



Sindh Water Sector Improvement Project

Resettlement Action Plan (RAP)
Contract WSIP/B1/NC/03

May 2016
Sindh Irrigation and Drainage Authority

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Sindh Irrigation and Drainage Authority

SIDA
Left Bank Barrage Colony
Hyderabad
Sindh
Pakistan

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Abbreviations

Acronym	Definition	Acronym	Definition
ACS	Additional Chief Secretary	ISEA	Integrated Social and Environmental Assessment
ADB	Asian Development Bank	IUCN	International Union for Conservation of Nature
AFs	Affected Families	LAA	Land Acquisition Act
APL	Adaptable Program Loan	LBOD	Left Bank Outfall Drain
APs	Affected Pearson	M&E	Monitoring and Evaluation
AWB (s)	Area Water Board (s)	MAF	Million Acre –Feet
BCM	Billion Cubic Meters	MD	Managing Director
BER	Bid Evaluation Report	MIS	Management Information System
BHU	Basic Health Unite	MRL	Maximum Residue Limit
BP	Bank Procedures	NAM	New Accounting Model
CAS	Country Assistance Strategy	NARC	National Agriculture Research Centre
CBC	Community Based Contract	NCB	National Competitive Bidding
CBOs	Community Based Organizations	NDP	National Drainage Program
CCA	Cultivable Command Area	NFDC	National Fertilizer Development Centre
CFAA	Country Financial Accountability Assessment	NGO	Non Governmental Organizations
Cfs	Cubic feet per second	NIP	Non Inspection Path
		NRP	National Resettlement Policy
CM	Community Member	O&M	Operation and Maintenance
CoA	Chart of Accounts	OEFC	Overseas Economic Cooperation Fund
Col	Corridor of Impact	OFWM	On-Farm Water Management
Cs	Cusecs	OP	Operational Procedure
DA	Designated Account	OPL	Official Poverty Line
DFID	Department for International Development	P&D	Planning & Development
DGAE	Director General Agricultural Extension	PAP	Project Affected People
DGAE&WM	Director General Agricultural Engineering and Water Management	PCMU	Project Coordination & Management Unit
DO	Development Objective	PDO	Project Development Objective
Dos	Direct Outlets	PFAA	Provincial Financial Accountability Assessment
DPR	Delivery Performance Ratio	PIC	Project Implementation Consultants
EA	Environmental Assessment	PIFRA	Program to Improve Financial Reporting and Auditing
EIA	Environmental Impact Assessment	PIP	Project Implementation Plan
EMF	Environmental Management Framework	PMCA	Project Management Consultant/Procurement Agent
EMP	Environmental Management Plan	PMP	Pest Management Plan
EMU	Environmental Management Unit	PP	Plant Protection
EPA	Environmental Protection Agency	PSC	Project Steering Committee
Eoi	Expression of Interest	PSR	Project Supervision Rating
ERR	Economic Rate of Return	RAP	Resettlement Action Plan

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Acronym	Definition	Acronym	Definition
ESP	Environmental and Social Plan	PRC	Project Resettlement Committee
FAO	Food and Agriculture Organization	RD	Reduce Distance
FFS	Farmer Field School	RFP	Request for Proposal Packages
FGD	Focus Group Discussion	RP	Resettlement Plan
FM	Financial Management	SA	Special Accounts
FMR	Financial Management Report	SAP	Social Action Plan
FO	Farmers Organization	SCARP	Salinity Control and Reclamation Program
GB	General Body	SEPA	Sindh Environmental Protection Agency
GCA	Gross Command Area	SIDA	Sindh Irrigation and Drainage Authority
GDP	Gross Domestic Product	SIL	Specific Investment Loan
GIS	Geographic Information Systems	SIMF	Social Impact Management Framework
GPs	Good Practices	SMP	Social Management Plan
GPN	General Procurement Notice	SOFWMP	Sindh On-farm Water Management Project
GoP	Government of Pakistan	Sq.ft	Square Fit
GoS	Government of Sindh	SWMO 2002	Sindh Water Management Ordinance 2002
Ha	Hectare	SWSIP	Sindh Water Sector Improvement Project
I&D	Irrigation and Drainage	TCP	Technical Cooperation Programmes
IAS	International Accounting Standards	TI	Transparency International
IBIS	Indus Basin Irrigation System	ToF	Training of Facilitators
IBRD	International Bank for Reconstruction and Development	ToR	Terms of Reference
ICB	International Competitive Bidding	UNDB	United Nations Development Business
ICR	Implementation Completion Report	VR	Village Road
IDA	International Development Association	WAC	Water Allocation Committee
IDMTA	Irrigation and Drainage Management Transfer Agreement	WAPDA	Water and Power Development Authority
IEE	Initial Environmental Examination	WB	World Bank
IFC	International Finance Corporation	WCA	Water Course Association
IFRS	International Financial Reporting Standards	WSIP	Water Sector Improvement Project
INTOSAI	International Organization of Supreme Audit Institutions	WTO	World Trade Organization
IP/ NIP	Inspection Path/ Non-Inspection Path	WTS	Walk Through Survey
IPD	Irrigation and Power Department	WWF	World Wildlife Fund
IPM	Integrated Pest Management	IPSNM	Integrated Plant and Soil Nutrients Management

Glossary of National Terms

Term	Definition	Term	Definition
Abiana	Irrigation water charges	Mogha	Ungated outlet from distributary/ minor or canal
Chaks or Dehs	Tertiary irrigation command area	Mohanas	A fish hunting community by profession.
Cabin	Wooden Kiosk		
Hari	Tenant	Pancho	An irrigation practice where water is let to cascade from one field to another

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Term	Definition	Term	Definition
Kharif	Summer crop season (April-October)	Rabi	Winter crop season (November-March)
Warabandi	Rotational system for water distribution	Pacca	House or building constructed with concrete or burned bricks
Semi-Pacca	House or building constructed with burnt bricks and mud	Kacha	House constructed with un-burnt bricks and mud, or temporary wooden poles etc
Jhoopra	Hut	Otaq	Formal sitting/living arrangements for men guests
Washing Ghats	Areas designed along the canal/minor for laundry purpose	Tehsil / Taluka	A sub- division of a district headed by Assistant Commissioner, generally a district comprises of 3 to 5 tehsils

DEFINITIONS OF TERMS

The following terms and definitions have been used in this report (RP):

Affected Person/People	Any person affected by sub-project-related changes in use of land, water, natural resources, or income losses.
Affected Family/Household	All members of a household residing under one roof and operating as a single economic unit, who are adversely affected by the Sub-project, or any of its components. It may consist of a single nuclear family or an extended family group.
Col (Corridor of Impact)	It is an area falling within the Right of Way (RoW) used to determine the area of specific impact from the proposed works.
Compensation	Payment in cash or in kind of the replacement cost of the acquired assets or structures.
Cut-off-date	For non-land related entitlements: The date of the start of the census survey For land related entitlements: Date of notification under section 4 of the Land Acquisition Act
Encroacher	Person who extends his/her structure beyond area of ownership into adjacent areas
Entitlement	Range of measures comprising compensation, income restoration, transfer assistance, income substitution, and relocation, which are due to affected people, depending on the nature of their losses, to restore their economic and social base.
Income Restoration	Includes re-establishing income sources and livelihood of the affected persons according to their status
Involuntary Resettlement	Any resettlement, which does not involve willingness of the persons being adversely affected, but are forced through an instrument of law.
Shops	Commercial structures, like groceries, vulcanizing shops, tailoring shops, beauty parlour, market stalls, hotels, movie houses, and similar establishments.
Indigenous Peoples	The term 'Indigenous Peoples' is used in a generic sense to refer to a distinct, vulnerable, social and cultural group possessing characteristics as defined by the World Bank Operational Policy/Bank Policy 4.10 ¹ .
Land Acquisition	The process whereby a person is compelled by a government agency to acquire all or part of the land a person owns or possesses to the ownership and possession of the government agency for public purpose in return for compensation.
Market Value	The value of an asset determined by market transaction of similar assets and finally arrived at after negotiations with the owners. It includes transaction costs and without the depreciation and deductions for salvaged building material.

¹ World Bank Operational Manual available at <http://go.worldbank.org/DZDZ9038D0>

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Marginally Affected	Land or structure means less than 10 percent of the land or structure is affected and where the remaining unaffected portion is still viable for use.
Participation	A process that allows stakeholders to influence and share control over development initiatives, decisions and the use of resources that affect them.
Sub-project Area	The area specified by the Project Document in the Official Notification and includes the areas within administrative limits of the Provincial Government.
Project Director (PD)	The officer selected by the SIDA, Government of the Sindh responsible for execution of the project.
Project Impacts	Loss of physical and non-physical assets, including houses, communities, productive land, income-earning assets and sources, use of resources, cultural sites, social structures, networks/ties, cultural identity and mutual help mechanisms.
Rehabilitation	Compensatory measures provided under the World Bank Policy Framework on involuntary resettlement other than payment of the replacement cost of acquired assets/ structures.
RoW (Right of Way)	It is an area allocated to any canal, distributary, minor road, sui gas pipeline or any high transmission line etc on its right and left sides for its safeguard, patrolling or any future development on its either side.
Relocation	The physical relocation of an AP from her/ his pre-Project place of residence or business.
Replacement Cost	The value determined to be fair compensation for land based on its productive potential, the replacement cost of houses and structures (current fair market price of building materials and labour without depreciation or deductions for salvaged building material), and the market value of residential land, crops, trees, and other commodities.
Severely Affected	Land or structure means more than 10 percent of total land or structure is affected or even less than 10 percent is affected but the remaining portion is no longer viable for use.
Squatter	People who occupy and use land without possessing it or having any legal title, or right to use/ possess the land / asset for residential or commercial purpose.
Stakeholders	Include the affected persons and communities, proponents, private and public businesses, the NGOs, host communities and other concerned departments/ agencies.
Vulnerable	The marginalized or those distinct people who might face the risk of marginalization and suffer disproportionately from resettlement effects, including the women, children, destitute persons, Encroacher/Informal Settlers; those with historical or cultural usufruct rights; and landless groups. Generally, people who are living below the poverty line are called vulnerable persons, people/family.

Executive Summary

Introduction

Development of agriculture and agro-based industries is the present need of the country. Agriculture is an important source of employment and exports (two thirds of employment and 80% of exports); irrigation represents more than 95% of the total consumptive use of water. However, this massive infrastructure is deteriorating and is in need of rehabilitation. In response to this the Government of Sindh has launched the Sindh Water Sector Improvement Project (WSIP-1) with the financial support of the World Bank to improve the efficiency of irrigation water distribution in Ghotki, Nara and Left Bank Area Water Boards (AWBs). The project is being executed through the Sindh Irrigation and Drainage Authority (SIDA) with the active involvement of AWBs and Farmers Organizations (FOs) with support from the Project Implementation Consultants (PICs). The WSIP interventions include rehabilitation of canals and existing structures, construction of new head and cross regulators, construction of buffalo wallows, provision of washing ghats and new foot and village road bridges on selected reaches of the Main, Branch, Distributary and Minor Canals.

The implementation plan for the assistance for affected persons described in this Resettlement Action Plan (RAP) is to be synchronized with the implementation schedule, including the procedure for assistance to the Project Affected Persons (PAPs) and complete disclosure of project documents to the public.

The B1 project component includes the rehabilitation of the Main and Branch Canals of the Ghotki, Nara and Left Bank Canal systems covering some 830 km of Main Canals and 1,130 km of Branch Canals. This Resettlement Action Plan covers works to Mithrao Canal under Nara Canal Area Water Board (AWB) to be implemented under contract WSIP/B1/NC/03. The proposed contract works have been prepared based on consultations with the AWB at each stage of identification, prioritization and planning. The RAP has been prepared to comply with national legislative requirements, the World Bank's loan requirements, and the Social Impact Management Framework prepared for WSIP and addresses the impacts associated with this sub-project.

Scope of Works

Following the workshop held between PIC, SIDA and Nara AWB in April 2014, the scope of works for this sub-project is as follows:

- Establishment of temporary camps for the contractor's equipment and work force
- Establishment of borrow areas

- Embankment strengthening and raising of Mithrao canal from RD 5 to RD 65 using material excavated from borrow areas
- Excavation of the existing canal berm from RD 5 to 18 in order to widen the canal bed
- Disposal of excavated material at the toes of the proposed IP and NIP
- Replacement of cross-regulators on the Mithrao Canal
- Replacement off head regulators, and realignment of head reaches of canals offtaking from the Mithrao Canal
- Construction of temporary canal diversions
- Realignment of the road at Bakhoro cross-regulator

The works detailed above constitute the proposed sub-project and are all considered within this RAP. They shall all be executed within the Government owned Right of Way (RoW), with the exception of the establishment of borrow areas and the realignment of the public road at Bakhoro cross-regulator.

Purpose of the Resettlement Action Plan

The potential for direct economic and social impacts to arise from implementation of this sub-project have been identified. This RAP has been prepared as a plan for mitigation of these impacts and to, at least, maintain living standards of those affected by the sub-project activities. It includes the findings of socio-economic studies, census survey, consultations, parameters for entitlement packages for PAPs, the institutional framework, mechanisms for consultation, grievances resolution and the implementation timeframe.

The principal objective of the RAP is to ensure that all affected persons losing assets, infrastructure and livelihood as a result of the project are eligible to receive compensation and livelihood assistance. Such compensation and assistance shall be provided irrespective of ownership of title to the land.

Policy Legal and Administrative Framework

Land based entitlements due to registered land owners are in accordance with the Land Acquisition Act of Pakistan, which also meets the requirements of World Bank Policies.

Pakistan law does not provide for the payment of compensation or livelihood assistance to PAPs who do not hold a title to the land on which they depend for shelter or livelihood. However, World Bank policy requires that all affected persons losing assets, infrastructure and livelihood as a result of a project are eligible to receive compensation and livelihood assistance, irrespective of ownership to a title to the land. To ensure compliance with World Bank policy, entitlements are provided by an Entitlement Matrix

which is based on the Social Impact Management Framework, prepared by the Government of Sindh for WSIP in 2006. This Entitlement Matrix ensures the following:

- Compensation for lost assets regardless of rights to land on which they are sited
- Valuation of assets and land at the prevailing market rate
- Assistance in relocation for any PAP, regardless of legal entitlement to the land they occupy, in the form of a cash transport allowance
- Provision of additional allowance for those who may suffer impacts to their livelihood
- Permission for PAPs to rebuilt affected assets on alternative government owned sites (without transfer of title).

The matrix was updated in April 2016 to clarify some entitlement policies based on implementation of contracts WSIP/B1/NC/01 and WSIP/B1/NC/02 and their associated Resettlement Action Plans.

Collection of Primary Data

The preparation of this Resettlement Action Plan required the collection of data and information from the field. To achieve this end, comprehensive questionnaires for data collection were prepared and filled during consultative meetings and field visits. Four types of questionnaires were developed for data collection:

- Village profile for the collection of macro level information relating to the existence of socio-economic infrastructure in the rural settlements falling within Col.
- Census survey to document the PAPs, their assets, family profiles and economic status.
- Socio-economic survey to develop an overall baseline profile of the people of the area in respect to their socio-economic behaviour, vulnerability and attitudes towards the developmental activity to be carried out in the area.
- Gender data collection survey targeting the female population of the Col exclusively in order to supplement the socio-economic data collection.

Consultations were made with the stakeholders and general public. Consultative meetings and focus group discussions were held to elicit and record the views and concerns of the local community on the proposed rehabilitation works. The concerns raised by the stakeholders were considered and engineering designs have been adjusted in order to enhance the projects acceptability for the general public on socio-economic considerations. The main objectives of the consultations were to provide a platform for the stakeholders to voice their suggestions to the project team and to develop a sense of collective ownership for the activities of the project.

Socio-economic baseline of Col

The Col for the embankment strengthening works is entirely owned by SIDA, Government of Sindh. It is noted that no agriculture is practiced within the Col, except from RD 06+000 to RD 15+000 on the Inspection Path side, where five acres of rice crop is grown on the berms of the Mithrao Canal by an irrigation daroga. However the result of the survey indicated that approximately 34 different families have constructed houses and commercial structures illegally on to the Government owned. None of these PAPs have a legal entitlement to the land they occupy.

The surveys have identified that the primary source of income for the PAPs is from shops which have been established on the embankments. Other income sources include general labour, and one family sources income from fishing. 79% of the PAPs were found to be earning below the Pakistan poverty line. Approximately 50% of the PAPs are illiterate.

The caste system is very prevalent within the Col. Each PAP belongs to a caste, and conflicts are most commonly resolved by the head of the caste. Where conflicts cannot be resolved in this way, they may be resolved by the village head, political leaders, or, as a last resort, in a court of law.

Scope of Resettlement

Under the proposed works, clearance of the entire RoW shall not be required. Instead, the Col (the area over which resettlement is unavoidable) has been set as the area between the outer toes of the proposed embankments of the Mithrao Canal and the head reaches of any offtaking canals to be realigned. Exact measurements of the Col are given in this report.

Surveys of the Col completed by PIC identified that 34 households shall lose privately owned structures situated within the Col. Of these, nine households (55 PAPs) shall lose their homes, while the remaining 25 households shall lose commercial structures which they own and operate within the Col.

The clearance of two hand pumps and three prayer platforms which are owned by the community is also required. The proposed works and construction methodology have been designed to prevent the need to remove mosques and graves.

The permanent acquisition of approximately 1.52 acres of privately owned land shall be required for the execution of the works. In addition, the contractor shall be required to temporarily acquire 227 acres of privately owned land within the sub-project area for the

purpose of establishing borrow areas. Suitable borrow areas have been identified by PIC within areas of uncultivated land which are commonly found beyond the RoW of the Mithrao Canal.

An area of government owned land, totalling 5 acres, is cultivated on the berm of the Mithrao Canal. Any standing crops at the time of the works shall be lost as a result of this sub-project.

12 Government owned sites and three hand pumps have also been established within the Col, including a Police chowki, Farmer Organisation office, SIDA office, Irrigation Department buildings and an abandoned water supply scheme. The demolition of all such structures is required prior to the implementation of embankment raising works under this project. The replacement of Government owned sites shall be managed through the construction contract and therefore no compensation is required.

Tree cutting along the canal embankments and at the proposed structure sites is also required. All trees are owned by the Government, and their replacement shall be covered in the civil works contract. Tree cutting is discussed in detail in the Environmental Impact Assessment and Management Plan for Contract WSIP/B1/NC/03.

The works shall directly impact a total of 76 households. A summary of the direct social and economic impacts resulting from this sub-project are provided in the following table. Note that the table below sorts impacts by type of loss - as a single impacted household may experience multiple losses (and therefore a single household may be reported under two or more types of loss), the total number of impacted households cannot be summed from this table.

Table ES.1: Summary of Sub-Project Impacts

Type of Loss	Application	Definition of Entitled Person	Unit	Total
Loss of Land (Unused)	Permanent loss of entire land or where partial loss but the remaining land is less than 0.5 acre or is rendered economically unviable.	Legal owner with valid title or customary or usufruct rights.	Impacted Acres (Impacted Households)	1.52 (1)
	Temporary loss of land	Legal owner with valid title or customary or usufruct rights.	Impacted Acres (Impacted Households)	227 (40)
Loss of Land (Agricultural)	Temporary loss of land	PAPs without title	Impacted Acres	5 (1)

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Type of Loss	Application	Definition of Entitled Person	Unit	Total
Loss of Land (Residential, commercial, industrial or institutional land)	Loss of residential, commercial, industrial or institutional land without sufficient remaining land. PAPs will be required to relocate.	PAPs without title	Impacted Households	34
		PAPs without title, living below the poverty line	Impacted Households	27
Loss of Privately Owned Structures (Residential, commercial, industrial or agricultural)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Owner of structure (regardless of ownership of title to land on which structure is situated)	Impacted Households	32
Loss of Structures (Community)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Community	Number of Impacted Structures	5
Loss of Structures (Institutional)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Institution	Number of Impacted Structures	15
Loss of income (trade/ livelihood/ occupation or business incomes)	Temporary or permanent loss of commercial income	Impacted business owner	Impacted Households	25

Cut-off Date

The cut-off date for eligibility for all entitlements, except land based entitlements due to registered owners, has been set as the 5th May 2014. The 05th May 2014 was the first working day of PIC field team in the field during the 2014 field visit, during which the consultants updated the impact assessment and survey of the population of the Col. Any person constructed assets in the Col after this date shall not be eligible for entitlements under this Resettlement Action Plan.

The cut-off date for eligibility for land related entitlements due to registered owners shall be the date of the section 4 notification issued under the Land Acquisition Act of Pakistan.

Public Consultation and Information Disclosure

The PAPs were made fully aware of the sub-project and Resettlement Action Plan through consultative meetings, individual and group discussions about the sub-project and the Resettlement Action Plan. During these consultations, entitlements and mitigations were discussed. Where possible, the views expressed during these consultations have been incorporated in the sub-project design and this Resettlement Action Plan. During these consultations, entitlements were discussed and agreed upon. The Entitlement Matrix included within this document reflects the agreements reached during consultations.

Compensation, Relocation and Income Restoration

Privately owned land shall be permanently acquired as per the provisions of the Land Acquisition Act of Pakistan which is compliant with World Bank policy for the purposes of land acquisition. Land to be temporarily acquired shall be rented at prevailing market rates on agreement between the land owner and the contractor.

Where PAPs without title to the land they farm shall lose standing crops as a result of the sub-project, they shall be compensated at a per acre rate based on the average yield and average value of cultivated crops in the sub-project area.

All structures situated within the Col are built on Government land. Therefore, owners of the houses, shops and other structures do not own a title to the land on which these structures are located. The affected households are permitted to rebuild their structures at alternative government owned sites (but without the transfer of title to ownership of this land). Such sites have been identified as part of this RAP. The project shall not provide any land preparation at these sites. These PAPs are also entitled to a transport

allowance (regardless of whether they have opted to move to a government owned site or not). Where the affected household is living below the poverty line, the household shall also be provided an additional Low Income Allowance.

