Abdul Rahim	-do-	24-09-2011	6
20	Goth Muhammad Sharif	-do-	25-09-2011	21
21	Goth Afzal Khan	-do-	26-09-2011	7
22	Basti Malik Hassan(left Marginal Band	-do-	25-11-2011	22
23	Basti Shello Rathani (left Marginal Band	-do-	25-11-2011	20
24	Basti Parri Khan(left Marginal Band	-do-	25-11-2011	15
25	Basti Dhigana Khan Dasti(left Marginal Band	-do-	25-11-2011	15
26	Basti Mochi (left Marginal Band	-do-	25-11-2011	22
27	Goth Gidu Marani	-do-	14-09-2011	15

28	Goth Natho Khan	-do-	22-11-2011	15
29	Goth Aurangzaib Mazari	-do-	22-11-2011	31
30	Goth Mir Muhammad Mazari	-do-	24-11-2011	15
31	Goth Imam BukhsSolongy(Dolatpur)	-do-	24-11-2011	25
Total:				526

Table C-2: Consultation with Fisherfolk representatives during October 2013

Sr. No.	Name	Position	Contact No.
1	Murtaza Mirani	Fisherman	0303-3583022
2	Iqbal Mirani	Retailer	0305-3860627
3	Mumtaz Ali Mirani	Retailer	0300-3102649
4	Baboo	District General Secretary, fisherfolk	0300-3142652
5	Karim Baksh Mirani	Fisherman & Retailer	0300-3142652
6	Azbolo Mirani	Fisherman	0302-5562566
7	Abid Hussain		0300-7008357
8	Fakir Mohammad Mirani	Contractor (Leaser fish farm)	0300-3261668
9	Pir Baksh	Taluka president	
10	Ishaq Mirani	Fisher folk president Guddu	0333-7357033
11	Mohammad Ali Shah	Fisherman's cooperative Ka	0300-3102139

Table C-3: 1st Round of Consultations with Institutional Stakeholders (17 Sep., 2011 to 24 Nov., 2011)

Sr. No.	Name	Address
A1: Sindh Irrigation Department		
1	Syed Zaher Hyder Shah	Chief Engineer Irrigation Office at Sukkur
2	Shahnawaz Bhotto	XEN, Guddu Barrage Irrigation Office at Guddu
3	Jaipal Das	XEN (Mech) Mechanical section of Guddu project
4	Ali Akbar	Assistant Executive Engineer; Q&C sub-Division Irrigation Office at Guddu Barrage
5	Nazir Ali Shahani	Assistant Executive Engineer; Regulation sub-Division, Irrigation Office at Guddu Barrage
6	Ghaffar Soomro	Assistant Executive Engineer Irrigation Office at Guddu Barrage
7	Shaukat Mahar	Assistant Executive Engineer Irrigation Office at Guddu Barrage
A2: Sindh Wildlife Department		
1	Mr. Abdul Jabbar Mirani	Wildlife inspector Wildlife department site Office at Guddu Barrage and Kandhkot
2	Mir Akhtar Hussain Talpur	In charge Indus Blind Dolphin at Sukkur Regional Office Wildlife Department Sukkur
A3: Water and Power Development Authority		
1	Abdul Aziz	Medical Officer WAPDA hospital
A4: NGO		
1	Shahzad	Finance Director NGO People in Need
A5: Forest Department		
1	Ghulam Rasool	Clerical Staff Forest Department District office Kandhkot
A6: Agri. Extension		

1	Naimat Ullah Bajarani	District Officer, Agriculture Extension Department Khandkot
A7: Fisheries Department		
1	Mr. Ghulam Mustafa Gopang	D.O, Fisheries Fisheries Department District office Khandhkot
2	Mr. Manzoor Ahmad Banjrani	DO. Fisheries Fisheries Department District office Khandhkot
3	Nazir Ahmed	Senior Clerk Fisheries Department District office Kandhkot
A8: Sindh Wildlife Department		
1	Baqa Muhammad Baloch	D.O.Game officer Sukkur Regional Office Wildlife Department Sukkur

Table C-4: Villages Visited as Part of Consultations and Socio-Economic Baseline Data Collection