Owners of structures which are to be removed from the Col are eligible for compensation to rebuild the affected structure, regardless of whether they own the land on which the structure is situated or not. Structure valuations are based on prevailing local market rates.

For those PAPs owning commercial structures within the Col, a Livelihood Allowance shall be paid. This allowance shall be equal to three times the monthly income of the household, or equal to the equivalent of three months minimum wage in Pakistan, whichever is greater. This allowance is intended to compensate for any lost income during transition, relocation and reconstruction of their businesses.

Where community structures are to be impacted, PAPs have indicated their preference to be compensated for this loss. Valuation of these structures is as for privately owned structures.

All compensation rates have been calculated based on prevailing markets rates, with inflation to 2016 values where appropriate.

Impacted government structures shall be reconstructed under the civil works contract.

Institutional Framework

A strong institutional framework is already in place under WSIP for the implementation of this Resettlement Action Plan. SIDA will be responsible for implementing the RAP and coordination with relevant parties, including the Board of Revenue. SIDA may delegate some responsibilities to the AWB, however, SIDA shall remain responsible for ensuring all actions are implemented. With the exception of temporary land acquisition and reconstruction of government structures, compensation will not be part of the civil works contract but shall be paid by SIDA.

The disbursement of compensation and allowances, vacation of the Col and the permanent acquisition of land, shall be fully implemented prior to the mobilisation of the contractor for the works in order to prevent any delays to construction.

A Grievance Redress Committee shall be formed to provide a mechanism to mediate conflict and cut down on lengthy litigation. The Grievance Redress Mechanism will

provide a forum to people to raise objections or concerns about project impacts and their mitigations.

Resettlement Budget

The total cost for the implementation of this Resettlement Action Plan is estimated to be PKR 7,490,711 (USD 74,907). This includes compensation to PAPs, permanent land acquisition costs, cost of monitoring and evaluation, training and administrative costs.

Monitoring and Evaluation

SIDA shall complete internal monitoring of implementation of the RAP in close coordination with the Environmental Management Unit (EMU) of SIDA. Internal monitoring shall be supplemented by external monitoring and evaluation by the Monitoring and Evaluation Consultants for WSIP. A monitoring framework is provided in this RAP.

1. Introduction

1.1 The Indus Basin Irrigation System

In order to fully utilize the river water resources of Pakistan, the Indus Basin Irrigation System (IBIS) has emerged as the largest contiguous irrigation system in the world. Irrigated agriculture within the IBIS provides not only food security to the country (supplying 90% of food production²), but also economic growth (accounting for over 25% of the country's Gross Domestic Product and 44% of employment in 2013³). The Indus River is therefore a critical resource for Pakistan.

The IBIS comprises of three large dams, eighty five small dams, nineteen barrages, twelve inter-river link canals, forty-five canal commands and 0.7 million tube wells. The IBIS irrigates 18.21 million hectares (45 million acres)⁴ of farm land producing wheat, rice, fruits, vegetables, sugarcane, maize and cotton for local use as well as for export.

Sindh province is the second biggest beneficiary of the IBIS (after Punjab) with three barrages and 14 canal commands. The irrigation system has a total length of 19,066 km (11,916 miles) of canals, which serve a gross command area (GCA) of 5.8 million ha (14,391 million acres). There are about 42,000 watercourses (tertiary channels), which have an aggregate length of approximately 120,000 km (75,000 miles) which supply irrigation water directly to agricultural land. Approximately 59 billion cubic meters (48 million acre-feet) or of water is diverted annually to the canal commands. Yet the province suffers from low water availability and land productivity².

1.2 Sindh Water Sector Improvement Project

1.2.1 Objectives

The Government of Sindh has launched the first phase of Water Sector Improvement Project (WSIP) with the financial support of the World Bank (WB). The overarching project objective is to improve the efficiency and effectiveness of irrigation water distribution in three areas of the Sindh Province, namely the Ghotki, Nara and Left Bank Area Water Boards (AWBs). Improvement is measured with respect to reliability, equity and user satisfaction.

1.2.2 Components of WSIP

WSIP is intended to begin addressing these complex issues with an optimal mix of institutional strengthening, capacity building and investments in irrigation infrastructure. As such, WSIP is being implemented in different phases, mainly, through the Sindh Irrigation and Drainage Authority (SIDA) and AWBs.

Phase-1 of WSIP consists of following separate components:

- Component A: Community Development and Capacity Building
- Component B: Rehabilitation and Improvement of Irrigation and Canal Systems

² Project Appraisal Document on a Proposed Credit to Pakistan for a Sindh Water Improvement Phase 1 Project, World Bank, 2007

³ World DataBank, World Bank, <http://databank.worldbank.org/data/home.aspx>, [accessed 13/01/15]

⁴ <http://www.tbl.com.pk/indus-basin-irrigation-system-of-pakistan/>

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- Component C: Management Plan for Major I&D Infrastructure
- Component D: Monitoring and Evaluation of the Project Impact and Environmental Management Plan; and
- Component E: Project Coordination, Monitoring, Technical Assistance and Training

Poor operation and maintenance in the irrigation sector has necessitated investment into the rehabilitation of irrigation systems in the Nara, Ghotki and Left Bank AWBs. These rehabilitation activities are included within Component B of WSIP, which has been sub-divided into two further sub-components: B1 (rehabilitation of Main and Branch Canals) and B2 (rehabilitation of Minor and Distributary Canals). Under each sub-component, a number of rehabilitation packages (sub-projects) have been prioritised, designed, let, or are to be let as individual construction contracts.

An Integrated Social and Environmental Assessment (ISEA) was conducted for WSIP at the feasibility stage by the Government of Sindh in 2006, and includes a Social Impact Management Framework to be implemented for WSIP.

In accordance with the Social Impact Management Framework, this Resettlement Action Plan has been prepared for Contract WSIP/B1/NC/03, Rehabilitation of Mithrao Canal, which is a sub-project to be implemented within the Nara AWB under component B1 of WSIP.

1.2.3 Project Administration

WSIP is being implemented under a sector loan agreement between Government of Pakistan (GoP) and the WB. SIDA is the project proponent and is executing the project through the Nara, Ghotki and Left Bank AWBs under the supervision of Project Director (WSIP). The Project Coordination and Monitoring Unit (PCMU), sitting within the Planning and Development Department of the Government of Sindh, is responsible for overall monitoring and coordination of the project implementation activities.

The association of Mott MacDonald Ltd and MM Pakistan (Pvt) Ltd was appointed in 2009 by the Managing Director of SIDA as the Project Implementation Consultants (PIC) for WSIP phase 1. PIC were appointed to assist SIDA in the implementation of WSIP, including undertaking the detailed designs, environmental assessment, environmental management plans, resettlement actions plans, procurement of works and construction supervision for the rehabilitation works proposed under component B.

1.2.4 Works under WSIP Component B1

Improvement works under component B1 include remodelling of the Main and Branch canals on the basis of their sanctioned discharge, strengthening of embankments, rehabilitation and reconstruction of regulating structures, installation of gauges and flow measurement structures, rehabilitation and reconstruction of bridges where necessary, planting of trees and any other crucial rehabilitation works identified during the design period.

Two sub-projects have already been implemented within the Nara AWB: Contract WSIP/B1/NC/01 (Rehabilitation of the Upper and Lower Nara Canals) and Contract WSIP/B1/NC/02 (Rehabilitation of Makhi Complex and Khipro Canal).

A third major sub-project within the Nara AWB, Contract WSIP/B1/NC/03, is planned for the rehabilitation of the Mithrao Canal. A further two major sub-projects have been identified: Contract WSIP/B1/GF/01 (Rehabilitation of Ghotki Feeder Canal in the Ghotki AWB); and, Contract WSIP/B1/LB/01 (Rehabilitation of Fulleli Canal in the Left Bank AWB).

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The detailed designs for Contract WSIP/B1/NC/03, Contract WSIP/B1/GF/01 and Contract WSIP/B1/LB/01 are complete. The preparation of the Environmental Impact Assessments (EIAs) and Environmental Management Plans (EMPs) are complete, and Resettlement Action Plans (RAPs) for each sub-project are under finalisation.

1.3 Contract WSIP/B1/NC/03: Rehabilitation of Mithrao Canal

1.3.1 General

Contract WSIP/B1/NC/03 ('the sub-project') of B1 component is to be carried out within the Nara AWB and includes embankment strengthening and raising and canal widening for 18km (60 RD) of the Mithrao canal together with the rehabilitation or replacement of 9 and 22 cross regulators and head regulators respectively on the Mithrao Canal. The canal shall also be widened from RD 5 to 18 through excavation of the berm. In accordance with design, the majority of the proposed civil works activities will remain within the Government owned Right of Way (RoW), thus minimum disturbance and relocation is envisaged.

1.3.2 Sub-project Area

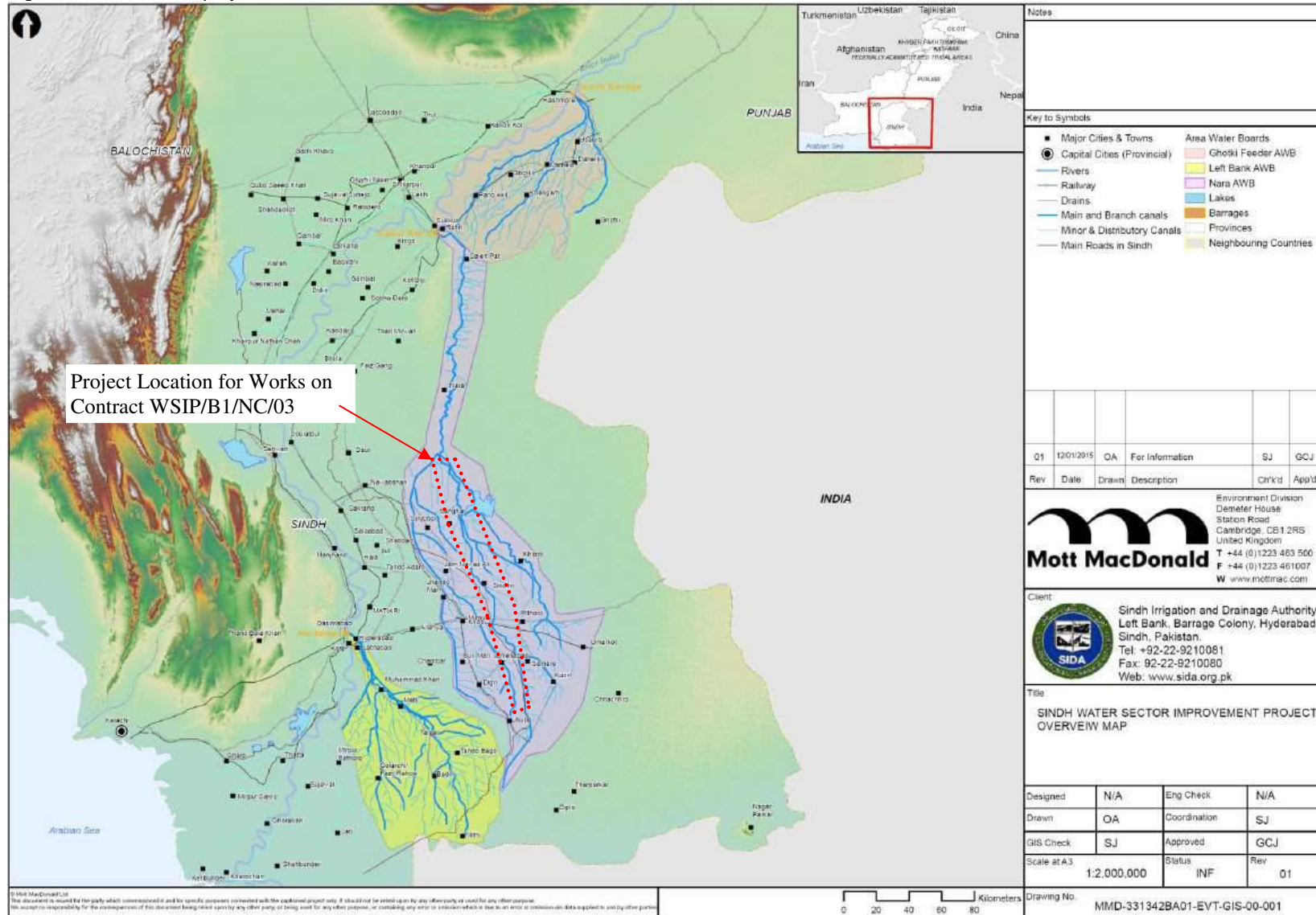
The Mithrao Canal offtakes from the Lower Nara Canal at Makhi Weir, approximately 9km (6 miles) north east of the town of Sanghar. The Nara Canal was a tributary of the River Indus and was modified as a canal in the nineteenth century. The total length of the Nara Canal is 170km from Sukkur Barrage where it offtakes from the River Indus, to its southern extent.

The Mithrao Canal is approximately 34m (112ft) wide at its head, reducing to 15m (49ft) at the tail. The total length of the canal is 128km (80 miles). Administratively the sub-project area lies within the districts of Sanghar, Mirpurkhas and Umerkot.

The sub-project area is shown in the following two figures.

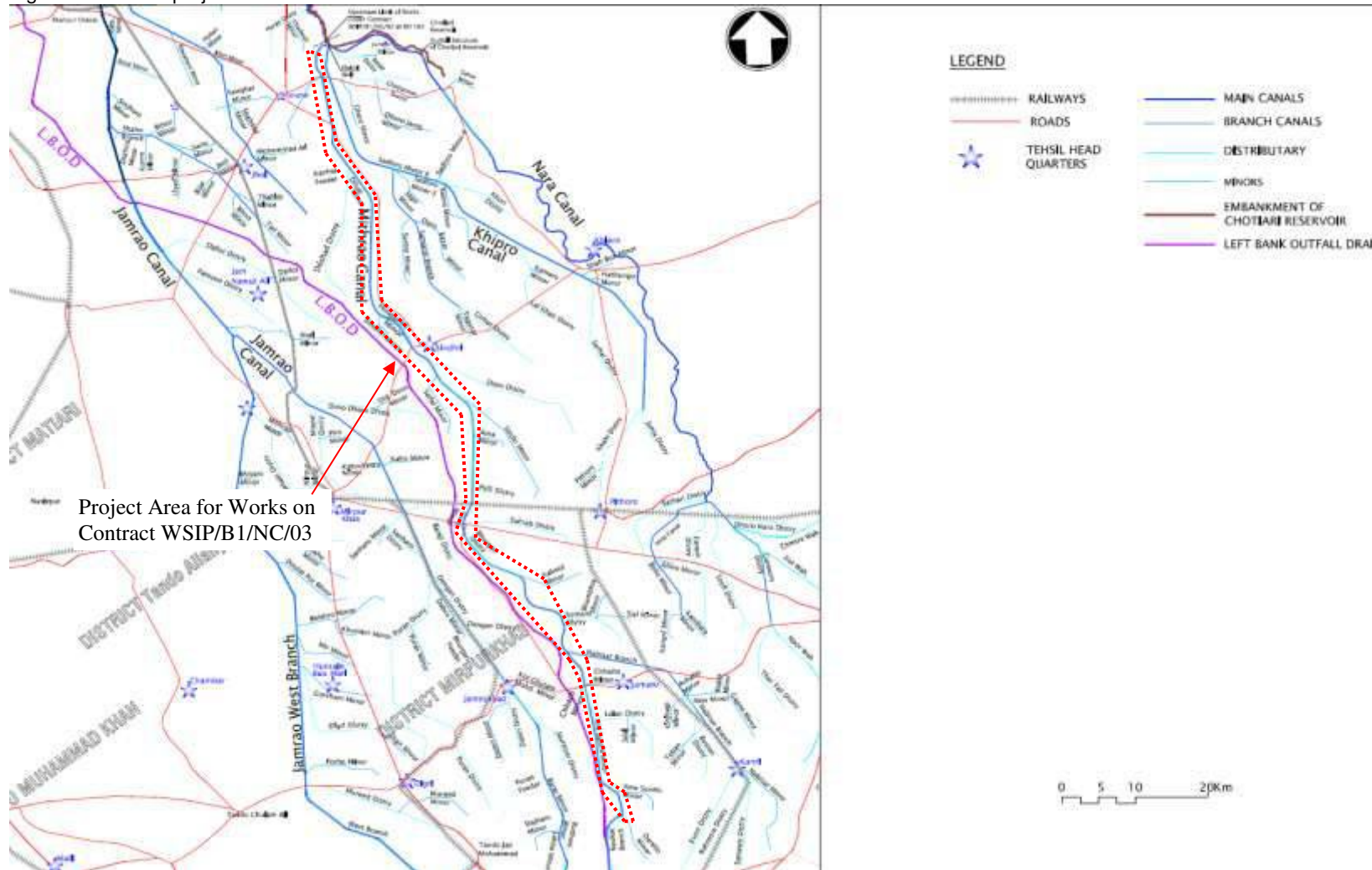
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Figure 1.1: Sub-project Location for Works on Contract WSIP/B1/NC/03



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Figure 1.2: Sub-project Area for Works on Contract WSIP/B1/NC/03



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1.3.3 Sub-project Objectives

The sub-project interventions will be executed by a Contractor, selected through the International Competitive Bidding (ICB) process. The proposed engineering interventions are aligned with the objectives of WSIP as follows:

- **To ensure authorized discharge flow requirements:** Due to deferred maintenance of structures and embankments, the Mithrao Canal irrigation system is in poor condition and is unable to sustain a safe running of the authorized discharge. The rehabilitation works have been designed to enhance the water carrying efficiency of the system through rehabilitation of the canal prism, and equitable distribution of water from head to tail through the rehabilitation of regulation structures.
- **To ensure equitable resource distribution:** The poor maintenance of hydraulic structures is leading to lack of fair distribution of irrigation water. All structures will be rebuilt to ensure transparent and equitable distribution of water.
- **To protect interests of the community:** Replacement of regulating structures will benefit the community's agricultural interest and ensure canal crossings which are used by the public are maintained at the regulator sites (cross-regulator structures are also designed to carry public road crossings)
- **To meet irrigation system safety standards:** The civil work activities include reconstruction of channel banks and berms, inspection paths and strengthening of the non-inspection path bank. This shall reduce the risk of canal breaches. Hydraulic structures shall also be provided with sufficient freeboard (distance from water level to deck level) to prevent flooding of public crossings and sufficient guards to prevent vehicles or members of the public entering the canals.

1.3.4 Type and Category of Sub-project

It is anticipated that the sub-project may have some adverse social impacts associated with the displacement of a number of residential and commercial structures as well as to income. The most significant impact is loss of source of livelihood.

The Mithrao Canal has a culturable command area of approximately 270,000 hectares (667,000 acres). Within this command area, agriculture is practiced to a large scale. Assuming an average farm size of 3.1 ha (7.6 acres) per family and an average family size of 6.8 persons⁵, it is determined that approximately 597,000 people are directly or indirectly dependent upon the irrigation water supplied through the Mithrao Canal.

Any major impact resulting from the sub-project, such as disruption of irrigation flows, has the potential to impact the large number of people who are dependent of the irrigation flows. This impact would be potentially unprecedented over an area far broader than the immediate sub-project area itself.

As a result of the potential impacts detailed above Contract WSIP/B1/NC/03 is categorised as a Category A project.

1.3.5 Need of Study

World Bank funded projects require a RAP for any project that results in involuntary land acquisition or related impacts. The scope and level of detail of resettlement planning will vary with circumstances,

⁵ Project Appraisal Document on a Proposed Credit to Pakistan for a Sindh Water Improvement Phase 1 Project, World Bank, 2007

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depending on the projects complexity and the magnitude of its effects. As a minimum requirement the RAP must ensure that the livelihood of PAPs is restored to pre-project level. As the proposed Contract WSIP/B1/NC/03 has social and resettlement issues a RAP has been prepared to address these issues.

The WB seeks to promote the improvement of the living standards of PAPs. Thus, resettlement activities should result in visible improvements in the economic conditions and social well-being of affected people and communities. The WB Involuntary Resettlement Policy (OP- 4.12) applies under all conditions of potential physical or economic displacement resulting from the acquisition or use of land and other assets for a project regardless of the total number of people.

Physical displacement could bring about disruption and impoverishment to communities. Therefore it should be avoided or minimized by exploring all viable alternatives. If displacement is inevitable, compensation plans should be developed in the early stages of the planning process of the project.

This document forms the RAP for the sub-project to be implemented under Contract WSIP/B1/NC/03. The RAP is a substantial component of any development project that causes a change in the existing land use patterns or requires the resettlement of people or businesses. Projects related to canal rehabilitation may cause a series of resettlement effects. The need for resettlement mostly arises due to the clearance of an area of land to enable the execution of construction works, or as a result of land acquisition through expropriation or other regulatory measures. During this process houses, community structures and systems, social networks and social services may be partially or completely and temporarily or permanently damaged.

This RAP has been prepared to highlight the social consequences of rehabilitation activities in the Corridor of Influence (CoI) of the sub-project and propose appropriate measures to reduce the adverse effects. This RAP has been prepared in according to the Social Impact Management Framework for WSIP, Pakistan Government Policy and World Bank Policy.

This document forms Volume I of the RAP. Volume I should be read alongside the Volume II of the RAP: Socio-Environmental Baseline and Impact Maps, which also acts as Volume II of the EIA/EMP for this contract.

1.3.6 Objectives of the Resettlement Action Plan

The potential for direct economic and social impacts to arise from implementation of this sub-project have been identified. As such this RAP has been prepared as a plan for mitigation of these effects and to, at least, maintain living standards of those affected by the sub-project activities. It includes the findings of socio-economic studies, census survey, consultations, parameters for entitlement packages for PAPs, the institutional framework, mechanisms for consultation, grievances resolution and the implementation timeframe.

Development projects that displace people involuntary can generally give rise to economic, social and environmental problems. Involuntary resettlement may cause severe long term hardship, impoverishment and environmental damage without the application of appropriate measures to mitigate these impacts. This RAP provides details regarding the likely impacts resulting from the sub-project intervention and the mitigation measures that will be adopted to address these adverse impacts.