Upstream Right Side	Downstream Right Side	Upstream Left Side	Downstream Left Side
Shakhelo Khan	Mevo Khan Soomro	Farman Ali Mazari	Gidu Mazari
Sher Jan Mazari	Bilawal Solangi	Allah yar Mazari	Hular Chachr
Abdul Hakim Mazari	Peeral Solangi	Araz Mohammad Mazari	Jam Allah Wasayo Chachar
Gul Nawaz Soomro	Din Mohammad Solangi	Allah Bux Mazari	
Mohammad Yaqoob	Jaro Khan Mazari	Mohammad Nawaz Malik	
Mohammad Alam	Abdul Wahid Brohi	Nawaz Khan Mazari	
Sakhi Bux Soomro	Bakshan Shah	Mohammad Punhal Mazari	
Abdul Rehman Mirani	Fateh Mohammad Solangi	Piyaro Khan Mazari	
Mohammad Sharif	Ghulam Mustafa Khoso	Hazar Khan Dasti	
Taj Mohammad Soomro	Baho Khan Mazari	Noor Hassan Dasti	
Mohammad Moosa Khoso	Kalo Khan Malik	Shabir Dasti	
Mohammad Iqbal Samejo	Mir Afzal Khan Mazari	Haji Nihal Mazari	
Araz Mohammad Mazari	Rehman Khan Mazari	Wasti Bunda	
Mohammad Sharif Mazari	Shah Mohammad Mazari	Garhi Dodo	
	Abdul Wahab Khoso	Akbar Malik	
	Dodo Khan Mazari	Mohammad Nawaz Mazari	
	Qadir Bux Kalwar	Natho Khan Mahar	
	Ghulam Qadir Solangi	Hussain Bux Malik	
	Lali Khan Mazari	Mohammad Hassan Malik	
	Ali Bux Solangi	Arab Kori	
	Hafiz Atta Mohammad	Garhi Khair Mohammad	
	Dhani Bux Mazari	Allah Wadhayo Mazari	
	Nazar Mohammad Samejo		
	Sachal Solangi		
	Ghulam Nabi Mazari		

Table C-5: 2nd Stage Consultations in the Primary Impact Zone

Sr. No.	Village	Location	Date	No. of Participants
1	Punho Khan Mazari	Village Otaq	10/11/13	20
2	Nazir Ahmed Dasti	Village Otaq	12/11/13	18
3	Jam Mujeeb Jhak	Otak of Jam Abdul Baki	13/11/13	16
4	Sardar Saleem Jan Mazari	Village Otaq	20/11/13	22
5	Sardar Shamsher Khan	Village Otaq	21/11/13	20

Mazari				
6	Sardar Atif Hussain Mazari	Village Otaq	21/11/13	18
Total:				114

Table C-6: 2nd Stage Consultations with women in the Primary Impact Zone

Sr. No.	Village	Location	Date	No. of Participants
1	Mukhtiar Khan Mazari	Downstream Left Side	27-10-2013	45
2	Bakhshan Shah	Downstream Right Side	1-11-2013	34
3	Village Chachar	Downstream Right Side	28-10-2013	28
4	Village Meerani	Downstream Right Side	29-10-2013	18
5	Mevo Khan Soomro	Downstream Right Side	29-10-2013	27
6	Meho Khan Mazari	Downstream Right Side	30-10-2013	31
7	Sachal Solangi	Downstream Right Side	05-11-2013	25
8	Abdul Rehman Meerani	Upstream Left Side	30-10-2013	22
9	Lahoti Deedan Faqeer Meerani	Upstream Left Side	31-10-2013	30
10	Farman Ali Mazari	Upstream Left Side	31-10-2013	17
11	Sharif Mazari	Upstream Left Side	01-11-2013	12
12	Ghulam Qadir Kori	Upstream Left Side	01-11-2013	32
13	Khan Mohammad Kori	Upstream Left Side	01-11-2013	25
14	Ghulam Nabi Malik	Upstream Left Side	02-11-2013	23
15	Allah Bux Manvani	Upstream Left Side	02-11-2013	20
16	Ali Bux Manvani	Upstream Left Side	03-11-2013	14
17	Meeran Bux Gopang	Upstream Left Side	03-11-2013	12
18	Mohammad Alam Meerbahar	Upstream Right Side	03-11-2013	28
19	Rab Nawaz Meerbahar	Upstream Right Side	04-11-2013	35
20	Ghulam Akbar Soomro	Upstream Right Side	04-11-2013	17
21	Arz Mohammad Mazari	Upstream Right Side	05-11-2013	13
22	Momin Shah	Upstream Left Side	05-11-2013	15
23	GidduMeerani	Downstream Left Side	06-11-2013	26
24	RaisGulanChachar	Downstream Left Side	06-11-2013	35
25	Afzal Malik	Downstream Left Side	06-11-2013	16
26	Mohammad Sharif Mazari	Downstream Left Side	11-11-2013	21
27	Gul Nawaz Soomro	Upstream Right Side	11-11-2013	26
28	Arz Mohammad Mazari	Upstream Right Side	12-11-2013	35
29	Naik Mohammad Mazari	Downstream Right Side	12-11-2013	30
30	Khano Bagri	Downstream Right Side	13-11-2013	32
31	BilawalSolangi	Downstream Right Side	13-11-2013	28
32	Allah Wadhayo Mazari	Upstream Left Side	14-11-2013	14
33	Sendhal Khan Mazari	Upstream Left Side	14-11-2013	17
34	Ghulam Rasool Malvani	Upstream Left Side	14-11-2013	22
35	Natho Khan Mahar	Upstream Left Side	15-11-2013	19
36	Mohammad Nawaz Lathani	Upstream Left Side	15-11-2013	23
37	Malik Hassan	Upstream Left Side	16-11-2013	29
38	Luqman Kori	Upstream Left Side	08-11-2013	31