The principal objective of the RAP is to ensure that all affected persons losing assets, infrastructure and livelihood as a result of the project are eligible to receive compensation and livelihood assistance. Such compensation and assistance shall be provided irrespective of ownership of title to the land.

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The following are the specific objectives of this RAP:

- Identify specific social and resettlement impacts of the sub-project by types and their mitigation
- Identification of those to be directly impacted as a result of sub-project implementation
- Present a strategy for achieving the objectives of the World Bank policy and the Social Impact Management Framework for WSIP
- Provide a framework for implementation of strategies to ensure timely acquisition land, payment of compensation and delivery of other benefits to PAPs.
- Provide details on the policies governing land acquisition and other direct impacts, the range of entitlements to improve the living standards, income earning capacity and production levels of PAPs or at least restore them to pre-sub-project levels.
- Provide details on the public information consultation and participation and grievance redress mechanism in sub-project planning, design and implementation.
- Identify and provide an estimate of required resources for implementation of recommended strategies, including monetary budget
- To provide a framework for supervision, monitoring and evaluation of implementation of this RAP.

2. Policy, Legal and Administrative Framework

2.1 Introduction

This chapter provides an overview of the relevant donor (World Bank) policies, Pakistan laws and the Social Impact Management Framework (SIMF) prepared for WSIP with which this RAP complies.

2.2 Pakistan Legal Framework

2.2.1 General

The Land Acquisition Act (LAA) of 1894 is the main law regulating land acquisition for public purposes in Pakistan. Each province has its own interpretation of the LAA, and some provinces have issued provincial legislations. The LAA and its implementation rules require that following an impact assessment and valuation effort, land and crops are compensated in cash at market rate to titled landowners and registered land tenants/users, respectively. The LAA mandates that land valuation is to be based on the latest 3-5 years average registered land sale rates though, recently, the median rate over the past 1 year, or even current rates, were applied in some cases. Due to widespread practice of land under-valuation by the Revenue Department, current market rates are now frequently applied, plus 15% Compulsory Acquisition Surcharge as required under the LAA.

Based on the LAA only legal owners and tenants registered with the Land Revenue Department or possessing formal lease agreements, are eligible for compensation. Users of the Rights of Way (RoW) are not considered "affected" by project activities and thus not entitled to any mitigating measure, compensation, or livelihood support. Also, there is no legal obligation to provide compensation to title-less land users, unregistered tenants or encroachers either in form of house-for-house or land-for-land replacement, or in form of cash.

The LAA also does not automatically mandate for specific rehabilitation/assistance provisions benefiting the poor or vulnerable groups, nor does it automatically provide for income/livelihood losses, resettlement or rehabilitation expenses. 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.

2.2.2 The 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. Also, 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 AP (Share-croppers, squatters).

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The exceptions to the rule can be explained by the fact that the law is not rigid and is broadly interpreted depending on operational requirements, local needs, and socio-economic circumstances.

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.

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

Section 3

According to 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 Government of Sindh 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 the 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 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.

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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 Irrigation Department of an enquiry under section 11 of the Act for the determination of claims and objections. The Irrigation Department 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.

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Sections 13 and 14

Sections 13 and 14 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.

Land Acquisition under the Proposed Sub-project

The execution of the sub-project shall require the permanent acquisition of approximately 1.52 acres of privately owned land at RD 18+000 NIP side of Mithrao canal. The cost of the permanent land acquisition

will be borne by the project proponent. Temporary land acquisition will be required for borrow material - the contractor will be responsible for temporary land acquisition. The contractor shall pay a monthly rent as per market value (or any other value as agreed with the land owner or registered tenant) to the land owner or registered tenant. The contractor shall repair or replace any damaged assets on private land at his own cost or else compensate the owner for the damage or loss.

2.3 Lender Policy

2.3.1 World Bank's Involuntary Resettlement Policy (OP 4.12)

2.3.1.1 General

The World Bank lays down policy guidance for the projects and programs that affect the human population to ensure that local residing people benefit from development projects and adverse effects on human environment caused by the project can be avoided or mitigated. Under the above policy displaced persons of development projects are entitled to compensation regarding loss of land, structural assets, access to assets, crops, livelihood activities etc. A social assessment has been carried out to evaluate the project's potential positive and negative/adverse effects on the people and to examine project alternatives where adverse effects can be minimized.

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 resettlement policy framework, in order to address the involuntary resettlement.

For the proposed sub-project, livelihood of some affected persons may be affected due to their dislocation from their existing location.

In view of the above, the OP 4.12 will be triggered; this RAP has been developed in accordance with this OP.

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

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- 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 would be adopted regarding PAPs;

- Inform about options and rights pertaining to resettlement matters
- Consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives
- Provide prompt and effective compensation at full replacement cost for losses of assets attributable directly to the sub-project
- Provide assistance such as moving allowances during relocation; and offer 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
- Provide with development assistance
- Counselling in respect of credit facilities, trainings, or job opportunities; and
- Measures to assist the displaced persons in their efforts to improve their livelihoods, or at least to restore, in real terms.

2.3.1.2 Criteria for Eligibility

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

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 a RAP⁶
3. Those who have no recognized legal right or claim of the land they are occupying

Persons covered under criteria 1 and 2 above are provided compensation for the land they lose and offered alternative resettlement sites, while those under criteria 3 are offered resettlement assistance in lieu of compensation for the land they occupy. 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.

All affected persons losing assets, infrastructure and livelihood as a result of the sub-project are eligible to receive compensation and livelihood assistance irrespective of ownership of title to the land.

2.3.1.3 Disclosure

In accordance with OP 4.12, the Government of Sindh shall provide the World Bank with a copy of this RAP. Following clearance by the World Bank, this RAP shall be made publically available by the World

⁶ No such process has been identified for this sub-project in this RAP.

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Bank and be published on the WSIP website (www.wsip.com.pk). The RAP shall also be translated by the project proponent (SIDA) into Sindhi and Urdu and be made publically and freely available at the following locations:

- SIDA office at Hyderabad,
- AWB office at Mirpurkhas,
- Mithrao Canal, RD 18 – Irrigation Office
- Mithrao Canal, RD 65 – Regulator’s operation room
- Mithrao Canal, RD 137 – Regulator’s operation room
- Mithrao Canal, RD 175 – Regulator’s operation room
- Mithrao Canal, RD 252 – Regulator’s operation room
- Mithrao Canal, RD 318 – Regulator’s operation room
- Mithrao Canal, RD 384 – Regulator’s operation room

The latter seven locations are all situated within the sub-project area, and shall therefore be easily accessible to PAPs.

2.3.2 World Bank Policy on Access to Information

The World Bank allows access to any information in its possession (with exceptions, such as where such information could cause harm to specific parties or interests). The policy is based on the following five principles:

- Maximizing access to information;
- Setting out a clear list of exceptions;
- Safeguarding the deliberative process;
- Providing clear procedures for making information available; and
- Recognizing requesters’ right to an appeals process.

Exceptions to access to information include:

- Personal information (of Bank staff)
- Communications within and between Governors and/or Executive Directors’ Offices
- Proceedings of the World Bank Ethics Committee
- Information subject to Attorney-Client Privilege
- Information which may compromise the safety and security of individuals, the environment and assets and documents belonging to the World Bank or its staff
- Information restricted under separate disclosure regimes or investigative information
- Information provided to the World Bank in confidence
- World Bank corporate administrative matters
- World Bank deliberative information
- Some financial information

All other information held by the World Bank is to be made available in accordance with the World Bank Access to Information Policy⁷. Where access to information is denied, the requester may file an appeal where the World Bank has violated this policy, or there is a public interest case to override the exceptions to the policy.

⁷ Available at <https://policies.worldbank.org/sitepages%2FExtranetAppPage.aspx?url=ExtranetPreviewPage&docid=3797>

2.4 Review of Government and World Bank Resettlement Policies

2.4.1 Comparison of Policies

The World Bank Operational policy explicitly makes adequate provision for the affected persons who are either displaced or suffer losses, as a result of development project to be catered for. Livelihoods of persons to be affected must be prevented 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 and economic livelihoods.

Land Acquisition Act, 1894 makes provision for compensation to be paid to only affected persons having suffered any loss and can produce any form of title that is legal in form of occupancy, ownership or legally binding tenancy agreement to the land in question. However, the World Bank policy accepts all forms of losses without exception to be catered for.

The World Bank policy requires that the persons affected by any development project be assisted during their transition period in the resettlement site and efforts made to restore their livelihoods whereas the Land Acquisition Act, 1894 is silent on that. The table given below highlights some comparison between the Land Acquisition Act, 1894 and the World Bank Policy on Involuntary resettlement.

Table 2.1: Comparison of Pakistan's LAA and WB Resettlement Policy

Pakistan's Land Acquisition Act, 1894	WB Involuntary Resettlement Policy
Land 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 sharecrop/lease tenants.	Crop losses compensation provided to landowners and sharecrop/lease tenants whether registered or not
Land valuation based on the market value of the land at date of publication of section 4 notification (refer to section 23 of the LAA)	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 (GRC), 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 get aware of the same	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 persons, or resettlement expenses	The WB policy requires rehabilitation for income/livelihood, for severe losses, and for expenses incurred by the PAPs during the relocation process.

2.4.2 Remedial Measures to Bridge the Gap

In principle, Pakistan's Law and World Bank 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 the local governments and the specific project proponents. To clarify these issues and reconcile eventual gaps between Pakistan's Law and WB Policy, this RAP for the rehabilitation of the Mithrao Canal sub-project has been prepared which ensures the following:

- Compensation for any privately owned land lost as a result of the works

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- Compensation for lost assets regardless of rights to land on which they are sited
- Valuation of assets and land at the prevailing market rate
- Assistance in relocation for any PAP, regardless of legal entitlement to the land they occupy, in the form of a cash transport allowance
- Provision of additional allowance for those who may suffer commercial losses'

This RAP is prepared in compliance with World Bank Operational Policy and Bank Policy 4.12 as well as national laws.

2.5 WSIP Social Impact Management Framework

The section of Social Impact Management Framework (SIMF) relevant to preparation of this RAP is summarised here. The SIMF was prepared for WSIP by the Government of Sindh and cleared by the World Bank in 2006. This RAP has been prepared in accordance with this SIMF with amendments to the SIMF where required to meet updated World Bank policies.

The SIMF provides the overall guidance on process and procedure required for addressing social impacts caused by the sub-projects and for social screening and preparation and implementation of RAPs, and/or other mitigation plans as necessary. The SIMF requires that RAPs describe distinctly and clearly how the sub-project would improve, or at least restore economic livelihoods of Project Affected Persons through adequate asset compensation and economic rehabilitation measures.

The SIMF requires that RAPs shall be guided by the following policy objectives:

- Land acquisition is an integral part of the project design, and should be dealt with from the earliest stages of project preparation.
- Both involuntary resettlement and the negative impacts on people by acquisition of assets should be avoided or minimised whenever feasible, exploring all viable alternative project designs.
- Persons to be affected should have their former living standards and income earning capacity improved or at least restored. In the case of displacement, they should be provided with adequate support during transition period.
- Project stakeholders, including PAPs are consulted and given the opportunity to participate, as practicable, in the design, implementation, and operation of the project.
- Particular attention will be paid to the protection of marginalised, disadvantaged and vulnerable groups, including women and children and promoting and providing, wherever possible, opportunities for such groups to take advantage of the investment.

The SIMF also provides for a low income allowance to be provided to all PAPs without land title and living below the poverty line, in case of loss of residential, commercial, industrial and institutional land.

2.6 Entitlement Matrix

The criteria for assessing entitlements for compensation and rehabilitation assistance to different categories of PAPs is defined within the entitlement matrix (Table 2.2) and has been followed during the preparation of this RAP. This version of the entitlement matrix is based on the entitlement matrix given within the SIMF (November 2006), but with updates to reflect implementation of contracts WSIP/B1/NC/01 and WSIP/B2/NC/02, their associated RAPs, and findings of consultations with PAPs.

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Table 2.2: Entitlement Matrix

No;	Type of Loss	Application	Definition of Entitled Person	Entitlement Policy
1	Loss of Land (Agricultural)	Partial but permanent loss of land and the remaining land farmed is economically viable and at least equal to or more than 0.5 acres (marginal impact on household income and living standard)	Legal owner with valid title or customary or usufruct rights	PAPs will be entitled to: <ul style="list-style-type: none"> • Compensation as per Pakistan Land Acquisition Act
			Tenant, leaser holder and sharecropper	PAPs will be entitled to: <ul style="list-style-type: none"> • Cash compensation equivalent to market value of gross harvest for one year production or for the remaining period of tenancy/lease, whichever is greater. Compensation to be reduced to mirror share cropping agreements in place between owner and tenant (typically 50%); AND • Cash compensation equivalent to market value of standing crops that could not be harvested. Compensation to be reduced to mirror share cropping agreements in place between owner and tenant (typically 50%)
		Permanent loss of entire land or where partial loss but the remaining land is less than 0.5 acre or is rendered economically unviable. (Severe impact on household income and living standards).	PAPs without valid title	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Cash compensation equivalent to market value of standing crops that could not be harvested.
			Legal owner with valid title or customary or usufruct rights.	PAPs will be entitled to: <ul style="list-style-type: none"> • Equivalent area of land with equivalent productive potential at location acceptable to PAP, OR • Compensation as per Pakistan Land Acquisition Act
Temporary loss of land			Tenant, lease holder and share cropper	PAPs will be entitled to: <ul style="list-style-type: none"> • Cash compensation equivalent to market value of gross harvest for one year production or for the remaining period of tenancy/lease, whichever is greater. Compensation to be reduced to mirror share cropping agreements in place between owner and tenant (typically 50%) AND • Cash compensation equivalent to market value of standing crops that could not be harvested. Compensation to be reduced to mirror share cropping agreements in place between owner and tenant (typically 50%)
			PAPs without valid title	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Cash compensation equivalent to market value of standing crops that could not be harvested
			Legal owner with valid title or customary	PAPs will be entitled to:

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No;	Type of Loss	Application	Definition of Entitled Person	Entitlement Policy
			or usufruct rights.	<ul style="list-style-type: none"> Monthly rent at market value
			Tenant, lease holder and share cropper	PAPs will be entitled to: <ul style="list-style-type: none"> Market value of gross harvest for production over period of temporary loss (rounded up to the nearest year). Compensation to be reduced to mirror share cropping agreements in place between owner and tenant (typically 50%)
			PAPs without valid title	PAPs will be entitled to the following: <ul style="list-style-type: none"> Cash compensation equivalent to market value of standing crops that could not be harvested
2	Loss of Land (Residential, commercial, industrial or institutional land)	Partial loss of residential, commercial, industrial or institutional land with remaining land sufficient to reorganize	PAPs with valid title or customary and usufruct rights PAPs such as tenants and leaseholders PAPs without valid title	PAPs will be entitled to the following; <ul style="list-style-type: none"> Cash compensation for affected portion of the land at replacement value PAPs will be entitled to the following; <ul style="list-style-type: none"> Reimbursement for loss of income for the un-expired lease period See below
		Loss of residential, commercial, industrial or institutional land without sufficient remaining land. PAPs will be required to relocate.	PAPs with valid title or customary and usufruct rights PAPs such as tenants and leaseholders PAPs without valid title PAPs living below the poverty line	PAPs will be entitled to the following; <ul style="list-style-type: none"> An equivalent area of land of similar characteristics and access to facilities in an acceptable location, OR Compensation as per Pakistan Land Acquisition Act PAPs will be entitled to the following; <ul style="list-style-type: none"> An equivalent area of leased land for un-expired lease period, OR Reimbursement for un-expired lease period PAPs will be entitled to the following; <ul style="list-style-type: none"> Permission to reside on alternative Government owned site without transfer of title PAPs will be entitled to the following; <ul style="list-style-type: none"> Low income allowance equal to two months household income, or two months minimum wage (whichever is greater)
3	Loss of Privately Owned Structures (Residential, commercial,	Partial loss of structure and the remaining structure viable for continued use by current occupier	Legal owner of affected structure with valid or customary or usufruct rights	PAPs will be entitled to the following: <ul style="list-style-type: none"> Cash compensation for affected part of the structure at replacement value; AND Allowance to cover repair of the remaining structure.

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No;	Type of Loss	Application	Definition of Entitled Person	Entitlement Policy
	industrial or agricultural)		Owner of affected structures without valid title to the land (squatter/encroacher)	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Cash compensation for affected part of the structure at replacement value; AND Allowance to cover repair of the remaining structure
		Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Owner of structure (regardless of ownership of title to land on which structure is situated)	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Transport allowance for shifting to new location; AND • Cash compensation for entire structure at replacement value; OR • Structure of equivalent standard in acceptable location
			Tenant / leaseholder in the affected structure	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Transport allowance for shifting to new location; AND • Transition allowance equivalent to three months' rent
4	Loss of Structures (Community)	Partial loss of structure and the remaining structure viable for continued use by current occupier	Community	Cash compensation for affected part of the structure at replacement value; AND Allowance to cover repair of the remaining structure
		Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Community	Cash compensation for entire structure at replacement value
5	Loss of Structures (Institutional)	Partial loss of structure and the remaining structure viable for continued use by current occupier	Institution	Repair under the civil works contract
		Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Institution	Replacement under the civil works contract
6	Loss of income (trade/ livelihood/ occupation or business incomes)	Temporary or permanent loss of commercial income	Impacted business owner	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Livelihood allowance equivalent to three months household income, or three months minimum wage (whichever is greater)
		Temporary or permanent loss of agricultural/commercial/institutional wages	Impacted employee or labourer	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Livelihood allowance equivalent to three months household income, or three months minimum wage (whichever is greater)
7	Loss of access to common resource and facilities	Loss of access to rural common property resources and urban civic amenities	Communities/ households	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Replacement of common property resources/ amenities; OR • Access to equivalent amenities/ services

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No;	Type of Loss	Application	Definition of Entitled Person	Entitlement Policy
8	Loss of trees	Affected trees.	Owner of trees	PAPs will be entitled to cash compensation equivalent to market value on the basis of type, age and productive value.
9	Loss of public infrastructure	Infrastructure (electric water supply, sewerage & telephone lines; public health centre; public water tanks)	Relevant agencies.	Compensation in cash at replacement cost to respective agencies.
10	Losses to host Communities.	Affected amenities and services	Host community	Restore losses as a result of resettlement for amenities / services equivalent to the provided to PAPs
11	Temporary Losses	Affected structures or other fixed assets	Affected PAPs	In cash, on the basis of replacement cost of material and labour without deduction for depreciation or salvageable materials for the damages during the period of temporary possession.
		Severely affected structures	Affected 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.
12	Loss of Land (unused)	Partial but permanent loss of land	Legal owner with valid title or customary or usufruct rights	PAPs will be entitled to: <ul style="list-style-type: none"> • Compensation as per Pakistan Land Acquisition Act
		Permanent loss of entire land or where partial loss but the remaining land is less than 0.5 acre	Legal owner with valid title or customary or usufruct rights	PAPs will be entitled to: <ul style="list-style-type: none"> • Compensation as per Pakistan Land Acquisition Act

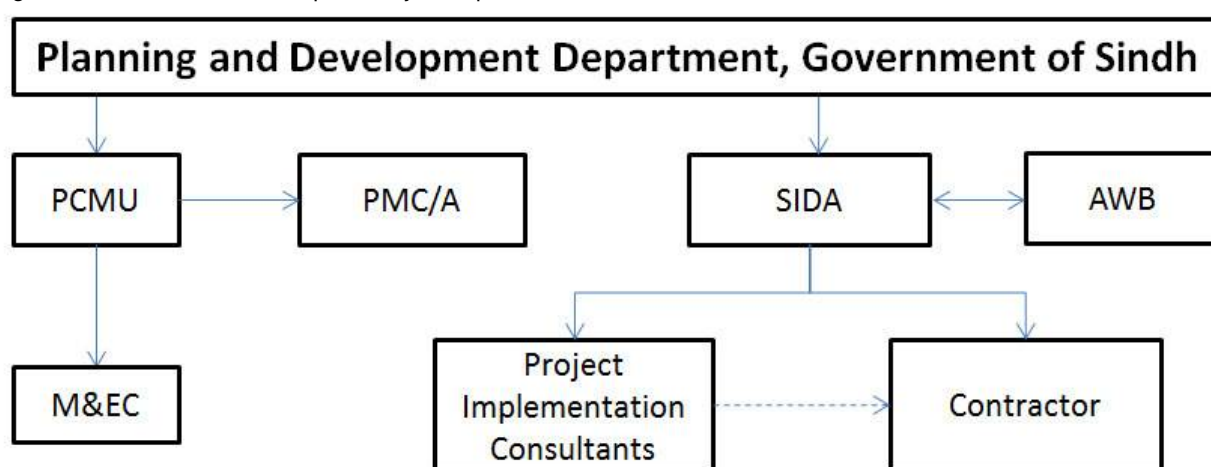
3. Description of the Sub-project

Please refer to Chapter 1 for an overview of WSIP, including details of Contract WSIP/B1/NC/03.

3.1 General Institutional Arrangements, Roles & Responsibilities

An organogram for institutional arrangements for project implementation is shown in the following figure. The roles and responsibilities of each party are detailed in the following sections.

Figure 3.1: Institutional Setup for Project Implementation



3.1.1 The Sindh Irrigation and Drainage Authority (SIDA)

3.1.1.1 General

The Sindh Irrigation and Drainage Authority (SIDA) is the project proponent, and therefore the sub-project proponent. SIDA has a Board of Management chaired by the Minister of Irrigation and Power Department (IPD) Government of Sindh.

SIDA is responsible for providing necessary support for the implementation of all WSIP components, including; maintaining consolidated project accounts, preparing disbursement applications and operation of the Designated Account and transfer of funds to other implementing agencies, and contributing to the project’s overall management information system. SIDA is also responsible for procurement of major contracts under WSIP, including Contract WSIP/B1/NC/03. SIDA’s Board meet quarterly to address project issues and make key decisions regarding investments as well as institutional strengthening. It will work closely with IPD in facilitating operation of the canal system during sub-project implementation.

SIDA shall act as the Employer, under the contract for WSIP/B1/NC/03.

3.1.1.2 Environmental Monitoring Unit (SIDA-EMU)

The responsibility for social and environmental management and monitoring will rest with the EMU established under SIDA. EMU are responsible for the environmental and social assessment, assisting in

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designing investments in a participatory way incorporating social and environmental issues, and monitoring the long term operational as well as construction phase impact of the project and major investments in the Province. These responsibilities extend to all investments made under WSIP, including this sub-project.

The EMU may seek necessary assistance from the social and environmental team of PIC in relation to works under component B1 and B2 of WSIP.

3.1.2 Project Coordination and Monitoring Unit (PCMU)

Project Coordination and Monitoring Unit (PCMU), established under the Planning and Development Department, Government of Sindh, monitor and coordinate all project implementation activities under WSIP, including this sub-project. It is responsible for carrying out project monitoring and evaluation studies and overall supervision of the environmental and social plans for WSIP (including this sub-project). PCMU shall engage a team of independent consultants (known as the Monitoring and Evaluation Consultants) to assist them in monitoring and evaluation.

3.1.3 Monitoring and Evaluation Consultants (M&EC)

M&EC assist PCMU in supervision and monitoring of the overall project as well as sub-projects (including Contract WSIP/B1/NC/03) in terms of environmental management and social plans. They provide continuous feedback to the Government of Sindh, Project Steering Committee (via PCMU) and implementing agencies on the project's performance and impact of its various components, so that corrective actions can be taken in a timely manner.

3.1.4 Project Management Consultants/Procurement Agent (PMC/A)

The Project Management Consultants/Agent (PMCA) oversee the procurement of consultancy services, works and goods to ensure these are in accordance with the World Bank's guidelines. PMC/A also oversees recruitment of project staff from the market place in a transparent manner with involvement of project implementing partners and Transparency International Pakistan (TIP). The team has a mandate to oversee the work performance of project staff and the consultants in carrying out their responsibilities, examining the functions of consulting services and the payments made to the consultants.

3.1.5 Nara Area Water Board

Nara AWB are responsible for the operation and maintenance of Mithrao Canal. The AWB shall hand-over operational responsibility of Mithrao Canal within the sub-project area to the contractor who shall implement the works under this sub-project. These areas of the canal shall be handed over to the contractor for the entire duration of the works. The AWB is required to complete any permanent land acquisition prior to the commencement of works under this sub-project, and also assist the contractor in the completion of any temporary land acquisition that the contractor finds appropriate for the execution of the works.

Following completion of the works, the contractor shall hand over control of the canal within the sub-project area back to the Nara AWB who shall maintain responsibility for operation and maintenance for the operational phase.

3.1.6 The Project Implementation Consultants (PIC)

The association of Mott MacDonald Ltd and MM Pakistan (Pvt) Ltd was appointed in 2009 as the Project Implementation Consultants (PIC) for WSIP phase 1. PIC were appointed to assist SIDA in the

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implementation of WSIP, including undertaking the detailed designs, environmental assessment, environmental management plans, resettlement actions plans, procurement of works and construction supervision for the rehabilitation works proposed under component B.

PIC have completed the detailed designs for this sub-project and are responsible for the preparation of this RAP as well as the EIA/EMP. PIC shall assist SIDA in the prequalification and procurement of a contractor to complete the works for this sub-project under Contract WSIP/B1/NC/03. Following contract award, PIC shall act as the 'Engineer' under the contract and maintain responsibility for supervision of the contract (on behalf of SIDA), including supervision of construction quality and the contractor's compliance with the EMP, for the duration of the works.

3.1.7 The Contractor

A contractor shall be appointed by SIDA under contract WSIP/B1/NC/03 to complete the works proposed in this sub-project.

3.2 Location of the Sub-project

Mithrao Canal off-takes from the Lower Nara Canal, upstream of Makhi Weir (at approximately RD167).

Table 3.1: Salient Features of Mithrao Canals

Canal	Total Length (km)	Design (m ³ /s)	Discharge	Number of Offtakes
Mithrao Canal	128	67		22

The Nara Canal was a tributary of the River Indus and was modified as a canal in the nineteenth century. The total length of the Nara Canal is 170 km from Sukkur Barrage to its southern extent. The canal carries large quantities of sediment which is carried in to the Mithrao Canal, causing the canal to become choked with sediment and reduce the capacity of the canal to carry the design discharge.

The Mithrao Canal is approximately 34m (112ft) wide at its head, reducing to 15m (49ft) at the tail. The canal is bounded by narrow berms slightly above the water level. The berms are backed by embankments which carry access paths along the top. The berms vary in width due to erosion within the canal and are typically between 3 and 9m (10 to 30ft), however, in many reaches these berms have been totally eroded by the canal (see Figure 3.2) and the water flows against the embankments themselves. The berms on both canals typically consist of grasses, shrubs and reeds in limited reaches. Trees are present on both the embankments and the berms.

Figure 3.2: Eroded berms on the Mithrao Canal



3.3 Right of Way

The Right of Way (RoW) is a strip of government owned land beyond the outer toe of both embankments of the canal that runs parallel to the embankments for the entire length of the canal. The RoW is assumed to be 45m (150ft) wide as measured adjacent to the outer toe of the existing embankments, however this cannot be confirmed by SIDA.

The RoW is dominated by barren land, open water and a mixture of reeds, tree thickets and grass/shrub land interrupted by occasional cultivated areas where agricultural practices have encroached upon the government owned land. Beyond the RoW, agriculture is practiced to a larger scale, with cotton, wheat, rice and sugar cane being the dominant crops in the area. Cultivated areas are interrupted by large expanses of barren and often flooded land. Villages and smaller hamlets are present within the agricultural land, housing fishermen and farm labourers who work on the agricultural land (which is generally owned by larger landlords) as well as their families.

It is noted that the Corridor of Impact (CoI) for this RAP is *within* the RoW, but does not cover the *entire* RoW – see section 4.2.1 for further details. The CoI varies down the entire length of the RoW, dependent upon the proposed embankment section and existing cross-section design.

3.4 Scope of Works

The works detailed in this section constitute the proposed sub-project and are all considered within this RAP.

The main components of the contract are to raise and strengthen the embankments of Mithrao Canal as well as the replacement of the hydraulic regulating structures. The canal shall also be widened from RD 5 to 18 through excavation of the berm.

Full details of all proposed works can be found in Volumes I and II of the 'Design Report for Contract WSIP/B1/NC/03, Rehabilitation of Mithrao Canal'.

Contract WSIP/B1/NC/03 will involve the following main engineering works:

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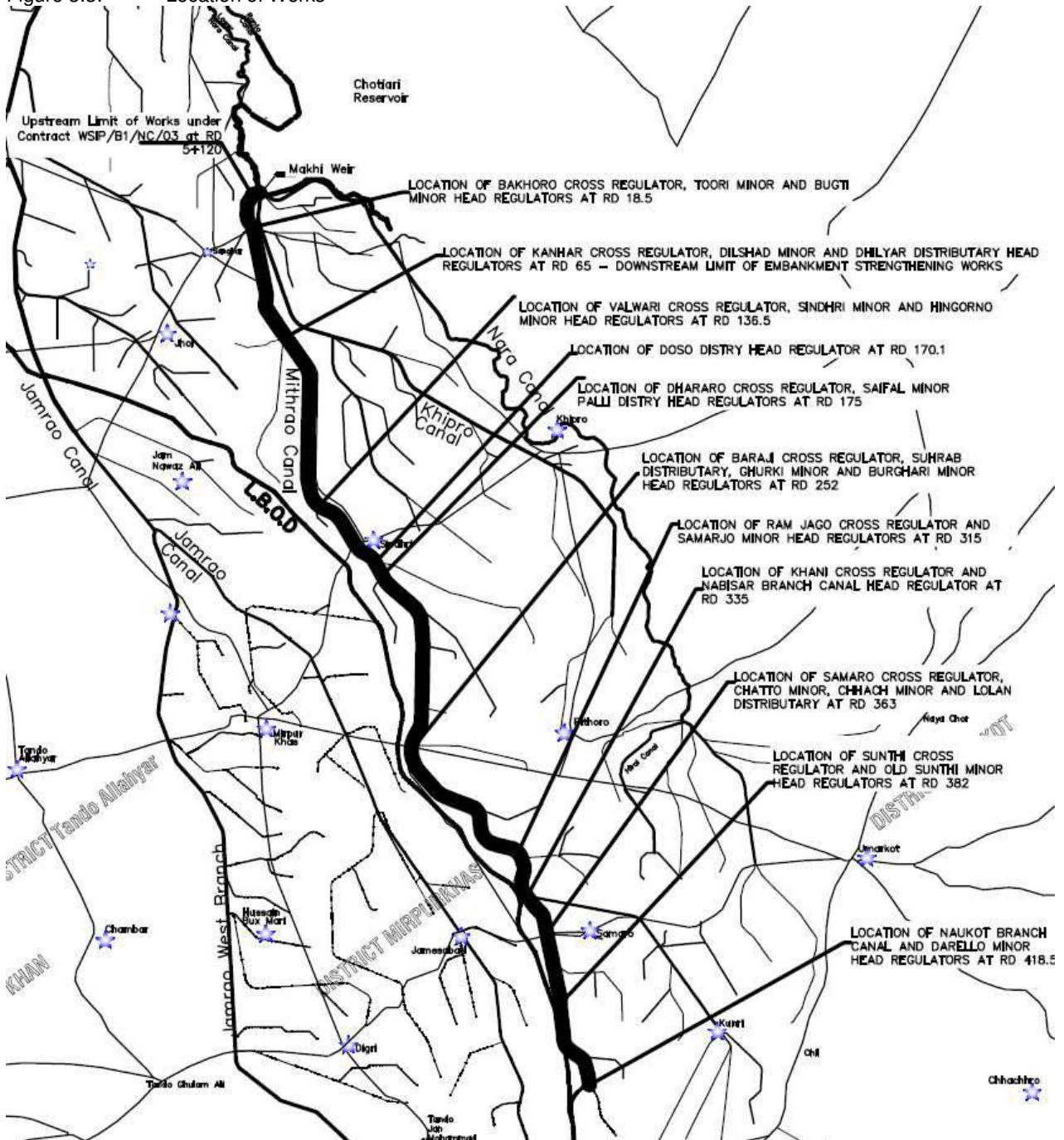
- Embankment strengthening and raising of Mithrao canal from RD 5 to RD 65 using material excavated from borrow areas
- Excavation of the existing canal berm from RD 5 to 18 in order to widen the canal bed and disposal of this material at the toes of the proposed IP and NIP
- Demolition/rehabilitation/replacement of cross regulators and head regulators on the Mithrao Canal as detailed in the following table.

Table 3.2: Hydraulic Structures to be Demolished and Replaced – Contract WSIP/B1/NC/03

RD	Structure	Name
18	Head Regulator	Bugti Minor
	Head Regulator	Toori Minor
	Cross Regulator	Bakhro Cross Regulator
65	Head Regulator	Kanhar Feeder
	Head Regulator	Dilshad Distributary
	Head Regulator	Diyar Distributary
	Cross Regulator	Kanhar Cross Regulator
136.5	Head Regulator	Sindhri Minor
	Head Regulator	Hingorno Minor
	Cross Regulator	Valwari Cross Regulator
170.1	Head Regulator	Doso Distributary
175	Head Regulator	Saifal Minor
	Head Regulator	Palli Distributary
	Cross Regulator	Dahrero Cross Regulator
251	Head Regulator	Suhrab Distributary
252	Head Regulator	Guruki Minor
	Head Regulator	Bhugari Minor
	Cross Regulator	Baraji Cross Regulator
315	Head Regulator	Samaro Minor Head Regulator
	Cross Regulator	Ramjago Cross Regulator
335	Head Regulator	Nabisar Branch Canal Head Regulator
	Cross Regulator	Khani Cross Regulator
353	Head Regulator	Chach Minor
	Head Regulator	Chhatto Minor
	Head Regulator	Lolan Distributary
	Cross Regulator	Samaro Cross Regulator
382	Head Regulator	Old Sunthi Minor Head Regulator
	Cross Regulator	Sunthi Cross Regulator
405	Head Regulator	New Sunthi Minor
418.5	Head Regulator	Naukot Branch Canal
	Head Regulator	Darello Minor Head Regulator

The locations of the works are shown in the following figure.

Figure 3.3: Location of Works

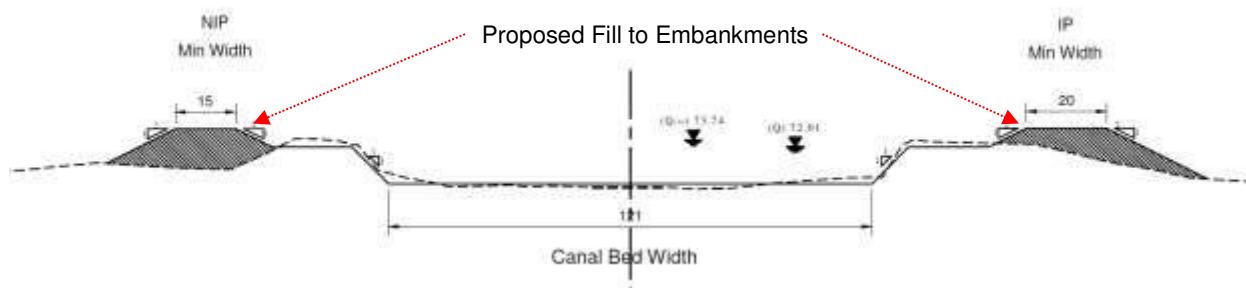


3.4.1 Strengthening and Widening of Embankments, Reinstatement of Berms

Construction works will involve reinstatement of the berms and the reconstruction of raised embankments set back from the existing embankments. The material required for raising the embankments will be borrowed from within the sub-project area.

A canal cross-section showing embankment raising works is provided in the following figure.

Figure 3.4: Typical Canal Cross-section showing Embankment Raising Works



Prior to filling works for these embankments, the top 0.15m (six inches) of material shall be removed from the foot print of the embankments and disposed of. A total of 80,000 m³ (2,800,000 ft³) of material shall be removed and disposed of adjacent to the outer toe of the proposed IP and NIP embankments from RD 5 to 65 within the Government owned RoW. Where settlements exist at the toe of the proposed IP or NIP, disposal over these areas shall be prohibited and resettlement of these settlements shall not be required.

3.4.2 Borrow Pits

540,000 m³ (19,000,000 ft³) of material will be required to form the embankments and must be taken from shallow borrow areas to be established within barren land to a maximum depth of 0.6m (2ft). The Contractor shall be responsible for the temporary acquisition of the borrow areas.

The borrow areas shall be established within the uncultivated lands which are commonly found beyond the RoW of the canals and therefore prevent loss of productive agricultural land. Where the ground water table is high, they will have the additional benefit of wet land habitat creation post construction. The ground water depth for each borrow area is given in Table 3.3 and is based on field investigations in June 2014.

The location and details of borrow areas for Contract WSIP/B1/NC/03 are summarised in Table 3.3.

Table 3.3: Details of Borrow Areas for Contract WSIP/B1/NC/03

BA no.	Location RD	Bank	Area (hectare)	Results of Material Test	Groundwater Depth (ft)
01	4	IP	9.380	Suitable	1.5
02	10	IP	1.451	Suitable	3
03	23+500	IP	11.589	Suitable	3
04	26+500	IP	8.925	Suitable	1.5
05	50	IP	0.811	Suitable	2
06	51	IP	5.186	Suitable	-
07	55	IP	13.773	Suitable	-
09	12	NIP	12.807	Suitable	1.5
10	24	NIP	3.556	Suitable	3
11	26	NIP	2.367	Suitable	3
12	28	NIP	2.356	Suitable	1
13	36	NIP	2.527	Suitable	3
14	37	NIP	6.053	Suitable	2.5
15	39	NIP	2.180	Suitable	-
16	50	NIP	1.977	Suitable	3

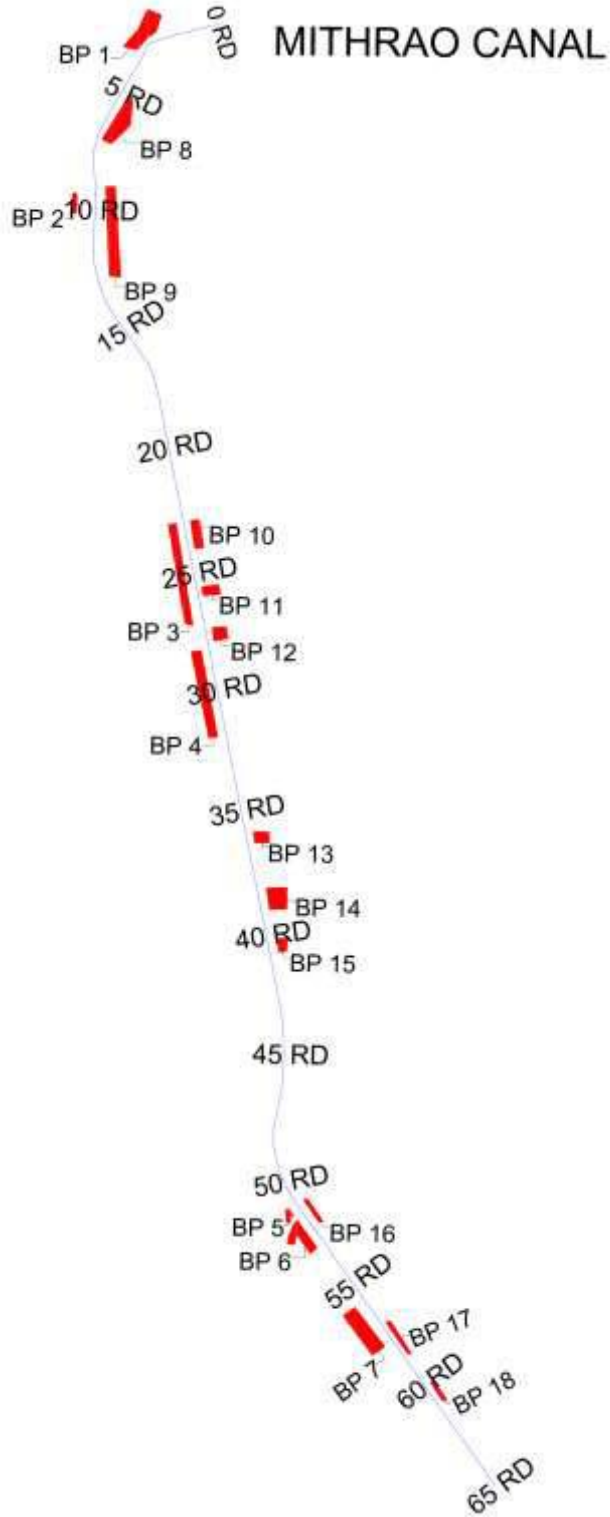
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BA no.	Location RD	Bank	Area (hectare)	Results of Material Test	Groundwater Depth (ft)
17	58	NIP	2.102	Suitable	1.5
18	62	NIP	0.887	Suitable	2
Total			100.780		

The locations of borrow areas are shown schematically in Figure 3.5. Maps showing the location and extent of the borrow areas can be found within Volume II of the EIA/EMP for Contract WSIP/B1/NC/03.

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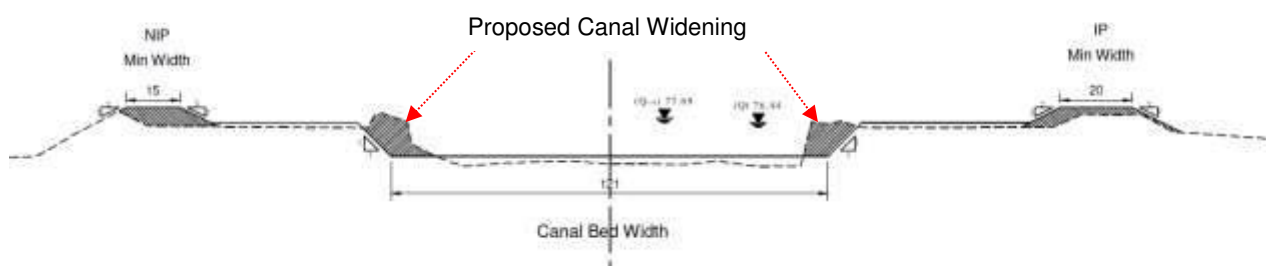
Figure 3.5: Location of Borrow Areas for Contract WSIP/B1/NC/03



3.4.3 Canal Widening

The berms of the Mithrao canal shall be widened from RD 5 to 18 through the excavation of berms. Excavation shall be achieved through land based plant situated on the canal embankments and berms. A total of 160,000 m³ (5,600,000 ft³) shall be excavated from the canal berms and disposed of alongside the outer toe of the proposed IP and NIP embankments within the Government owned RoW. Where settlements exist at the toe of the proposed IP or NIP, disposal over these areas shall be prohibited. A section showing the proposed canal widening is shown in the following figure.