39	Ghulam Akbar Malik	Upstream Left Side	16-11-2013	23
40	Arib Kori	Upstream Left Side	17-11-2013	15
41	Malik Hussain Bux	Upstream Left Side	17-11-2013	26
42	Punhal Khan Mazari	Upstream Left Side	17-11-2013	13
43	Hazar Khan Dasti	Upstream Left Side	18-11-2013	27
44	Shabir Sahib Dasti	Upstream Left Side	18-11-2013	30
45	Garhi Khair Mohammad	Upstream Left Side	18-11-2013	24

Table C-7: Stakeholders Consultation at Canal Command Area

S.#	Village	Location	Date	No. of Participants
Ghotki Feeder Canal				
1	Dilwaro Minor	Head	04-10-2013	9
2	Bori Lower	Head	04-10-2013	12
3	Kalwali	Head	05-10-2013	11
4	Saeed Pur	Middle	05-10-2013	10
5	Shah Minor	Middle	06-10-2013	10
6	Bago Daho	Middle	09-10-2013	10
7	Lundi Wah	Middle	9-10-2013	9
8	Mithiri	Middle	10-10-2013	10
9	Gaji lower	Middle	10-10-2013	10
10	Dingro Wah	Tail	10-10-2013	10
11	Barri Wah	Tail	11-10-2013	10
12	Jari Wah	Tail	11-10-2013	10
13	Sabani	Tail	12-10-2013	12
14	Kamal Wah	Tail	12-10-2013	09
15	Mubark Pur	Tail	14-10-2013	10
16	Sangrar	Tail	15-10-2013	11
17	Rohri Forest	Tail	16-10-2013	10
Beghari Sindh Feeder				
1	Gail Pur Distry	Head	24-11-2013	10
2	Gandher Distry	Head	12-11-2013	10
3	Bahadur Pur Minor	Head	24-11-2013	11
4	Noor Pur Minor	Head	24-11-2013	11
5	Hazaro Distry	Middle	15-11-2013	04
6	Choi Branch	Middle	27-11-2013	10
7	Khan Distry	Middle	28-11-2013	10
8	Zarkhail Distry	Middle	27-11-2013	10
9	Channa Distry	Middle	28-11-2013	10
10	Mirza Wah	Middle	28-11-2013	10
11	Katta Distry	Tail	30-11-2013	10
12	Dilmurad Distry	Tail	26-11-2013	07

13	Noor Wah	Tail	30-11-2013	11
14	Hazaro Distry	Tail	26-11-2013	11
15	Koureja Branch	Tail	22-11-2013	10
16	Gul Distry	Tail	26-11-2013	10
17	Seer Minor	Tail	27-11-2013	04
18	Lund Minor	Tail	27-11-2013	14
19	Eiden Minor	Tail	29-11-2013	09
Desert Pat Feeder				
1	Adio Minor	Head	24-11-2013	11
2	Old Frontier Distry	Head	12-11-2013	12
3	Risaldar Minor	Middle	13-11-2013	11
4	Mistri Minor	Middle	13-11-2013	13
5	Garhi Hassan Distry	Tail	17-11-2013	10
6	Bhutta Minor	Tail	18-11-2013	10
7	Jangu Distry	Tail	18-11-2013	10

Table C-8: 2nd Round of Consultations with Institutional Stakeholders

Sr. No.	Name of person	Address/ Position/ Contact Date	Contact #
Sindh Irrigation Department			
1	Mr. Nazir Ahmad Mahr	Chief Engineer Guddu Barrage (04-10-2013)	
2	Mr. Ghulam Farooq Chanar	S.E. Desert Pat Feeder Circle (04-10-2013)	
3	Mr. Nazir Ahmad Shahani	Sub-Divisional Officer, Guddu Barrage (05-10-2013)	0346-3394836
4	Mr. Zameer Hussain Bhangar	Chief Draftsman, Guddu Barrage (05-10-2013)	
Sindh Wildlife Department			
1	Ms. Fahmida	Director General (26-10-2013)	99204951
2	Abdul Jabbar Mirani	Inspector/Incharge Guddu Barrage (26-10-2013)	0300-9316886
Water and Power Development Authority			
1	Mr. Muhammad Yousaf Magsi	Executive Engineer (Civil), Guddu Thermal Power Station (15-11-2013)	03332258763
2	Mr. Abdul Aziz Khosoo	Sub-Divisional Officer, Guddu Barrage (16-11-2013)	03003079618
Mojaz Foundation (NGO)			
1	Mr. Abdul Smad	Project coordinator (16-11-2013)	0303-3335618
2	Mr. Rajab Ali	Office Manager (16-11-2013)	
Forest Department			
1	Mr. Anyat Mazari	Range Forest Officer Forest Department	0333-7361855
Agri. Extension			
1	Mr. Nazir Ahmed Khoso	Assistant Director Agri. Extension	0333-7362414
3	A. Rahim Chachar	Agri. Officer Agri. Extension	0333-7254113
Health Department			
1	Dr. Mushtaq Ahmed Khalwar	DMS Health Department	0333-7363960
Local Influential Persons			
1	Mr. Punoo Khan Mazari	Local Land Lord (17-11-2013)	0344-3822743
2	Nazir Ahmed Dasti	Local Land Lord (17-11-2013)	
3	Jam Mujeeb Jhak	(20-11-2013)	
4	Sardar Saleem Jan Mazari	(20-11-2013)	

5	Sardar Shamsheer Khan Mazari	(20-11-2013)	
6	Sardar Atif Hussain Hussain Mazari	(20-11-2013)	
7	M. Amir Mazari	(22-11-2013)	0334-2545587
8	Nazir Ahmed Dasti	(22-11-2013)	0334-2970628
9	Mujeeb Jhak	(23-11-2013)	0302-7618482

Table C-9: Personnel Consulted at Local Industry

Sr. No.	Name of person	Address/ Position/ Contact Date	Contact #
Fuji Fertilizer Plant			
1	Mr M Ibrahim Kiyani	Public Relation Officer	0323-7255612
2	Shakeel Ahmed Memon	Mechanical Engineer	0303-3713646
3	Mr Mansoor Ahmed Bhutto	Sub-Division Officer	0334-4469569
Engro Fertilizer Plant			
1	Mr M Ibrahim Kiyani	Public Relation Officer	0323-7255612
2	Shakeel Ahmed Memon	Mechanical Engineer	0303-3713646
3	Mr Mansoor Ahmed Bhutto	Sub-Division Officer	0334-4469569
Engro Fertilizer Plant			
1	Riaz Hussain Shah	Sectional head and Public Relation Officer	0300-8317252
Foundation Power Plant			
1	Dilawar Khan Leghari	Public Relation Officer	0723-612303
2	M.Amjad Hussain	Manager Mechanical	0302-7875388
TBN Power Plant			
1	Qazi Kareem Ullah	Mechanical Engineer	0300-8313442
2	Rasheed Siyal	Public relation Officer	0300-8319975
Pano Akil Cantonment			
1	Shahid Abbasi	Major	0321-2139624
2	Zafar Abbas	Major	0300-2988689
3	Rasheed Mahar	Major (Public relation Officer)	0333-7177758

C.5.8 Consultation Results

A summary of meetings conducted and total number of participants attended is given in Table C-10 while summary of Consultation Feedback and Responses are given in Table C-11. Detailed feedback from the first and second round consultations in the project and surrounding area can also be found in Appendix B of ESIA.