Figure 3.6: Proposed Canal Widening



3.4.4 Hydraulic Structures

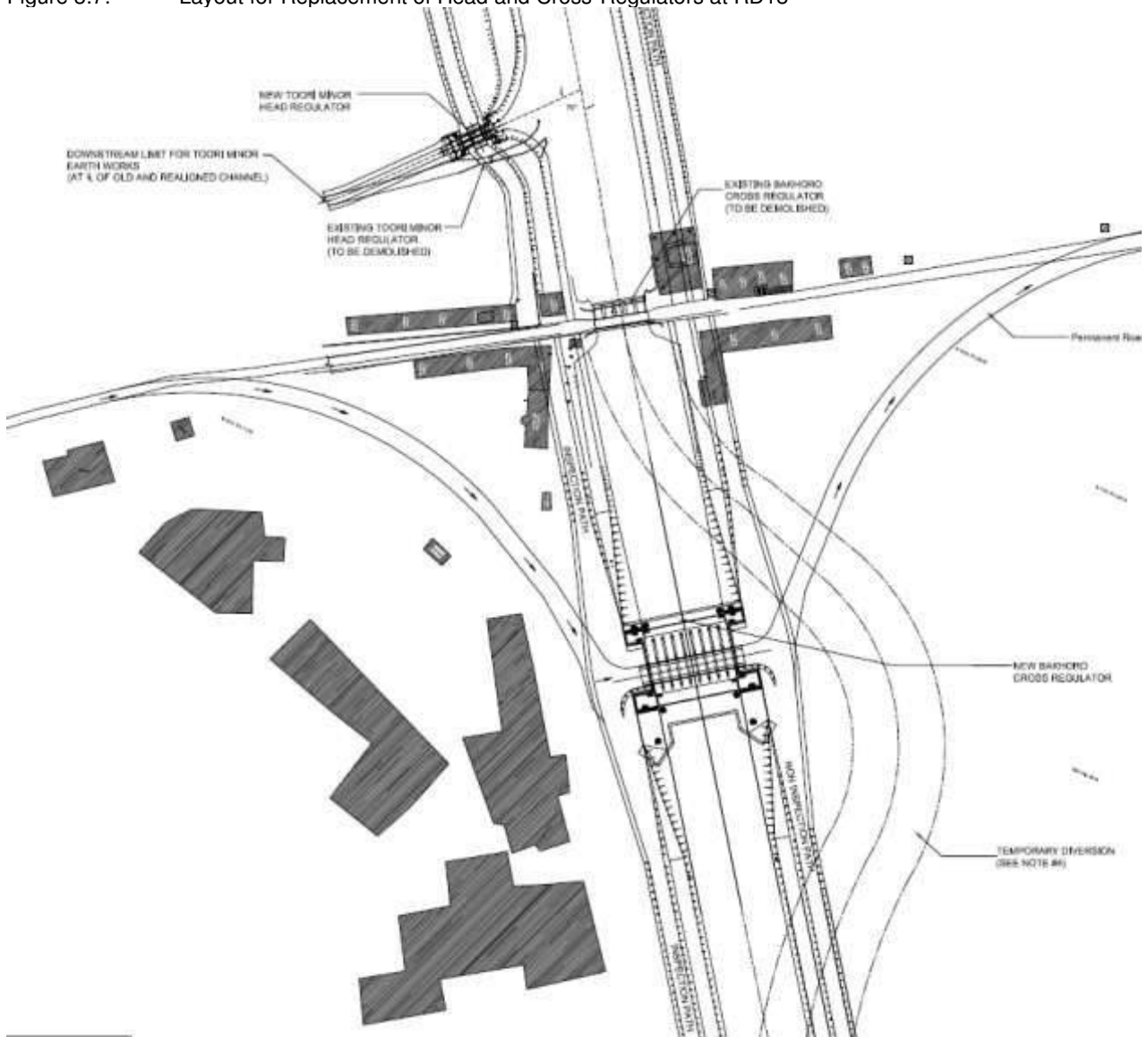
PIC completed a condition Assessment of hydraulic structures on Mithrao Canal and found the majority of the structures to be in a poor condition, both structurally and hydro-mechanically, many being aged brick built structures.

A total of nine and 22 cross- and head regulators respectively shall be replaced on the Mithrao Canal under this contract.

In order to complete the replacement of the cross-regulator at RD 18, permanent acquisition of 1.52 acres of privately owned land shall be required in order to allow realignment of the road which crosses the regulator. No further land acquisition shall be required for this contract. The arrangement of the realigned road, along which permanent land acquisition shall be required, is shown in Figure 3.7.

All cross-regulators shall be constructed within the current alignment of the canal, and temporary diversion channels shall be constructed to divert the canals around the structures during construction to provide a dry area for construction, as shown for Bakhoro cross-regulator in Figure 3.7. The temporary diversions shall be constructed with the Government owned RoW.

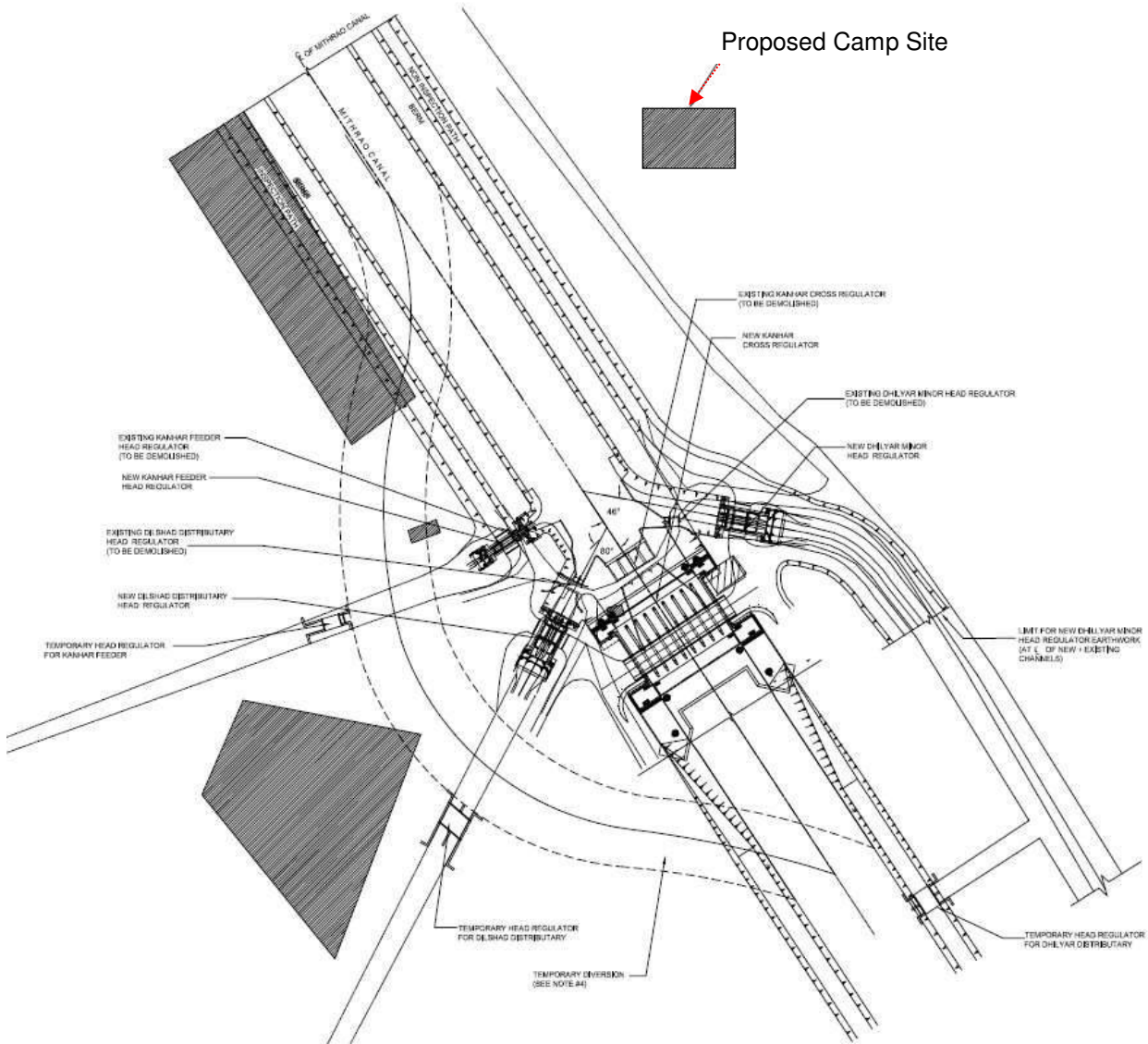
Figure 3.7: Layout for Replacement of Head and Cross-Regulators at RD18



3.4.5 Establishment of Construction Camp

The main construction camp shall be located beyond the NIP (right bank) at RD 63 of the Mithrao Canal near Kanhar Cross Regulator as shown in Figure 3.8. The camp shall cover an area of approximately 10,000m² (108,000ft²). The majority of this area shall be for the provision of a manufacturing and fabrication yard, and an office and dormitory shall also be provided here. Approximately 100 people shall be resident in the main camp.

Figure 3.8: Location Plan of Main Camp at RD63



The land situated at the proposed camp site is government owned land and no acquisition is necessary.

3.4.6 Site Access

The Contractor will utilise the existing roads, IPs and NIPs to access the majority of the site. Temporary haul routes may also be established through private land in order to access borrow areas. The contractor shall be responsible for the temporary acquisition of these areas and shall be prohibited from establishing these through any existing settlements.

3.4.7 Labour Requirements

It is estimated that approximately 600 personnel shall be employed on the contract at its peak. Of these, 300 shall be skilled or semi-skilled, and shall include the following positions:

- Machine operators

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- Engineers
- Surveyors
- Masons
- Electricians
- Mechanics

Approximately 300 unskilled labourers shall be engaged on the project, and this shall include drivers, construction labourers, watchmen and camp staff.

Based on employment statistics for contracts WSIP/B1/NC/01 and WSIP/B1/NC/02, it is expected that of the total labour requirements, approximately 55% of the skilled labour and 65% of the unskilled labour requirements can be sourced from within the sub-project area.

In addition, approximately 30 management staff shall be engaged by the contractor. These shall be engaged from the contractor's home office.

3.5 Works Schedule

A summary of the works schedule for Contract WSIP/B1/NC/03 is given in the following table. Works are scheduled to be completed by the early 2018, over a period of 24 months.

Table 3.4: Works Schedule – Summary for Contract WSIP/B1/NC/03

Activity	Start (month/year)	End (month/year)
Mobilisation (personnel, materials and equipment)	03/2016	04/2016
Temporary Works	04/2016	08/2016
Mithrao Canal Realignment	08/2016	11/2016
9 Cross Regulators, and Nabisar and Naukot Branch Canal Head Regulators	11/2016	11/2017
Replacement of Offtaking Head Regulators	03/2017	03/2018
Site Hand Over		03/2018

The length of Contract WSIP/B1/NC/03 is estimated to span 24 months, scheduled in order to make use of two closure periods during which the earth works may be completed. The final programme shall be confirmed by the contractor following contract award but prior to mobilisation.

3.6 Scoping of Potential Impacts

3.6.1 Alternative Options for Minimizing the Impacts

This section provides an overview of the alternatives considered and measures taken to minimise the resettlement impacts.

Efforts have been made by using all appropriate options of engineering design in finalizing the alignment to minimize the resettlement impacts. The implementation of this sub-project shall cause direct economic or social impacts due to clearance of the Col for the execution of civil works, resulting in the partial or complete demolition of permanent structures (residential and commercial), relocation of commercial structures and felling of trees within the Col. To minimize the adverse impacts of the sub-project, the Col of impact has been set to only the area required to complete the proposed civil works, and not the entire Government owned Right of Way (RoW).

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To reduce the social impacts of the proposed interventions, the mitigation measures have been taken into account for minimizing the adverse impacts as shown in the following table.

Table 3.5: Proposed Mitigation Measures

Items	Mitigation Measures
Impact on local population / agricultural production	Most structures will be constructed off-line in the dry land. Where structures are to be constructed on-line (i.e. within the canal), temporary diversions will be constructed such that the water supply remains uninterrupted. Where works are required within the canals for commissioning of the structures the closure periods will be utilised. Continuity of water availability for irrigation and other community uses in accordance with normal practice will be ensured.
Reduced Work Area Limits	Instead of taking into consideration the entire width of RoW, the proposed sub-project works are confined to Col. This approach has helped in minimizing the resettlement related impacts on the community. In case of any relocation from Col, compensation will be paid as per World Bank Policy.
Community/Religious Structures	The rehabilitation works have been designed to avoid the need to demolish community/religious structures.
Land Acquisition	Permanent land acquisition is required at RD 18 (Bakhoro cross-regulator of Mithrao Canal) due to the realignment of the canal. Land acquisition at other regulator sites has been prevented through the identification of realignments which do not extend beyond the RoW.

3.6.2 Scoping of Sub-Project Activities Resulting in Impacts

The following table provides an assessment of the resettlement requirements of each component of work under contract WSIP/B1/NC/03.

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Table 3.6: Scoping of Impacts of Contract WSIP/B1/NC/03

Work Component	Description	Loss of Shelter	Loss of Assets/Access to Assets	Loss of Income Source/ Means of Livelihood	Restriction of Access to Parks/ Protected Areas
Establishment of Construction /Labour Camps (temporary works)	The land is government owned and there are no settlements on the site. A maximum of 2.5 acres of land is required.	-	-	-	-
Widen the Mithrao Canal	Construction works are to be carried within flowing water between the IP and NIP within government owned land.	-	-	-	-
Raising/ strengthening of canal embankments	Although the land is government owned, a number of households have built residential and commercial structures on the embankments	√	√	√	-
Establishment of borrow areas	Shallow borrow areas (maximum 2ft depth) are to be established in privately owned cultivated land	-	-	√	-
Establishment of haul routes to borrow areas	Temporary haulage routes shall be established through private land.	-	-	√	-
Disposal of excavated material alongside outer toe of proposed IP and NIP	Although the land is government owned, a number of households have built residential and commercial structures in the RoW. There is sufficient area for disposal and avoidance of these structures, therefore the disposal of material over these settlements has been prohibited under the contract.	-	-	-	-
Construction of temporary canal diversions	Diversions are to be constructed within the Government owned RoW. No structures are present in the Col of the diversions	-	-	-	-
Replacement of cross-regulators	Works are to be carried out within the canal	-	-	-	-

Work Component	Description	Loss of Shelter	Loss of Assets/Access to Assets	Loss of Income Source/ Means of Livelihood	Restriction of Access to Parks/ Protected Areas
Replacement of offtaking head regulators and realignment of head reaches	Although the land is government owned, a number of households have built residential and commercial structures in the RoW. Although the alignments have been chosen to minimise the impact, a number of these structures shall be removed	√	√	√	-
Realignment of road over Bakhoro cross-regulator	The road shall be realigned through private land. No structures lie within the Col of the road realignment	-	-	√	-

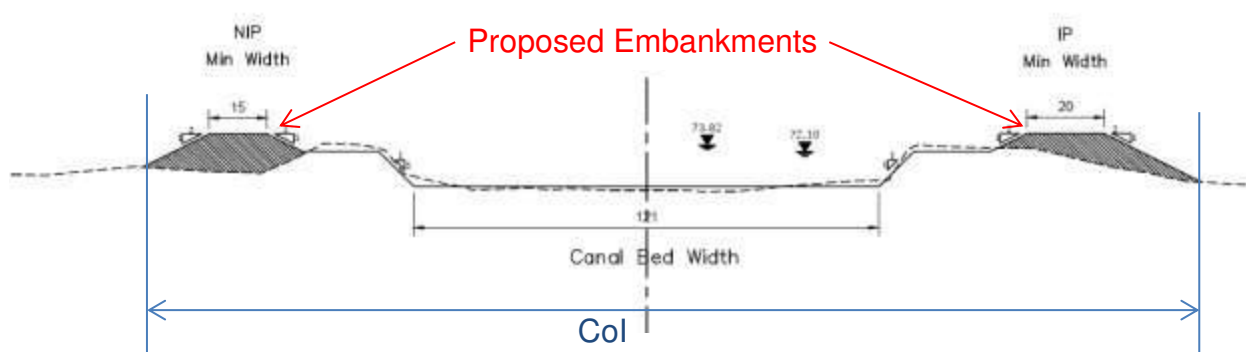
Impacts summarised above are detailed further in Chapter 5, a full summary of the assessed impacts is given in Table 5.6.

3.7 Corridor of Impact (Col)

The Corridor of Impact (Col), for the work components that are identified in section 3.6.2 to result in resettlement, is defined in this section.

All those living within the Col have been identified as PAPs who need to be resettled. On the Mithrao Canal from RD 5 to 65, the Col has been defined as the area falling between the proposed outer toes of the embankments as shown in the following figure. The Col does not cover the entire RoW.

Figure 3.9: Col for Mithrao Canal RD 5 to 65



At each of cross-regulating sites, the Col is as above for the embankments to be raised at each site. In addition, the Col also includes the foot print of any realigned offtaking canal or road at the cross-regulator site.

The Col for embankment raising for each reach of the canal from RD 5 to 65 is given in the following table.

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Table 3.7: Mithrao Canal Col for Embankment Raising

Reach (RD)	NIP Extent of Col (ft – measured from canal centreline)	IP Extent of Col (ft – measured from canal centreline)
5 - 7.5	137.1	203.4
7.5 – 12.5	147.99	193.28
12.5 – 17.5	136	158.44
17.5 – 22.5	116.46	124.92
22.5 – 27.5	121.83	137.43
27.5 – 32.5	127.3	135.11
32.5 – 37.5	142.49	135.12
37.5 – 42.5	125.81	145.54
42.5 – 47.5	122.25	143.77
47.5 – 52.5	130.86	144.28
52.5 – 57.5	129.7	132.38
57.5 – 62.5	126.47	138.61
62.5 - 65	118.25	137.23

Cross-sections showing the Col at 5ft intervals can be found in Appendix F.

4. Socio-Economic Studies

4.1 Approach and Methodology

4.1.1 Techniques and Sample Size

In order to have comprehensive and detailed information the following techniques and tools of data collection were used. It is also significant to note that representatives from SIDA and the Nara Canal AWB participated in the field survey. A list of SIDA staff accompanying the team is provided in Appendix A. The following members the Nara Canal AWB participated in the field survey:

- Mr Iqbal Memon (Sub-divisional officer)
- Mr Ali Dino (Sub-divisional officer)
- Mr Irshad Soomro (Sub-engineer)
- Mr Ishtiaque Memon (Sub-engineer)

4.1.1.1 Sample Design

A census of all households and businesses falling within the Col was conducted.

4.1.1.2 Village Profile

A comprehensive village profile was prepared to document the socio-economic and demographic data of each sample settlement in the study area. During the field survey eight (08) villages were randomly selected under the WSIP/B1/NC/03.

4.1.1.3 Pretesting of Questionnaire

In order to test the validity and reliability of the developed questionnaire, interviewing guides were pretested in the study area and the questionnaire was reviewed to assess whether questions need to be clarified or changed.

4.1.1.4 Women Survey

A separate questionnaire was developed covering various aspects relating to women in the Col. Female gender specialists of PIC conducted the field survey with male sociologists in the sub-project area and held meetings with the affected families.

4.1.2 Collection of Primary Data

The preparation of the RAP required the collection of data/information from the field. To achieve this end, comprehensive questionnaires for data collection were prepared (as given in Appendix B). The questionnaires were filled during the consultative meetings and during field visits. Four types of questionnaires were developed for data collection, as described below:

- Village profile for the collection of macro level information relating to the existence of socio-economic infrastructure in the rural settlements falling within Col.
- Census survey to document the Project Affected Persons (PAPs), their assets, family profiles and economic status.

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- Socio-economic survey to develop an overall baseline profile of the people of the area in respect of their socio-economic behaviour, vulnerability and attitudes towards the developmental activity to be carried out in the area.
- Gender data collection survey targeting the female population of the Col exclusively in order to supplement the socio-economic data collection.

Consultations were carried out with the stakeholders and general public. Consultative meetings and focus group discussions were held to learn about the views and concerns of the local community on the proposed rehabilitation works. The concerns raised by the stakeholders were discussed with the sub-project design team in order to enhance the sub-projects acceptability for the general public on socio-economic considerations. The main objectives of the consultation were to provide a platform to the stakeholders, to voice their concerns or suggestions to the project team and to develop a sense of collective ownership for the activities of the sub-project. For detailed consultation see Chapter 6.

PIC were initially active in the field from September to 2010 to January 2011. PIC remobilised to the field to update the baseline data from May to July 2014.

4.1.3 Collection of Secondary Data

Secondary data relating to the socio-economic characteristics of the sub-project was collected from the concerned local government offices, police, fisheries, building, road and agriculture departments at Hyderabad.

Official Websites of Sanghar, Mirpurkhas and Umerkot were also searched. The population census reports for the concerned districts were also consulted.

4.2 Socio-Economic Profile of Sub-Project Area

4.2.1 Location of Canal

Mithrao Canal, of Nara Canal AWB, falls under the administrative jurisdiction of Sanghar, Mirpurkhas and Umerkot Districts. The District Sanghar is subdivided into six Talukas namely, Jam Nawaz Ali, Khipro, Sanghar, Shahdadpur, Sinjoro and Tando Adam Khan. The District Mirpurkhas is sub divided in to six talukas namely Mirpurkhas, Digri, Hussain Bux Maree, Jhuddo, Sindhri and Kot Ghulam Muhammad. District Umerkot is sub divided in to four talukas namely Pithoro, Umerkot, Samaro and Kunri.

4.2.2 Brief Description of Sanghar District

Sanghar districts lies between 25⁰-30' to 26⁰-29' north latitudes and 68⁰-25' to 70⁰-13' east longitudes. It is bounded on the north by Khairpur district, on the northwest by Nawabshah district, on the east by Jaisalmir and Jodhpur (India), on the south by Mirpurkhas and Umerkot districts and on west and south west by Hyderabad district. The total area of the district is 10,728 square kilometres yielding a population density 135.4 (persons per square kilometres) in 1998. The population of the Sanghar district is 1,452,956 comprising of male 762,212 and female 690,744. Overall population growth rate of population of Sanghar district is 2.74 percent per annum.

4.2.3 Brief Description of Mirpurkhas District

The District Mirpurkhas lies between 24⁰ 46' to 25⁰ 44' and to 69⁰30' east longitudes. It is bounded on the north by Sanghar district, on the west by Hyderabad district on the south by Badin and Tharparkar districts and on the east Umerkot district and Sanghar districts.

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The District Mirpurkhas has an area of 7,332 square kilometres and total population 1,569,020 comprising of 820,840 males and 748,180 females. Overall population growth rate of District Mirpurkhas is 2.60%.