Table C-10: Summary of Consultation Meetings

Type of Consultation	Total Participant
Village wise Meetings	31 Villages (526 persons participated)
Individual Consultations	21 Political/Local Leaders/ Officials participated
Focus Group Discussions	245 persons
Canal Command Area	43 Minor/ Distributaries (431 persons)

Table C-11: Summary of Consultation Feedback and Responses

Sr. No.	Feedback Received	How they were addressed
Primary Stakeholders		
1	The contractor should be required to maintain close liaison with the local population for easy and timely resolution of issues/disputes arising during the construction stage.	The contractor shall employ a full time, qualified Community Liaison Officer for the project who is conversant with the World Bank's social safeguard policies and other community liaison issues
2	Project should ensure free mobility of all, especially women, during the implementation of the project	Contractor will be bound to avoid routes used by the women and girls as far as possible. If unavoidable, alternate routes will be identified for the women in consultation with the community
3	Proper sprinkling of water on access routes should be ensured during the construction stage to control dust pollution	Contractor will be bound to control dust pollution by regular sprinkling on dust prone areas.
4	Disturbance of the population by construction activities at night was a major concern	The noise generating activities will be avoided during night time.
5	Communities showed concerns that a non-local workforce would not be aware of local customs and norms, which may result in conflicts in the community	The Contractor shall develop a Worker Code of Conduct to govern the behaviour of workers on site, in camps, and with local communities. This shall cover cultural awareness or workers from outside the project area, a drugs and alcohol policy with information about testing and penalties for contravention, and information about communicable diseases.
6	The communities showed concerns regarding disturbance of access routes along marginal bunds during construction.	The access roads along with the marginal bunds will kept operational.
7	Existing unemployment issues in the project area	The requirement for provision of employment opportunities to residents of the project, and surrounding area, shall be included within the contract document.
8	Employment of youth on the project was requested	
9	Rights to employment of local labour in Guddu Barrage project required	
10	Schools in the project area lack furniture and staff	This issue shall be communicated to the Education Department
11	Requirement for establishment of dispensaries in the project villages.	Provision of a dispensary has been made in the EMP cost.
Institutional Stakeholders		
12	Concerns over risk of conflict between local communities and contractors labour force during construction	<ul style="list-style-type: none"> ■ The main mitigation for this impact is the preparation and implementation of the contractor's Communication Strategy. ■ This strategy shall focus on early and continued consultation by the contractor with influential figures within the project area. ■ The Communication Strategy should define a process for receiving, recording and responding to complaints and also monitoring of the success of any responsive action taken to prevent the escalation of any conflicts.

13	Construction related issues like excavated material, soil erosion and hazards for local communities and labour force should be appropriately addressed during the construction activities.	<ul style="list-style-type: none"> ■ Traffic will be limited to work areas and established tracks. ■ Access roads to be adequately compacted and/or regularly sprinkled to prevent dust generation. ■ Warning signs will be provided where access routes pass adjacent to settlements. ■ Vehicle speeds will be limited to 30km/hr. ■ Safe driving practices included in Contractor's training plan. ■ Provision and enforcement in use of all necessary PPEs (such as life jacket, safety harnesses, gloves, safety boots, hard hats, dust masks, ear protectors, safety goggles, overalls etc.) as per approved Health & Safety Plan. Measures for enforcement of use of PPEs to be included in Health & Safety Plan.
14	The endangered Indus dolphin may be impacted by project activities.	Dolphin Management Plan has been prepared and attached with report. (See Appendix K of ESIA for details)
15	Construction activities in Indus River will exert significant impacts on aquatic life	The EMP including Dolphin Management Plan cover this issue
16	Health and safety measures shall be required for the labour force	The Contractor shall be bound to employ a full time Health and Safety Officer who has a relevant qualification and experience.
17	Safe transportation of construction material should be ensured	Traffic management plan to be submitted to Engineer for approval and to include routes for delivery vehicles Flag persons to be provided where partial closure of public highway is required to maintain traffic flow
Female Consultation		
18	Due to the presence of construction personnel, mobility of women shall be impacted and they will not be able to use areas currently used for toilet needs. The construction of toilets for women in villages by the project was requested.	Avoid routes used by the women and girls as far as possible. If unavoidable, alternate routes will be identified for the women in consultation with the community
19	A mechanism for the resolution of conflicts and grievances arising during construction is required	The Communication Strategy shall define a process for receiving, recording and responding to complaints and also monitoring of the success of any responsive action taken to prevent the escalation of any conflicts.
20	Improved secondary education for girls is required	This issue shall be communicated to the Education Department
21	Concern was raised over the demolition of, or damage to, religious sites and graveyards	No religious structure will be disturbed.
22	There is an urgent need for Basic Health Units in the project area	The case will be taken up with the health department

23	Trained female health visitors should be available in the project area	
24	A maternity health care centre was requested in the project area	
Government Organization		
25	Guddu Barrage is located at the Dolphin Reserve and as such the Sindh Wildlife Department should be consulted at all stages of project intervention	Primary level stakeholder consultation has been done with Sindh Wildlife Department. Also, continued consultation with Sindh Wildlife Department and other related stakeholders shall be maintained during construction.
26	The Indus Dolphin is very sensitive to noise and turbidity	Dolphin Management Plan has been prepared and attached with ESIA report. (see Appendix K of ESIA)
27	Over fishing, use of illegally sized mesh, off season fishing, drought and industrial effluents are considered major factors resulting in the decline in population of commercial fish	These cases will be taken up with the Fisheries department
28	Fishermen are interested in developing fish farms but require the lease of suitable land	
29	Most people are in favour of fish stocking in the pond area as a step towards improving the fish stocks.	
30	Cold storage is required for preserving fish before sale or transfer to market	
31	Concerns over the impact of increased turbidity resulting from the construction and destruction of temporary cofferdams and impacts on fish movement were raised	The Environmental Management Plan covers these issues.
32	River pollution is seen as a major risk to the population of commercial fish	
Project Landlords		
33	The need for adequate security during construction was stressed	Fencing & security shall be provided by contractor at all camps. Entrance to camps shall be monitored and restricted. The contractor shall include in the Emergency Plan, a procedure for emergency evacuation of camp & practice this procedure. Contractor shall provide all staff with identity cards showing their association with the project

APPENDIX D. COMMUNICATION MATRIX – SECONDARY STAKEHOLDERS

Stakeholder (secondary)	Information/message	Communication means	Timing/Frequency	Responsibility
Project Progress	Establishment & strengthening of PMO	Reports , routine correspondence Emails website	Immediately	Irrigation department
	Approvals of ESIA, SEPA	Written approval letters from world bank and Sindh environmental protection agency	Immediately 03 months before the execution of project	PMO The World Bank Sindh Environmental Protection Agency (SEPA)
	Project Appraisal	PAD document	Immediately	The world Bank
	Clearance of COI (Relocation , resettlements and compensation of PAPs)	Project Status Reports Newsletter Quarterly progress reports including feedback of world bank aid memoir	Immediately Daily on regular basis Monthly Quarterly	PMO
	Construction of Irrigation Colony	Reports, Newsletter quarterly progress reports , project portfolio, M&E reports, website, emails, video conferencing bulletins FM radio seminars/workshops media briefings project portfolio including feedback of world bank aid memoir	PY1 Daily on regular basis Monthly Quarterly	PMO Consultants Contractor
	Earth Work i.e strengthening and raising of embankments	Reports Quarterly Progress reports, Newsletter, website, emails, missions ,video conferencing, bulletins ,FM radio seminars/workshops, media briefings project portfolio including feedback of world bank aid memoir	PY2 Daily on regular basis Monthly Quarterly	PMO Consultants Contractor
	Re- alignment of divide wall	Reports Quarterly Progress reports, Newsletter, website, emails, missions ,video conferencing, bulletins ,FM radio seminars/workshops, media briefings project portfolio project portfolio including feedback of world bank aid memoir	PY2-3 Daily on regular basis Monthly Quarterly	PMO Consultants Contractor
	Repair of Head Regulators of 03 off taking canals	Reports Quarterly Progress reports, Newsletter, website, emails, missions ,video conferencing, bulletins ,FM radio seminars/workshops, media briefings project portfolio including feedback of world bank aid memoir	PY3-4 Daily on regular basis Monthly Quarterly	PMO Consultants Contractor