4.2.4 Brief Description of Umerkot District

The name of the district is derived from its headquarter town Umerkot. The district Umerkot was created in April 1993. The district lies between 24° 54' to 25° 47' north latitudes and 69° 11' to 70° 18' east longitudes. It is bounded on the north by Sanghar District, on the west by Mirpurkhas district, on the south and east by Tharparkar district. The District Umerkot has an area of 5,608 square kilometres and total population 663,100. Overall population growth rate of District Umerkot is 3.28%. The population density of the district is yielding 118.2 (persons per square kilometres).

4.2.5 Cropping Pattern in the Sub-project Area

The sub-project area being the fertile land and irrigated by canals, is very rich in growing of cotton, wheat, sugarcane. The cropping pattern of the three districts is given in the following sections. It is noted that no agriculture is practiced within the Col from RD 06+000 to RD 15+000 on the IP side, where rice is grown on the berms in small patches. About five acres of land on the berms is cultivated by the irrigation darogas.

Many PAPs living on the embankments are engaged as agricultural labourers, working in agricultural land outside of the Col.

4.2.5.1 The Cropping Pattern of District Sanghar

Sanghar is the major grower of cotton, wheat and sugarcane. The district is famous for ground-nuts also. The other crops in the area are rice, maize, barley, jawar, bajra, onion, oilseeds and pulses. The main occupation of the people is agriculture. Major fruits are Mango, Banana and Lemon. The season wise cropping pattern is given in Table 4.1.

Table 4.1: Cropping Pattern of Sanghar District

Cropping Seasons	
Rabi Crops	Kharif Crops
i) Wheat	i) Cotton
ii) Gram	ii) Sugarcane
iii) Oilseed (Rape Seed and Mustered)	iii) Rice
iv) Barley	iv) Jawar
v) Pluses	v) Bajra
vi) Tobacco	vi) Maize
vii) Rabi Fodder (Barseem/Losern)	vii) Sesamum
viii) Vegetables (Onion, Chillies, Tomato, Potato, Cabbage)	viii) Pluses
ix) Ground Nuts	ix) Kharif Fodder
	x) Vegetables

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November- 2014

4.2.5.2 The Cropping Pattern of District Mirpurkhas

District Mirpurkhas being a fertile land and irrigated by canals is rich in growing of cotton and oil seeds. The soil and climate is suitable for the growth of American variety of cotton. The other crops in the area are wheat, sugarcane, rice, sesame, rape and mustard. The other crops grown in the district are chillies, maize and barley. The main occupation of the people is agriculture. Major fruits are Mango, Banana and Citrus. The season wise cropping pattern is given in the following table.

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Table 4.2: Cropping Pattern of Mirpurkhas District

Cropping Seasons	
Rabi Crops	Kharif Crops
i) Wheat	i) Cotton
ii) Oilseed (Rape Seed and Mustered)	ii) Sugarcane
iii) Barley	iii) Rice
iv) Pluses	iv) Maize
v) Rabi Fodder (Barseem/Losern)	v) Sesame
vi) Vegetables (Onion, Chillies, Tomato, Potato, Cabbage and Radish)	vi) Pluses
	vii) Kharif Fodder
	viii) Vegetables
	ix) Turnip

Source: Survey of the Project Area, Project Implementation Consultants, March, 2014 to November - 2014

4.2.5.3 The Cropping Pattern of District Umerkot

A large variety of crops are grown in the district. However, the major crops cultivated in the district are cotton, wheat, sugarcane and red chilies. Fruits and vegetables are also grown in the irrigated areas. Fruits like mango, guava and citrus fruits are grown in some parts of the District. The other crops grown are vegetables oil-seeds and pulses. In the desert area of the district during monsoon season Millet Goward and Sorghum are grown. The season wise cropping pattern is given in Table 4.3.

Table 4.3: Cropping Pattern of Umerkot District

Cropping Seasons	
Rabi Crops	Kharif Crops
i) Wheat	i) Cotton
ii) Oilseed (Brassica nigra))	ii) Sugarcane
iii) Barley	iii) Rice
iv) Pluses	iv) Pluses
v) Rabi Fodder	v) Kharif Fodder
vi) Vegetables (Onion, Chillies, Potato, Cabbage and Radish)	vi) Vegetables
	vii) Goward

Source: Survey of the Project Area, Project Implementation Consultants, March, 2014 to November - 2014

4.3 Socio-Economic Profile of Col

The socio-economic profile of the Col includes the description of the populations of those resident on the right and left banks of the Mithrao Canal (which are to be raised and strengthened as part of this sub-project) and those who depend on income generated through commercial structures located there. The socio-economic characteristics of the sub-project corridor are based on the village profile, socio-economic surveys, focus group meetings and information collected from the secondary sources. The results of the survey are described in the following sections.

The Col is defined in section 3.7.

4.3.1 Population of Col

The population of the PAPs can be sub-divided as shown in Table 4.4

Table 4.4: Population of the Col

Age Group	Male	% Age	Female	% Age	Total	Percentage
≤ 5	14	6.64	15	6.89	29	13.63

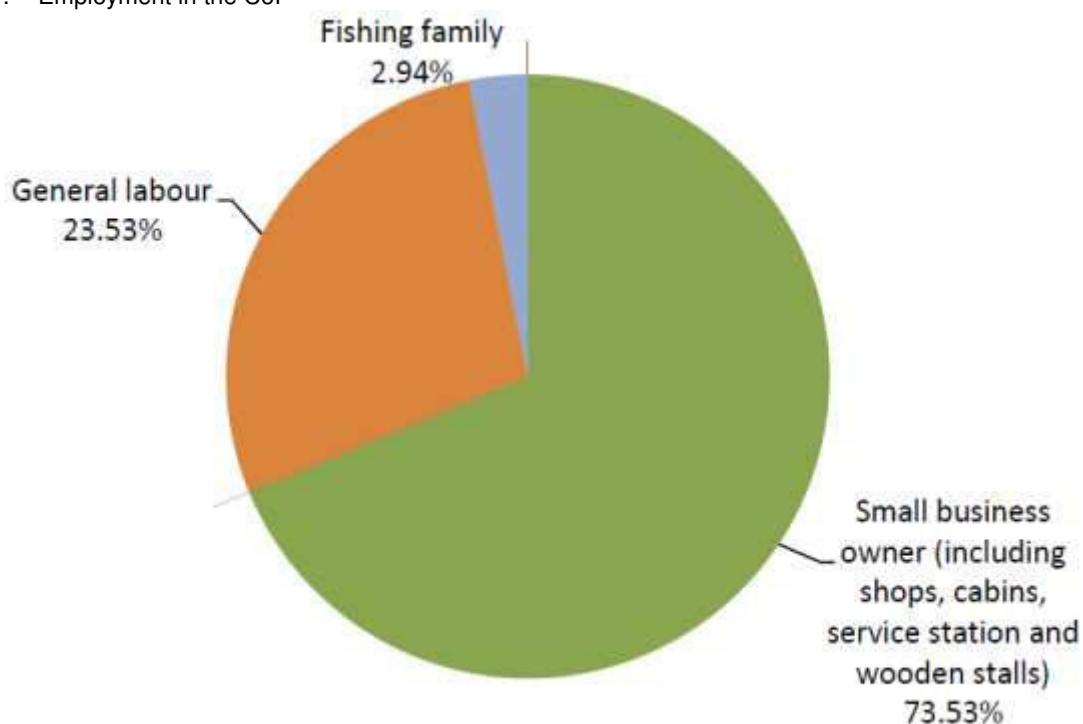
Age Group	Male	% Age	Female	% Age	Total	Percentage
6-9	10	4.91	11	5.01	21	10.10
10-18	19	8.70	19	8.92	38	17.68
19-65	60	28.10	62	29.34	122	57.58
Above 65	2	0.74	1	0.75	3	1.01
Total	105	49.09	108	51.91	213	100

It is noted that 55 PAPs are resident within the Col, and 158 are dependent upon income generated through commercial structures located on the embankments.

4.3.2 Employment and Income Sources in Col

The survey has identified the following occupations in the Col: 25 small businesses (including shops, cabins, service station and wooden stalls) (73.53%), eight general labourers (23.53%) and one fishing family (2.94%) are falling in the Col.

Figure 4.1: Employment in the Col



Only those earning income from general labour or fishing are resident within the Col. Small business owners have established their businesses within the Col, but are resident in nearby villages outside the Col.

General labourers are engaged in number of roles. Most commonly, labourers are employed as agricultural labourers (harvesting, picking, threshing, animal rearing, drivers and guards). Note that agricultural labourers are engaged on agricultural land outside of the Col.

Local labourers commonly gain employment during the sugarcane harvesting season, for crop harvest, loading and transportation. Sugar mills in the surrounding area also employ skilled and unskilled labour, which is a source of income generation for some PAPs. Sanghar sugar mill is located about 20km from the

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Col and cotton factories in Sanghar city are approximately five km from the Col. Both have created employment and made positive impact on the local economy within the Col.

Intermittent employment on construction projects has been common in the past, including the rehabilitation of the Upper and Lower Nara and Khipro Canals under the WSIP project. The skills that could contribute to the local economy and resources are lacking for enterprise development.

For the majority of labourers, employment is intermittent and usually on a temporary basis.

4.3.3 Small Businesses in the Col

The small businesses to be impacted by the works fall within the following broad categories:

- General stores (non-fresh food and toiletries) – 12 number
- Tobacco and confectionary stores – 7 number
- Fresh fruit and vegetable store – 1 number
- Cold drink store – 1 number
- Tea stall – 1 number
- Cobbler – 1 number
- Agricultural tool repair – 1 number
- Motorcycle service station – 1 number

Small businesses operating within the Col are detailed separately in the following table:

Table 4.5: Small Businesses Operating in the Col

Sr. No	Name of Small Business Owner	Father's Name	RD	Affected structure	Goods/services sold
1	Shahmir Jamali	Dost Mohammad	18+000(IP)	Shop	Cold drinks
2	Altaf Hussain	Shahmir Jamali	18+000(IP)	Shop	Tea stall
3	Mohd Yameen Lashari	Abdul Raheem	18+000(IP)	Shop	Fruit and vegetables
4	Moti Naal Sochi	Bagchi	18+000(IP)	Wooden Stall	Cobbler
5	Nazir Ahmed	Khada Bux Lashari	18+000(IP)	Shop	General store: sugar, flour, soap, tooth paste, milk etc
6	Ghulam Sarwar Lashari	Abdul Raheem	18+000(IP)	Shop	General store: sugar, flour, soap, tooth paste, milk etc
7	Ghulam Nabi Laghari	Qamar Din	18+000(IP)	Shop	Cigarettes, Gutka (chewing tobacco) and confectionaries
8	Gulzar Ahmed Laghari	Haji Ghulam Mohd	18+000(IP)	Shop	Cigarettes, Gutka (chewing tobacco) and confectionaries
9	Wahid Bux Bugti	Mir Hassan	18+000(NIP)	Shop	General store: sugar, flour, soap, tooth paste, milk etc
10	Ghulam Nabi Laghari	Qamar Din	18+000(NIP)	Shop	General store: sugar, flour, soap, tooth paste, milk etc
11	Khalil Ahmed Laghari	Haji Faizullah	18+000(NIP)	Shop	General store: sugar, flour, soap, tooth paste, milk, mobile phone credit
12	Dhani Bux Laghari	Sain Bux	18+000(NIP)	Shop	Blacksmith - Repair of agricultural tools (non-mechanized)
13	Abdulhaq Laghari	Khalil Ahmed	18+000(NIP)	Shop	General store: sugar, flour, soap, tooth paste etc

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Sr. No	Name of Small Business Owner	Father's Name	RD	Affected structure	Goods/services sold
14	Talib Hussain	Adam Khan	18+000(NIP)	Motor cycle service platform	Washing and minor repairs/servicing of motor cycles
15	Abdul Karim Laghari	Khalil Ahmed	18+000(NIP)	Shop	General store: sugar, flour, soap, tooth paste, milk etc
16	Nangar	Fazul	40+000(NIP)	Cabin	Cigarettes, Gutka (chewing tobacco) and confectionaries
17	Allah Dino	Kongho Jamali	40+000(IP)	Cabin	Cigarettes, Gutka (chewing tobacco) and confectionaries
18	Ameer Bux Jamali	Allah Dino	40+000(IP)	Shop	General store: sugar, flour, soap, tooth paste, milk etc
19	Ali Dino Sher	Imam Bux	40+400(NIP)	Shop	General store: sugar, flour, soap, tooth paste, milk etc
20	Bhale Dino	Mohammad Ismail	64+000(IP)	Cabin	Cigarettes, Gutka (chewing tobacco), confectionaries, sugar, shampoo and other general items
21	Mir Mohd Brohi	Haji Abdul Karim	175+000(IP)	Shop and Cabin	General store: sugar, flour, soap, tooth paste etc And Tea Stall
22	Zahoor Din Sher	Haji Lal Mohd	175+000(NIP)	Shop	General store: sugar, flour, soap, tooth paste etc
23	Habib-ur- Rehman Sher	Habibullah	175+000(NIP)	Cabin	Cigarettes, Gutka (chewing tobacco) and confectionaries
24	Khemchand Bheel	Nango Mal	175+000(NIP)	Shop	Cigarettes, Gutka (chewing tobacco), confectionaries, sugar, shampoo and other general items
25	Sanwan Khoso	Mirho Khan	354+200 (IP)	Cabin	Cigarettes, Gutka (chewing tobacco) and confectionaries

Examples of the various small businesses are shown in the following figures.

Figure 4.2: Cobbler at RD 18



Figure 4.3: Confectionery store at RD 18



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Figure 4.4: Motorcycle Service Platform at RD 18



Figure 4.5: Fruit and Vegetable store at RD 18



Figure 4.6: General Store at RD 40



Figure 4.7: Tea Stall at RD 176



Figure 4.8: General Store RD 176



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4.3.4 Income Levels and Poverty Status

The overall income and poverty status of PAPs is provided in the following table.

Table 4.6: Income and Poverty Status of the Affected Households

Sr. No	Profession of the AFs	No. of Affected Households	Total No. of PAPs.	Total Monthly Income (Rs)	Average Monthly Income Per Household (Rs)	Average Income Per Capita (Rs./Month)
1	Small Business (Shops and shops with cabin)	18	116	184,500	10,250	1,591
2	Small Business (Cabin only)	5	24	29,000	5,800	1,208
3	Small Business (Wooden stall)	1	10	6,000	6,000	600
4	Small Business (Service station)	1	8	12,000	12,000	1,500
5	General Labour	8	46	64,000	8,000	1,391
6	Fishing	1	9	8,000	8,000	889
	Total	34	213	303,500	8,926	1,425

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

Note: One abandoned structures are not included in this table; rather it is included in structure only.

Table 4.7: Poverty Status of Mithrao Canal (Below Poverty Line)

Sr. No.	Profession of Affectees	No. of Households (Below Poverty Line)	Total No. APs (Below Poverty Line)	Poverty Status (% of households)
1	Small Business (Shop with cabin)	12	95	67
2	Small Business (Cabin only)	4	23	80
3	Small Business (Wooden stall)	1	10	100
4	Small Business (Service station)	1	8	100
5	General Labour	8	46	100
6	Fishing	1	9	100
	Total	27	191	79

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

The tables above indicate that among the affected households, 72% of the small business owning households (including families owning shops, cabins, service stations and wooden stalls), 100% general labourer and 100% fishing households are living below the official determined poverty line. On an overall basis 79% of the affected households are living below poverty line. 100% of those PAPs who are resident within the CoI are living below the poverty line.

For full details please refer to Appendix C.

The income levels have been considered in relation to the poverty line of Pakistan, which has been set in this RAP to be PKR 2,307 per capita per month. This is calculated from the 2010-2011 poverty line of PKR

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1, 745/capita/month as quoted in the Pakistan Economic Survey of 2013-2014. This value has been adjusted based on the annual consumer price inflation quoted by the World Bank⁸:

- 11.9% in 2011: PKR 1,952.66
- 9.7% in 2012: PKR 2,142.06
- 7.7% in 2013: PKR 2,307.00

4.3.5 Expenditure of Affected Household

During the field survey encroachers were asked their monthly/ yearly expenditure. They informed the consultants that their income and expenditure varies every month. They said they take loan from shopkeepers in the town and from landlords. Labourers depend on their daily wages, until the harvest season when they pick the crop to meet their expenses and repay loans to shopkeepers.

Table 4.8: Expenditure of Affected household

Sr. No	Profession of the AFs	No. of Affected Households	Total No. of PAPs.	Total Monthly Expenditure (Rs)	Average Monthly Expenditure Per Household (Rs)	Average Expenditure Per Capita (Rs./Month)
1	Small Business (Shop, and shops with cabin)	18	116	188,000	10,444	1,621
2	Small Business (Cabin only)	5	24	40,000	8,000	1,667
3	Small Business (Wooden stall)	1	10	15,000	15,000	1,500
4	Small Business (Service station)	1	8	12,000	12,000	1,500
5	General Labour	8	46	70,500	8,813	1,533
6	Fishing	1	9	10,500	10,500	1,167
	Total	34	213	336,000	9,882	1,577

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

4.3.6 Agriculture

With the exception of government owned land from RD 06+000 to RD 15+000 on the IP side, where rice is grown on the berms in small patches, there is no agricultural land that will be impacted within the RoW.

The lands in sub-project area, beyond the Col, are fertile and canal water is the main source of crop cultivation 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 (May to October). Sugarcane is a cash crop and commonly grown in the sub-project area due to the availability of the surrounding sugar mills. The most commonly grown crops are wheat, rice, sugarcane and fodder for livestock.

⁸ <http://databank.worldbank.org/data/home.aspx>

Figure 4.9: Cropping in the Sub-project Area



The canal irrigation system is the major source of crop cultivation in the sub-project area. It was also observed that some farmers have also installed tube wells near the canal to irrigate their land/crops.

4.3.7 Landholding Status

During the field survey it was observed that no household to be resettled depends on agriculture in the Col. Of the 3.042 acres of land required for the construction of a new cross-regulator, 1.52 acres are under private ownership (the owners are resident outside the Col) and the remainder is government owned. The land to be acquired is under seepage water and is not farmed. Further details are provided in section 5.3.7. Approximately 5 acres of government owned land is cultivated by an irrigation darago on the berms of the Mithrao Canal from RD 6 to 15.

4.3.8 Animal Husbandry in the Sub-project Corridor

Overall in the sub-project area people own very good breeds of buffaloes, cows and bulls, goats and sheep. Livestock is the main source of milk, meat and ghee for the local population. Livestock is also a source of income as people of the area keep cow/bulls, goat and sheep to sell annually at Karachi market. Donkeys and camels are used for load carrying. Domestic poultry is also a source of income.

Figure 4.10: Livestock in the Sub-project Area



4.3.9 Castes and Languages

The main castes in the sub-project corridor and surrounding area are Bugti, Bheel, Chandio, Jamali, Kolhi, Junejo, Leghari, Lashari, Mallah, Malik, Mangrio, Joyo, Rind, Burdi, Syed and Solangi. Sindhi language is commonly spoken as mother tongue of majority of the communities in the sub-project area. However, Urdu, Punjabi and Siraiiki languages are also spoken and understood as local languages.

4.3.10 Social Cohesion and Conflict in the Col

The social structure and conflict resolution mechanisms of the Col and sub-project area are similar.

The majority of families in the study area live in joint family systems (parents live with their elders and children). The sharing of resources is beneficial in term of joint incomes, manpower (agricultural practices) and basic amenities such as water, electricity, housing and food.

Social organization in all villages is strongly based on the tribal system, where each tribe has a tribal leader. The families belonging to the same tribe have strong interactions with one another and generally keep separate identities. For example, in the marriages of their young, they prefer to marry within their own tribe. Such interactions between different tribes are less common. During the survey it was found that most communities had built their own religious structures and maintenance of these religious structures was by the villagers themselves.

4.3.10.1 Conflict Resolution within Tribes and Castes

During the field survey of villages it was observed that most activities are carried out under the instruction of the head of tribe. The caste system in the rural area of the Sindh is very rich, and decisions about conflict, right of vote, marriage settlements and other matters usually resolved by the head of tribe. Most of the conflicts in the Col are mutually resolved within the tribe at the village level. Those living within the Col feel obliged to accept the decision of their tribe leader.

It has been observed in rural Sindh that where more than one tribe has settled within a single village, each tribe has their own tribe leader. Overall there is a village leader from the same village and who belongs to an influential political family or a land lord and is from a financially sound family of the village. The majority of conflicts are resolved by tribe leader, and if not solved at this level, the matter shall be elevated to the village leader.

Occasionally, where the conflict cannot be resolved at a village level, the matter may go to the political leaders of the area. Of the conflicts reaching this level, more than 90 percent matters were resolved by the political leaders of the area.

In extreme cases where resolution at all other levels has failed, conflicts may go to police and ultimately a court of law. The police and the court of law are the last options and these are rarely exercised.

4.3.11 Education and Literacy Ratio in the Sub-project Area

During the field survey eight (08) villages and scattered hamlets were selected randomly for socio-economic analysis. According to the results of the survey, the total population of the eight surveyed villages and hamlets is 2,705 persons, comprising of 1,282 males and 1,423 females. The number of literate persons is 1,149 (consisting of 836 boys and 313 girls students) which accounts for 42.48 percent of the total population. The Information in respect of literacy levels of the surveyed villages is furnished in Table 4.9.

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Table 4.9: Literacy Rate in the Sub-project Corridor

Sr. No.	Education Level	Literacy Rate			Percentage	
		Male	Female	Total		
1	Primary	480	245	725	26.80	(63.10)
2	Middle	150	60	210	7.76	(18.28)
3	Matric	110	08	118	4.36	(10.26)
4	Above matric	96	-	96	3.55	(8.36)
Sub-Total Educated		836	313	1149	42.48	(100)
5	Illiterate	356	1010	1366	50.50	
6	Children	90	100	190	7.02	
Grand Total		1282	1423	2705	100.00	

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

4.3.12 Social Amenities in Sub-project Area

The result of the survey revealed that the electricity is available in the sub-project area. However, only approximately 80 percent of the population had access to this facility, whereas, 20 percent are not provided with electricity. Regarding the quality of services, about 60 percent of the respondents availing this facility showed their dissatisfaction. Education is the other important facility which is available in the area. Primary schools are available in 75% of the surveyed villages. Majority of people (approximately 65 percent) is unsatisfied with the quality of services while 35 percent showed their satisfaction, road facility is available in sub-project area. Availability of sewerage/drainage facility is not reported in the area. Other amenities like water supply tanks are not available in the sub-project corridor. Gas, Basic Health Units (BHUs) and land lined telephone services are not available in the surveyed villages, as reported by the respondents. The information in respect of access to social amenities and their quality of services are given in Table 4.10.