	Construction of Spurs	Reports Quarterly Progress reports, Newsletter, website, emails, missions ,video conferencing, bulletins ,FM radio seminars/workshops, media briefings project portfolio including feedback of world bank aid memoir	PY2-3 Daily on regular basis Monthly Quarterly	PMO Consultants Contractor
	Replacement of Gates	Reports Quarterly Progress reports, Newsletter, website, emails, missions ,video conferencing, bulletins ,FM radio seminars/workshops, media briefings project portfolio including feedback of world bank aid memoir	PY 3-4 Daily on regular basis Monthly Quarterly Every March	PMO Consultants Contractor
	Implementation of SAP (in case of extended canal closure)	Consultations SAP Reports Progress reports, Newsletter, website, emails, missions ,video conferencing, bulletins ,FM radio seminars/workshops, media briefings project portfolio including feedback of world bank aid memoir	PY3-4 Daily on regular basis Monthly Quarterly Every March	PMO Consultants NGOs
Irrigation Department	Development of Project Documents Draft RAP, SADP, EMP, Communications strategy Project position paper,	Reports, Emails Meetings(including feedback of World Bank their consent, approvals , aid memoir project portfolio ,PAD, etc	Immediately. As and when required Regularly	PMO
	Establishment of Project Management Office , hiring of key staff	Status reports emails correspondences(letter) (including feedback of partner organizations aid memoir including feedback of world bank aid memoir	Immediately Monthly Quarterly	irrigation Department PMO
	Clearance of encroachment ,implementation of RAP	Reports Emails Correspondences (letters)(including feedback of partner organizations including feedback of world bank aid memoir,	Immediately 2months before the embankment work	Chief Engineer Guddu Barrage PMO
	Project implementation	Reports Briefings Bulletins Newsletter Website (including feedback of partner	Monthly , quarterly reports and newsletters Regular website updates	PMO

organizations , aid memoir				
District Administration of Kashmore	Project awareness (general information and SDAP, EMP, traffic management plan, pollution prevention and control plan, health & safety plan, emergency plan, code of conduct and training plan.	Consultations. routine correspondence , workshops, brushers ,emails, website,	Immediately 03 months before the execution Weekly Monthly	PMO
	RAP,	Consultation Routine correspondence Emails Reports Website Grievance Redress Committee including feedback of world bank aid memoir	Immediately 03 months before the execution and especially on selecting location for Irrigation staff colony and relocation areas to resettle PAPs Daily on regular basis At the time of cash compensations to PAPs On land acquisition if required	PMO Consultants Grievance Redress Committee
District Administration of Jacobabad, Larkana and Sukkur districts of Sindh	Project awareness (general project information, implementation, etc.)	Workshops/ seminars Brochures Emails Website	PY1 One	PMO
	Transport Management Plan. Maps of Alternative routes, EMP, traffic management plan, pollution prevention and control plan, health & safety plan, emergency plan, code of conduct and training plan	Radio Newspaper , sindhi urdu,	PY2 6 monthly As and when required	PMO
Naseerabad district of Baluchistan	Project awareness (general project information, implementation, traffic management plan, pollution prevention and control plan, health & safety plan, emergency plan, code of conduct and training plan	Consultations	Immediately	Chief Engineer Gudu Barrage
	Contingency plan and need assessment Extended Canal Closure	Consultations Reports Radio SMS Newspaper, sindhiurdu, baluchi	PY1-2-3 Regular Every March	PMO

Public Works Department (PWD), responsible for all roads and bridges.	Project awareness (general project information, implementation, traffic management plan, pollution prevention and control plan, health & safety plan, emergency plan, code of conduct and training plan	Workshops/ seminars Brochures Emails Website	At the start of execution of work Regular Monthly	PMO
	Transport Management Plan. Maps of Alternative routes, EMP	Workshops/ seminars Brochures Radio. Health Safety and Traffic control Sign Boards	PY2-3 Regular	PMO Consultant (Community Liaison Officer)
District Govt. and Rural Development Department	Project awareness (general project information, implementation, etc.) traffic management plan, pollution prevention and control plan, health & safety plan, emergency plan, code of conduct and training plan	Consultations Workshops/ seminars Brochures Emails website	immediately at the time of selecting location for Irrigation staff colony and relocation areas to resettle PAPs Regularly At the time of cash compensations to PAPs On land acquisition if required Monthly	Chief Engineer Guddu Barrage PMO
	SAP, RAP and Contingency Plan (need assessment report)	Consultations including feedback of rural development on location for resettlements, facilities and SAP	Immediately At the implementation of RAP When and as required	Chief Engineer Guddu Barrage PMO
NGOs	Project awareness (general project information, implementation, etc.) traffic management plan, pollution prevention and control plan, health & safety plan, emergency plan, code of conduct and training plan	Newsletter Workshops/ seminars Emails website	Immediately 2 months before the project execution	PMO
	SAP, RAP and need assessment for the farmers of Dessert Pat Feeder	Consultations	Immediately 2months before the project execution	PMO
Sindh EPA	ESIA, SIA,EMP, Traffic Management Plan, Dolphin rescue plan traffic management plan, pollution prevention and control plan, health & safety plan, emergency plan, code of conduct and training plan	Consultations (including feedback, consent and approvals of EPA. Public Hearing Correspondences	Immediately 03 months before the execution of project Regularly Especially at the time of realignment of divide wall	Chief Engineer Guddu Barrage PMO

Agriculture Department	Project awareness (general project information, implementation, ,traffic management plan, pollution prevention and control plan, health & safety plan, emergency plan, code of conduct and training plan	Workshops/ seminars Newsletter Emails website	PY1 Quarterly As and when required	PMO
	SAP ,contingency plan, extended canal closure	Consultations	PY2-3 Every March Regularly	PMO
Forest Department/ Wildlife	Project information (general information , implementation , EMP, RAP ,	Consultations Newsletter Emails website	PY-1 Monthly Quarterly	PMO
	Dolphin Rescue Plan	Consultations Routine correspondence Emails Reports Newsletter website	PY 2-3 Every March During extended canal closure Especially at the time of realignment of divide wall Daily	PMO Consultants NGOs
Local Leaders (religious, cultural, political)	Project information and SAP, RAP and need assessment for the farmers of Dessert Pat Feeder Employment opportunities	Consultations Routine correspondence Local newspapers	Immediately Before 03 months of execution Regularly Every March	PMO
Industries (Fauji Fertilizers, Engro Fertilizers, PanoAkil Cant, Sugar Mills, etc)	Project general information	Consultations Newsletters Local newspaper website	PY1-2 Every March Regularly Quarterly	PMO
Journalists	Project awareness and project achievements	Newspaper and television interviews	Following mobilization of each contractor (breaking ground ceremony) 0) Following completion of staff colony 1) During sheet piling works 2) During gate replacement 3) Beginning of embankment raising works 4) Commission of barrage and head regulators	PMO

Staff of PMO/ Chief Engineer

Staff	Information/message	Communication means	Timing/Frequency	Responsibility
Staff of Chief Engineer	Project awareness (general project information, implementation, etc.)	Orientation Workshop Meetings	Immediately and especially on the selecting location for Irrigation staff colony and relocation areas to resettle PAPs Monthly At the time On land acquisition if required Monthly Regularly	Chief Engineer Guddu Barrage Head of PMO
	PAD, PIP, Institutional set up and responsibility matrix	Orientation workshops Website	On finalization of PAD, PIP and institutional setup	Chief Engineer Guddu Barrage Head of PMO
	SAP, RAP, Communications strategy	Orientation workshops Website Email updates	Immediately 3months before embankments works	Chief Engineer Guddu Barrage Head of PMO
	Contingency plan, Traffic Management and Dolphin Rescue Plans	Orientation workshops Website Email	PY2-3Regularly When and where required	Head of PMO
Staff of PMO	Project awareness (general project information) Project Goal Project Objectives Project steps/ phases	Induction workshop	Immediately After establishment of PMO and hiring of staff	Head of PMO
	PAD, PIP, RAP, plan and dolphin rescue plan	Orientation workshop Website Email	Immediately After establishment of PMO and hiring of staff	Head of PMO
	Job Descriptions	Written at the time of joining with contractual document	Immediately After establishment of PMO and hiring of staff	Head of PMO
	Routine work correspondences	Written Verbal Emails	Daily	Head of PMO
	Responsibility assignment matrix	Inter office memo emails	Immediately Quarterly	Project Director
	Work plan	memos , meetings, emails	Monthly	Project Director
	Open discussions	Progress review meetings	Monthly Quarterly	Project Director
	Project Resources	All the resources required to complete the task,	Immediately Regularly	Project Director