Table 4.10: Access to Social Amenities in the Sub-project Area

Sr. No.	Facility	Available	Not Available	Satisfactory	Unsatisfactory
		(%)	(%)	(%)	(%)
Mithrao Canal					
1	Electricity	80	20	40	60
2	Gas	0	100	-	-
3	Water Supply/Tank	0	100	-	-
4	Telephone (Land Line)	0	100	-	-
5	Sewerage/ Drainage	0	100	-	-
6	Road	40	60	50	50
7	BHU	0	100	-	-
8	School (Primary only)	75	25	35	65

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

4.3.13 Pressing Needs of the Men

It has been pointed out by the men during the survey that 33 percent identified delivery of adequate irrigation water was their priority - they were concerned that they were not given irrigation water according to the design discharge of their canal. The second and onward needs prioritized by the men are electricity, dispensary, a middle school and gas. The pressing needs of men are presented in Table 4.11.

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Table 4.11: Pressing Needs of Men (Multiple Response)

Sr. No.	Items	Number	Percentage (%)
1	Irrigation Water	68	33
2	Electricity	56	27
3	Dispensary	48	23
4	Middle School	24	12
5	Gas	10	5
	Total	206	100

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

4.3.14 Status of Women

The survey has revealed that participation percentage of women in various socio-economic activities in the sub-project corridor is generally high, 100 percent in case of household activities and child caring. Their participation percentage in case of farm/crop stood at 75 percent, livestock rearing at 60 percent, and 90 percent in the case of social obligations (such as attending death and marriage ceremonies). Regarding decision making, the participation of women remained zero percent.

Information in respect of women participation is presented in Table 4.12.

Table 4.12: Women Role in Socio-economic Activities (Multiple Response)

Sr. No.	Activity	Percentage (%)
1	Households Activities	100
2	Child Care	100
3	Farm/Crop	75
4	Livestock Rearing	60
5	Social Obligations (Death and Marriage occasion)	90
6	Decision Making	0

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

Figure 4.11: Women Engaged in Agriculture



4.3.14.1 Gender Issues

A gender study was carried out to assess the difference in social roles between females and males. The constraints faced by the females in gaining access to various activities and participation were gathered. The female population in Pakistan according to the 1998, Census, is around 48%. In view of this situation, the gender issues assume special focus and need to be properly addressed and evaluated. The females were interviewed including working class ladies, house wives, students and elderly women. The results of the survey have shown that women are an integral part of the socio-economic life of the rural economy. Women of the area took active part in household activities (like cooking, washing of clothes, carrying of fodder for livestock and potable water for human consumption, etc.), child caring and fulfilling social obligations. The above data indicates that as far as participation in carrying out different activities is concerned, they share with the males in every household and field activity. However, their participation is zero in making decisions about various socio-economic matters, particularly related to activities which require interaction with others such as decisions about children education, farm business, sale and purchase of livestock or property, etc. The male respondents were of the view that traditionally they have been undertaking such responsibilities and they do not think that the females have much exposure and courage to decide such matters. This is a kind of social stress for the women.

The majority of the females within the Col are illiterate. The health and hygiene condition of females and children is very poor. Many diseases were identified within the Col, i.e. skin diseases, diarrhoea, hepatitis and flu. Almost all female are suffering from anaemic diseases.

4.3.14.2 Pressing Needs of Women

Pressing needs of the women correspondents in the sub-project area within the corridor of impact are given in Table 4.13:

Table 4.13: Pressing Needs of Women (Multiple Responses)

Sr. No.	Items	Number	Percentage (%)
1	Girls Primary School	50	26.32
2	Health (RHC)	45	23.68
3	Irrigation water	40	21.05
4	Electricity	35	18.42
5	Gas	20	10.53
	Total	190	100.00

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

It can be found from the above table that first priority of the women of the area is girls' primary school. The second most pressing need is a health centre. The remaining pressing needs are irrigation water, electricity and gas.

4.3.15 Non-Government Organization in the Sub-project Corridor

During the field survey it was observed that many NGOs were working in the sub-project and the following are currently active: National Rural Support Programme (NRSP), Strengthening Participatory Organization (SPO), Marvi Stop Service (MSS), Dharti Dost particularly in the field of health, education, livestock, poultry, health & hygiene, infrastructure, micro-credit and Environment. These NGOs are working in the whole districts, and not exclusively or specifically in sub-project area. NGO representatives assured the project team that they will work in the project affected villages on priority basis in future.

5. Assessment of Impact

5.1 General

Prior to implementation of works to raise embankments as part of the rehabilitation of Mithrao Canal, clearance of certain measurements of land over and on IP and NIP (defined as the Col) will be required. It has been found during the field survey that the Col is occupied by households living in shelters and conducting business within the Col. All structures within the Col shall require removal prior to the implementation of the works. The Col is defined in section 3.7.

5.2 Identification of PAPs and Affected Assets

A Project Affected Person (PAP) is defined as any person, whose land, assets, infrastructure, source of livelihood or access to resources is likely to be affected by the sub-project activities. PAPs can be divided into the following two groups:

1. Directly and Partially Affected Persons: This group includes people whose land, houses, other built-up property or source of livelihood (or the source of livelihood of those on whom they depend) will be affected due to sub-project activities.
2. Indirectly Affected Persons: This group includes people who will not lose their land, houses or built-up property, but whose social relations and/or free mobility would be disrupted due to sub-project activities. All those living within the primary impact zone are considered to fall within this category.

This RAP considers only the directly affected PAPs, and in the context of the WSIP/B1/NC/03 rehabilitation sub-project, this includes all those to lose their homes and commercial structures due to the raising of the embankments or realignment of cross-regulating groups. Any person whose land, assets, infrastructure, source of livelihood or access to resources is likely to be affected by the sub-project activities within the Col of the embankment works is therefore considered to be a PAP.

The impact to the indirectly affected persons is covered within the Environmental Impact Assessment and Environmental Management Plan (EIA/EMP) for Contract WSIP/B1/NC/03. The EIA/EMP details a number of actions taken during the planning and design as well as actions to be implemented by the contractor to prevent any significant impact to this group. This group is not considered within the RAP.

PIC were initially active in the field from September 2010 to January 2011 to identify the PAPs. PIC remobilised to the field to update the list of PAPs from May to July 2014 in order to capture any changes to the population of the Col since January 2011. A further visit was held after the consultation with M&EC on the 06th November to 09th November 2014 in order to finalise the resettlement requirements and undertake additional consultations.

Note that in this RAP, an immovable structure is defined as a single continuous structure fixed to the ground, including all the rooms within that structure, and any sheds built against, or over that structure. For example, a single house may contain multiple rooms (bedrooms, living room), a kitchen and a shed. Or a shop may contain a number of rooms acting as the storefront and any store rooms or sheds. Wherever buildings are separated by a strip of land large enough for a person to pass between, these buildings are considered to be separate structures. Cabins and wooden stalls are considered as moveable structures.

5.3 Overview of Impacts

5.3.1 Summary

Privately owned structures and hand pumps are constructed illegally within the Col (i.e. the owners of these assets have no formal recognisable rights to the land occupied by their assets). These structures are owned by 34 households, comprising of 213 persons. One structure is abandoned. All these structures are to be removed as part of the sub-project as they have been constructed illegally within the Col (i.e. the owners of these structures have neither formal nor recognisable rights to the land they occupy).

The clearance of two hand pumps and three prayer platforms which are owned by the community is also required. The proposed works and construction methodology have been designed to prevent the need to remove mosques and graves.

In addition, the permanent acquisition of approximately 1.52 acres of privately owned land shall be required for the execution of the works.

12 Government owned sites and three hand pumps have also been established within the Col, including Police chowki, FO office, SIDA office, Irrigation Department buildings and an abandoned water supply scheme.

5.3.2 Impact on Privately Owned Structures

The result of the survey revealed that different temporary structures have been constructed at the toe of canal within the Col. These structures can be defined and sub-defined as follows:

- Katcha houses, including:
 - rooms
 - kitchens
 - sheds
 - animal sheds
- Hand pumps
- Sheds
- Guest house (Otaq)
- Pacca, semi pacca and katcha shops, including:
 - storefronts
 - stores
 - sheds
- Moveable cabins
- Movable wooden stall
- Motorcycle Service Station

The views of the privately owned structures with in the Col are shown in the following figures.

Figure 5.1: View of Houses in the Col



A summary of the private resettlement requirements within the revised Col is given in the following table.

Table 5.1: Detail of privately owned structures within the Col (including hand pumps)

Sr. No.	Type of Structure	Number of Structures		
		Inspection Path	Non Inspection Path	Total
1	Houses	9	-	9
2	Guest House (OTAQ)	1	-	1
3	Shops	9	10	19
4	Cabins	4	3	7
5	Wooden Stall	1	-	1
6	Service Station	-	1	1
7	Shed	1	1	2
8	Hand Pumps	2	2	4
	Total	27	17	44

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

For further details, please refer to Appendix C.

The demolition/removal of all structures detailed in the table above is required.

5.3.3 Impact on Community and Religious Structures

The impact on community structures during sub-project implementation is a crucial issue because people consider the demolition of such structures a sin. Therefore, care should be taken regarding impact on community structures during sub-project works.

The local population commonly raised questions regarding the safety of graveyards and graves of saints during consultations. The field team very clearly informed them that these graveyards/graves of saint will be 100 percent protected from demolition.

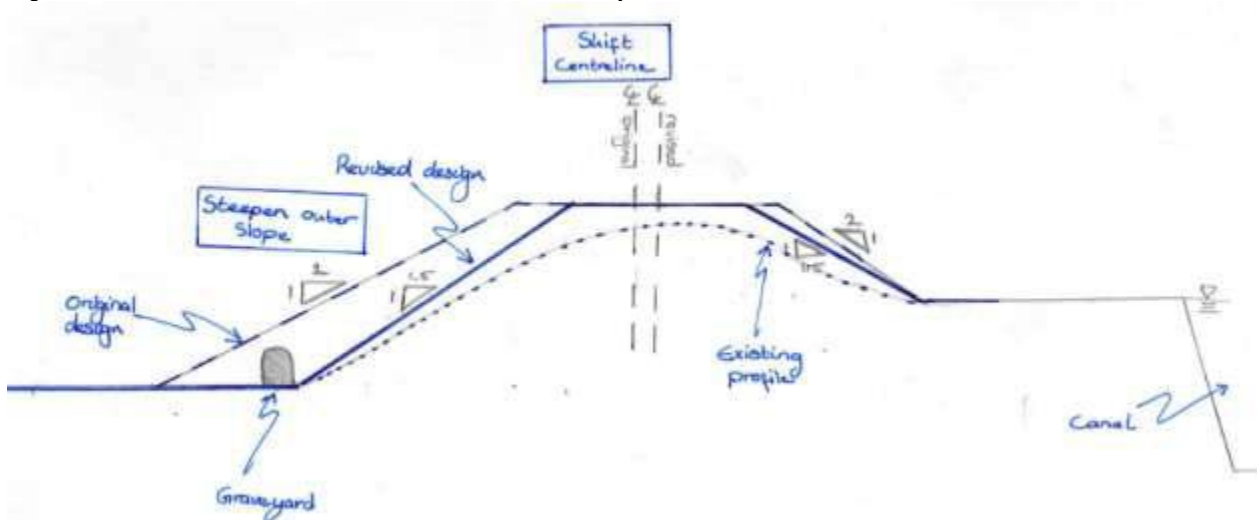
PIC identified graves of saints at RD 40+000 IP side are out of Col. Details of these graves are given in Appendix C, and photos are shown in the figures below.

Figure 5.2: View of Graves in the Col



As the graves are positioned near the toe of the embankment, certain adjustments to the centreline of the embankments are made to avoid the graves at these positions. Local steepening of the embankments was shown to be technically feasible during previous contracts under WSIP within the Nara AWB.

Figure 5.3: Measures to Avoid Demolition of Graveyards



Two mosques are identified within the Col which will be also be avoided by realigning the embankment at these positions as discussed above.

In addition, three prayer platforms and two hand pumps were also identified in the Col. Demolition of these five structures cannot be avoided and they are therefore included in this RAP.

The details of the religious structures with in the Col are given in the following table.

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Table 5.2: Community Structures in the Col

Sr. No	Type of Community Structure	IP	NIP	Total No: of Structure	Demolition Required
1	Mosque	1	1	2	No
2	Graveyard	1	-	1	No
3	Prayer platform	3	-	3	Yes
4	Hand pump	2	-	2	Yes
	Total	7	1	8	5

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

Further details, including location, can be found in Appendix C.

Figure 5.4: View of Mosques in the Col



View of Prayer platform in the Col



5.3.4 Impact on Government Structure

The result of the survey revealed that the Government structures existing in the Col are eight irrigation buildings, one abandoned water supply scheme, one FO office, one police check post, one SIDA office and three hand pumps. Demolition of all these structures shall be required for the completion of these works and their reconstruction have been included within the civil works contract. Details of the Government sites to be removed from the Col are given in the following table.

Table 5.3: Detail of Government Structure at Col

Sr. No	Type of Community Structure	IP	NIP	Total No: of Structure
1	Irrigation Office	3	5	8
2	SIDA Office	-	1	1
3	FO office	1	-	1
4	Police chowki	1	-	1
5	Abandoned Water Supply Scheme	-	1	1
6	Hand pump	1	2	3
	Total	6	9	15

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to July- 2014

Figure 5.5: View of Irrigation House



Figure 5.6: View of SIDA Building



5.3.5 Privately Owned Fish Farms

During the 2014 baseline survey, two fish farms at RD 353 totalling approximately two acres were identified to be impacted as a result of the proposed works – these fish farms no longer exist. There shall be no impact to privately owned fish farms under this sub-project.

The fish farms were located on both sides of the canal at RD 353, and although primarily situated within private land, they extended into the government owned RoW where works are to be implemented under this contract. The fish farms were owned and operated by Mr Altaf Khoso. Additional consultations were carried out with Mr Khoso in December 2015 in which it was reported that Mr Khoso's attempts to establish the fish farms in ditches adjacent to the canal had been unsuccessful. Mr Khoso now cultivates root vegetables in ditches situated within his privately owned land, and this land shall not be impacted by the proposed works - as shown in the Figure 5.9. Mr Khoso generates an annual income of approximately PKR 3,000 from the sale of these vegetables which shall not be affected. This income is secondary to income from the Irrigation Department in his role as a *Tundel* (operator of the cross-regulating complex at RD 354). Mr Khoso does not employ any labourers.

Figure 5.7: Cultivated Ditches at RD 354

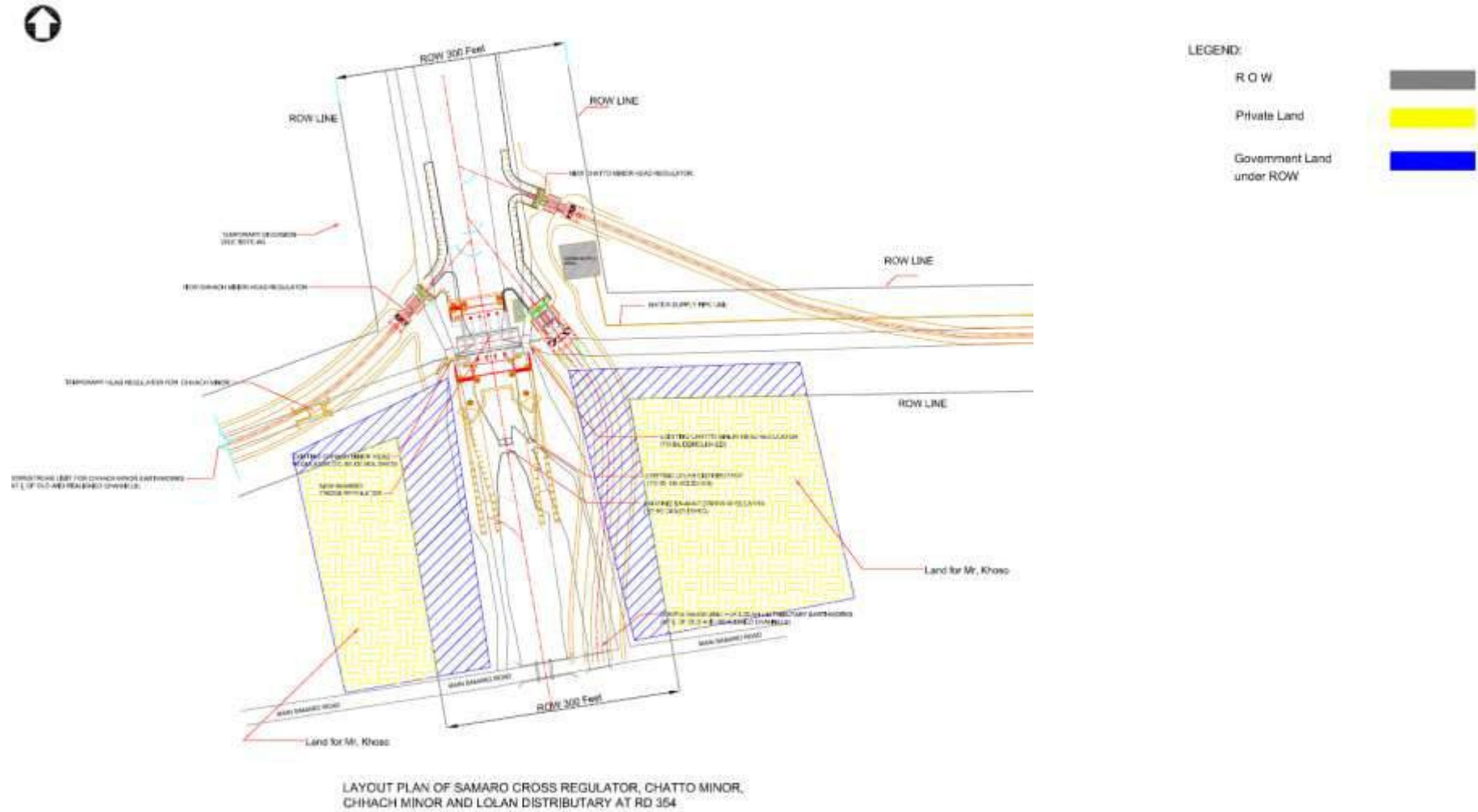


Figure 5.8: PIC consulting with Mr Khoso in December 2015



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Figure 5.9: Layout Plan of Works a RD 354



5.3.6 Cultivated Land in the RoW

An area of government owned land, totalling 5 acres, is cultivated on the berm of the Mithrao Canal from RD 6 to 15 on the IP side. Rice is grown on this land and it is cultivated by one irrigation daroga (employed by the AWB to operate the gates on the regulators). Any standing crops at the time of the works shall be lost as a result of this sub-project. Agriculture is not practiced in any other locations within areas of the RoW to be impacted.

5.3.7 Private Land Acquisition

Private land will be acquired for the realignment of the road over Bakhoro Cross Regulator. A total of 3.042 acres of land will be required for the diversion of the road to carry out the construction works. Land on the IP side is the government land and unused while 1.52 acres of land on the NIP side is privately owned by one land owner, and will be acquired. The privately owned land on the NIP side is unused and is under seepage water as shown in the following figure. Therefore there shall be a minimal negative impact to the household which owns this land as a result of the acquisition.

Figure 5.10: Permanent Land Acquisition at RD 18 – Baseline Land Use



5.3.8 Temporary Land Acquisition

The contractor shall be required to temporarily acquire 227 acres of privately owned land within the sub-project area for the purpose of establishing borrow areas. Suitable borrow areas have been identified by PIC within areas of uncultivated land which are commonly found beyond the RoW of the Mithrao Canal. The land to be temporarily acquired is owned by 40 separate land owners.

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An inventory of the borrow areas is provided in the following table:

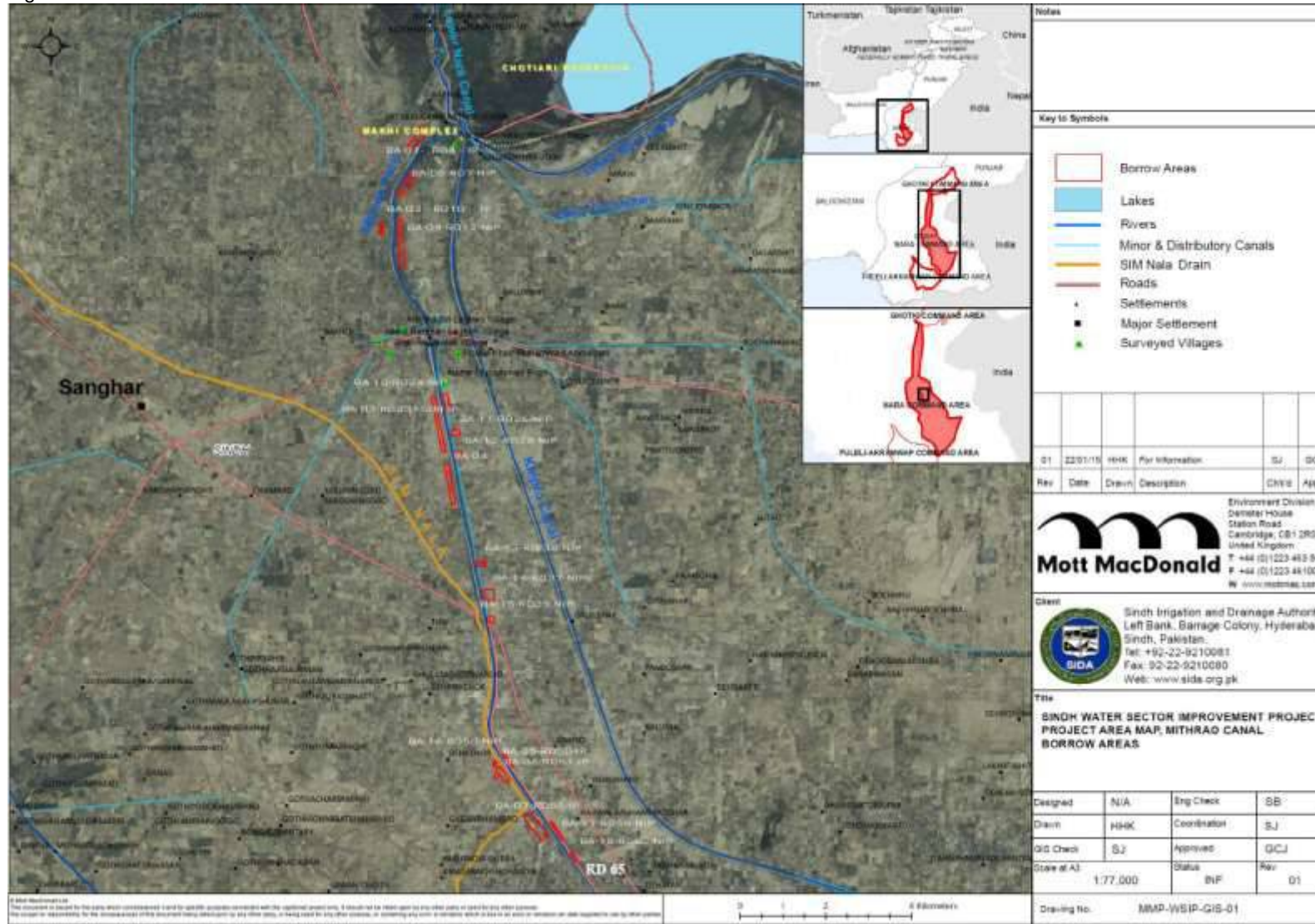
Table 5.4: Details of Borrow Areas for Contract WSIP/B1/NC/03

Borrow Area Number	RD	Bank	Area (acres)
1	4	IP	23.45
2	10	IP	3.6275
3	23+500	IP	28.9725
4	26+500	IP	22.3125
5	50	IP	2.0275
6	51	IP	12.965
7	55	IP	34.4325
8	7	NIP	7.5
9	12	NIP	32.0175
10	24	NIP	8.89
11	26	NIP	5.9175
12	28	NIP	5.89
13	36	NIP	6.3175
14	37	NIP	15.1325
15	39	NIP	5.45
16	50	NIP	4.9425
17	58	NIP	5.255
18	62	NIP	2.2175
		Total	227

The location of borrow areas are shown in Figure 5.11, and photographs showing the baseline land use are provided in Appendix J.

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Figure 5.11: Location of Borrow Areas for Contract WSIP/B1/NC/03



5.4 Impact to Occupation and Income in the Col

5.4.1 General

The survey has revealed that occupation of households within the Col is as follows:

- 25 households owning small businesses (73.5%)
- Eight household's workings as general labour (23.5%)
- One fishing household (3%).

In addition, approximately 5 acres of land is being farmed by an irrigation daroga (gate operator employed by the AWB) from RD 5 to 15 on the berms of the Mithrao Canal.

The overall income status of PAPs is provided section 4.3.4, and the poverty status is provided in the following table.

Table 5.5: Poverty Status of Mithrao Canal (Below Poverty Line)

Sr. No.	Profession of Affectees	No. of Households (Below Poverty Line)	Total No. APs (Below Poverty Line)	Poverty Status (% of households)
1	Small Business (Shop with cabin)	12	95	67
2	Small Business (Cabin only)	4	23	80
3	Small Business (Wooden stall)	1	10	100
4	Small Business (Service station)	1	8	100
5	General Labour	8	46	100
6	Fishing	1	9	100
	Total	27	191	79

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

This table indicates that among the PAPs, 72% of the small business owning families (including families owning shops, cabins, service stations and wooden stalls), 100% General Labour and 100% fishing are living below the official determined poverty line. On an overall basis 79% of the affectees were living below poverty line.

The analysis indicates that professional groups relating to fishing and general labour will be the most adversely affected due to sub-project activities as they fall under the official poverty line (inflation adjusted) of Rs.2,307 per capita/month.

It is expected that the sub-project activities in the area will generate employment opportunities. Estimated labour requirements for the contract are provided in section 3.4.7. The contractor shall be able to source many of the labourers from within the sub-project area, including from PAPs, and especially within Loharo village at RD 63. However, employment of skilled and semi-skilled labourers who do not reside within the sub-project area shall be required to meet the needs of this contract.

On completion of rehabilitation work, reliability and efficiency of irrigation water will be increased which will help to increase socio-economic activities in the area, thus making positive impacts on the incomes of the vulnerable groups.

5.4.2 Small Businesses

It is noted that the 25 households operating small businesses in the Col own commercial structures (including shops, cabins, service stations and wooden stalls). Note that in certain cases, a single household owns a shop and a cabin. Further details on the ownership of commercial structures may be found in Appendix C.

The affected families who own small business structures within the Col shall experience a direct impact on their income due to loss of these business structures and therefore the loss of trade. This is true for all business structures, with the exception of cabins. Compensation for the impact to the livelihood of owners of small business structures (except cabins) is therefore required, and is discussed further in Chapter 7.

Cabins are small and movable structures (as shown in the following figure), therefore their demolition is not required, as they can be relocated outside the Col and business resumed. Therefore there shall be minimal impact to their income, although they will incur some expenditure in moving their cabin.

Figure 5.12: Example of a Cabin



The families who own these small business structures are located outside the Col. If their shops should be relocated to a distant area, this would impact upon their income in the long term as access to the source of livelihood shall be compromised. This has been considered while identifying the alternative sites, as discussed in Chapter 7.

5.4.3 General Labourers

General labourers are finding employment in a range of industries, including agriculture, sugar mills, cotton factories, rice mills and construction. They and their families are resident inside the Col. As their location of employment is outside the Col, there shall be no direct impact to their income.

However, should they be required to relocate to a distant area, this shall impact on access to their current place of employment, which shall in turn impact on their income. As all PAPs employed as general labourers are living below the poverty line, such an impact would be exacerbated. This has been considered while identifying alternative sites as discussed in Chapter 7.

5.4.4 Fishing

The family who depend upon fishing for income is living within the Col at RD 354. They fish from the Mithrao Canal and sell these fish as a source of income. As for the general labourers, should they be required to relocate to some distant position, particularly if this position is remote from a canal or other watercourse suitable for fishing, this shall have an impact upon the source of income. As these PAPs are living below the poverty line, such an impact would be exacerbated. This has been considered while identifying alternative sites, as discussed in Chapter 7.

The main impact to the fishing household shall result from loss of shelter and distance to travel from their new residence to fishing location. The impact to fishing activities themselves as a result of the works within the canal shall be limited. Fish within irrigation canals are generally sourced from parent watercourses (the River Indus, via the Nara Canal, in the case of Mithrao Canal), and there is little evidence to support the existence of natural populations reproducing within the canals themselves⁹. Therefore there is minimal scope for a long term impact to fish populations within the canal as a result of the works, as fish stocks should be expected to be naturally replenished from the River Indus. The main risk to fish population, and therefore fishing activities on the Mithrao Canal, shall result from increased turbidity (sediment load) during canal remodelling works from RD 0 to 60. However, far more extensive canal remodelling activities were completed upstream (within the Upper and Lower Nara Canal) under Contract WSIP/B1/NC/01 without any reported impact to fishing activities in the downstream system. As such, no impacts to fishing from the Mithrao canal is expected.

5.4.5 Farmers

The irrigation daroga who farms the berms of the Mithrao Canal from RD 6 to 15 shall also experience a total loss of income usually generated from cultivation of rice on the canal berms in the short term. This impact shall only be temporary for a single growing season while works are completed in this reach. As the proposed works shall result in the reinstatement of berms from RD 18 to 65 (where none currently exist) a much larger area of berm shall become available for cultivation, if so permitted by the AWB. This would be a positive impact for farming households in the sub-project area. It is noted that the income gained by the irrigation daroga from cultivation on the berms is supplementary to their income from the AWB. Nonetheless, the impact during the construction phase is considered in the compensation plan included in Chapter 7.

The irrigation daroga is resident outside the Col.

There shall be no socio-economic impact resulting from the temporary use of borrow areas as the borrow areas have been identified within barren land and are not currently used for any socio-economic activity.

5.5 Impact to Social Networks

There shall only be an impact to the social networks of those who are residing within the Col. Those who own shops in the Col are resident within nearby villages located outside the Col, and therefore their social networks within these villages shall remain intact.

55 PAPs who are resident within the Col are located at RD 63 and 354. Of the 55 PAPs, 46 PAPs are from eight households located at RD 63 whose primary income is from general labour, and nine PAPs are from

⁹ Redding, T. A., and Midlen, A. B. (1990) 'Fish Production in Irrigation Canals. A review' Food and Agricultural Organization of the United Nations. Rome

a single fishing household at RD 354. Those households who have settled within the Col at RD 63, originate from the village of Loharo, situated just 1,500ft away from the PAPs, and these PAPs maintain strong social networks to this village. Any relocation of these PAPs away from the village of Loharo, shall have a negative impact on their social network. This has been considered when identifying alternative sites in Chapter 7.

5.6 Impacts on Low Income Earners

Table 5.5 identifies those living below the poverty line (business community, general labour and fishermen). Out of 34 affected families, 27 (79%) affected families have been found to be living below the official poverty line. The incomes of affectees are fragile and any change in their socio-economic equilibrium comprehends negative effects.

No vulnerable professional groups such as working children have been found in the sub-project area of Contract WSIP/B1/NC/03.

5.7 Impacts on Women Headed Households

During the surveys of the sub-project area, it was found that no women headed households exist in the Col of sub-project.

5.8 Impacts on Trees

All trees to be cuts during implementation of the sub-project are government owned. To mitigate the adverse impacts, provision for re-plantation through the contractor has been proposed: the contractor shall plant five trees for every one tree which is cut. Full details of trees to be cut are included in the EIA/EMP for Contract WSIP/B1/NC/03.

5.9 Summary of Impacts

The impacts associated with each component of works are summarised in the following table.

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Table 5.6: Summary of Project Impacts for Contract WSIP/B1/NC/03

No;	Type of Loss	Application	Definition of Entitled Person	Unit	Establishment of Construction Camp	Widening of the Mithrao Canal	Raising/Strengthening of Canal Embankments	Establishment of Borrow Areas	Establishment of Haul Routes to Borrow Areas	Disposal of Excavated Material	Construction of hydraulic structures ¹⁰	Realignment of Road	Total
1	Loss of Land (Unused)	Permanent loss of entire land or where partial loss but the remaining land is less than 0.5 acre or is rendered economically unviable.	Legal owner with valid title or customary or usufruct rights.	Impacted Acres (Impacted Households)								1.52 (1)	1.52 (1)
		Temporary loss of land	Legal owner with valid title or customary or usufruct rights.	Impacted Acres (Impacted Households)				227 (40)					
2	Loss of Land (Agricultural)	Temporary loss of land	PAPs without title	Impacted Acres			5 (1)						5 (1)
3	Loss of Land (Residential, commercial, industrial or institutional land)	Loss of residential, commercial, industrial or institutional land without sufficient remaining land. PAPs will be required to relocate.	PAPs without title	Impacted Households							34		34
			PAPs without title, living below the poverty line	Impacted Households								27	
4	Loss of Privately Owned Structures (Residential, commercial, industrial or agricultural)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Owner of structure (regardless of ownership of title to land on which structure is situated)	Impacted Households							32		32
5	Loss of Structures (Community)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Community	Number of Impacted Structures							5		5
6	Loss of Structures (Institutional)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Institution	Number of Impacted Structures							15		15
7	Loss of income (trade/livelihood/ occupation or business incomes)	Temporary or permanent loss of commercial income	Impacted business owner	Impacted Households							25		25

¹⁰ This component of works includes the following activities: replacement of cross-regulators; replacement of offtaking head regulators and realignment of head reaches; and, construction of temporary canal diversions.

6. Public Consultation and Information Disclosure

6.1 Introduction

To comply with the World Bank's requirements and policies on environmental assessment of projects, the sponsors of the projects resulting in involuntary resettlement are required to prepare and publicly disclose a RAP. The RAP must be prepared through a process of public consultation with all interested and affected parties. Proper consultation with affected parties can increase the effectiveness and reduce the cost of RAP implementation for the sponsor or other responsible parties. The proposed sub-project of Contract WSIP/B1/NC/03 will impact the local environment of the area as well as communities living in and around sub-project area to some extent. This chapter provides details of consultations carried out with stakeholders during the preparation of this Resettlement Action Plan.

6.2 Objectives of Consultation

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 the RAP, which leads to better and more acceptable decision-making. The important general objectives of the Consultation process are:

- Provide key project information to the stakeholders, and to solicit their views on the Resettlement Action Plan, and ensure their views are incorporated into the RAP,
- 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 sub-project and RAP;
- Ensure that views and concerns of the stakeholders are incorporated into the sub-project design and implementation with the objectives of reducing or offsetting negative impacts and enhancing benefits of the proposed sub-project;
- Create a sense of ownership among the stakeholders regarding the sub-project;
- Increase public confidence about the proponent, reviewers and decision makers; and
- To ensure the transparency in all the sub-project activities.

6.3 Methodology

The consultants carried out public consultations at various locations in the proposed sub-project area of Contract WSIP/B1/NC/03. The stakeholder's consultation during the work targeted the sub-project area, administration, government offices, shops and local community in and around the sub-project area:

- Selection of the stakeholders for consultation, reconnaissance of the proposed sub-project sites of Mithrao Canal, initial discussions with the SIDA officials, public and private employees stakeholders, local public representative, local shopkeepers, and Project Affected Persons (PAPs).
- Appraising the targeted stakeholders initially for the purpose of consultation and working out a schedule for holding regular consultation meetings;
- Meetings with the stakeholders through the participation of consultants' environmental and social specialists and documenting the opinions of the stakeholders expressed during the meetings etc.

6.4 Consultations with Project Affected Persons

As per WB Policy, at the second stage of consultation community members and their representatives were consulted to introduce the sub-project formally to the local community and to obtain their views on the development project. Group discussions were made with affected households. Various focus group meetings /discussions /scoping sessions were carried out with all expected project affected persons during months from September 2010 to 24th January, 2011. The documents were revised during May 2014. A further visit was held after the consultation with M&EC on the 06th November to 09th November 2014. The meetings were held at various locations. During the meetings, local people were informed about the rehabilitation works to be carried out on Mithrao canal in Nara Canal AWB. A question answer session was initiated such as:

- Demographic characteristics of the village, such as population, number of households, housing characteristics, availability of social amenities, ethnic groupings etc.
- Livelihood activities of the project affected persons.
- Women's role in socio- economic life.
- Existing health and education facilities in the village.
- Feeling about the RAP.

Following issues were also discussed:

- Sub-project introduction will ensure the water supply without any hindrances
- Un-authorized structures within the Col will be affected due to sub-project works
- Compensation for lost structures will be paid as per WB policy
- Mutual consensus on acceptable compensation was reached
- Location of where PAPs shall be shifted to (they shall shift beyond the Col within the RoW so that sub-project works could be completed without any hindrances)
- Consultation with host community about community and religious structures.

6.4.1 Outcome of Focus Group Discussion/Meetings

All the affected households at Mithrao Canal in Nara Canal AWB sub-project desire to get compensation in shape of cash for compensation to their structures and wanted to manage themselves..

6.4.2 Cut Off Date

The cut-off date for eligibility for all entitlements, except land based entitlements due to registered owners, has been set as the 5th May 2014. The 05th May 2014 was the first working day of PIC field team in the field during the 2014 field visit, during which the consultants updated the impact assessment and survey of the population of the Col. Any person constructed assets in the Col after this date shall not be eligible for entitlements under this Resettlement Action Plan.

The cut-off date for eligibility for land related entitlements due to registered owners shall be the date of the section 4 notification issued under the Land Acquisition Act of Pakistan.

6.5 Consultation with Local Women Community

Consultation sessions with the local women were also held. The consultant's female sociologist (Gender Specialist) conducted these consultations. The women of the area were keenly interested in the consultations and provided good information. The participants included housewives, students, and farm workers. Names and occupations of those attending the consultations are given in Appendix A.4.

As far as education is concerned, the majority of them were illiterate. Most of them belonged to poor families living in small houses. They pointed out the following issues and concerns, associated with this sub-project.

- Most of the women demanded proper compensation, rehabilitation and assistance.
- The relocation of affected business structure of their spouse's will create negative effect on their income.
- Risk of safety, security and privacy will be increased due to the working of outsiders during construction.
- Some women were interested to work with their family male members during construction work, which will reduce the burden on their budget.

6.6 Meetings with Secondary Stakeholders

As per participatory approach, staff of SIDA and Nara AWB were involved in the survey for the RAP. A list of officials contacted is given in Appendix A.

6.7 Grass Root Stakeholders Consultation

The grass root consultations were carried out at the following sub-project locations:

- Bakhoro Mori
- Nazar Mohammad Bugti
- Pir ji Landhi near RD 40+000
- Mohammad Zaman Shar
- Haji Malook Rajar

The results of these consultations are given in Appendix D. Detailed list of persons contacted during grass root consultation is given in Appendix A, and pictorial views are provided in Appendix H.

6.8 Summary of Consultation Findings

The following table reviews the mains impacts that were discussed and mitigations that were agreed during the consultations.

Table 6.1: Impacts and Mitigations Discussed during Consultations

Impact	Discussion	Agreed Mitigation
Improved delivery of water to the tail of the command area	Rehabilitation of the canal is required to ensure equitable distribution of supplies throughout the command area	Implementation of works under Contract WSIP/B1/NC/03
Loss of privately owned structures	PAPs cannot afford to rebuild their structures. Compensation is required	Compensation for lost structures as per the Entitlement Matrix
Employment	A large number of labourers shall be required for implementation of the sub-project. The contractor should employ local people. PAPs perceived that most labour opportunities were given to migrant labourers (see box: Lessons Learnt from Employment on Contracts WSIP/B1/NC/01 and WSIP/B1/NC/02)	Contractor to employ local community during construction work
Disposal of excavated material within the RoW resulting in impacts to privately owned structures	There is sufficient space between structures in the RoW to allow for disposal of material excavated from the canal. This area should be fully used to prevent further loss of assets.	Disposal of material over structures in the RoW shall be prohibited under the contract
Destruction of	Damage to these religious structures should be	Minor changes to the embankment design at

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Impact	Discussion	Agreed Mitigation
mosques and graves in the Col	avoided as a priority.	the locations of graves and mosques in order to avoid the need to remove these structures.
The sub-project area currently suffers from waterlogging and salinity	Works should focus on reducing waterlogging that affects human health and productivity of land	Strengthening of embankments is proposed to reduce seepage from the canal and reduce waterlogging of the sub-project area.
Loss of residential land	PAPs have no other land available to move to	The AWB shall make land available for PAPs to rebuild their structures. Land preparation and transfer of title to the land shall not be provided.
Migrant workforce in sub-project area	During implementation of previous contracts in Nara AWB, the presence of migrant labourers made it difficult for PAPs to maintain free movement of women and children within the sub-project area	The proposed construction camp is located 1.5 km from any major settlement to minimise this impact. The Contractor shall be required to deliver training on cultural sensitivities of the local populations during the induction of all migrant staff. Monitoring of this training is also proposed
Loss of shelter of very poor PAPs	PAPs who are living below the poverty line will be severely affected if their assets are destroyed.	An additional allowance shall be provided to PAPs who are living below the poverty line and who are losing structural assets.

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Lessons Learnt from Employment on Contracts WSIP/B1/NC/01 and WSIP/B1/NC/02

Employment on contracts WSIP/B1/NC/01 and WSIP/B1/NC/02 is summarised in the following table. Note – these tables do not include managerial staff on the contract (from the contractors head office in China). Staff are divided into local (residing within the sub-project area) and migrant (residing in other districts).

Labour Employment on Contract WSIP/B1/NC/01

S No	Description	Contract WSIP/B1/NC/01			Contract WSIP/B1/NC/02		
		Local	Migrant	Total	Local	Migrant	Total
Skilled Labour							
1	Technical Staff	4	7	11	3	9	12
2	Foreman	13	22	35	15	14	29
3	Excavator and Crane Operator	9	27	36	13	26	39
4	Bulldozer Operator	8	16	24	7	14	21
5	Dumper Operator	9	8	17	11	13	24
6	Water Tanker Driver	11	1	12	9	0	9
7	Transit Mixture Operator	5	6	11	5	6	11
8	Concrete Pump Operator	0	3	3	0	3	3
9	Generator Operator	12	0	12	9	1	10
10	Mechanic	7	11	18	5	9	14
11	LTV Driver	22	6	28	10	3	13
12	Painter	5	2	7	3	8	11
13	Electrician	10	9	19	11	3	14
14	Carpenter	8	5	13	10	4	14
15	Steel Cuter Bender & Fixer	23	9	32	21	11	32
16	Scaffolder	22	16	38	20	9	29
17	Cook	16	2	18	9	4	13
Total Skilled Labour		184	150	334	161	137	298
Un skilled Labour							
1	Total Un-Skilled Labour	239	148	387	217	95	312
TOTAL LABOUR		423	298	721	378	232	610

The table above shows that on these two contracts, 60% of the labourers were sourced from the local population, with the majority employed as unskilled labourers. Although the contractor needed to rely more heavily on migrant staff to fill the skilled labour positions (45% of the skilled labourers were migrant, while only 35% of the unskilled labourers were migrant), the generally high rate of local employment shows that there were significant labour opportunities for local staff on these contracts. The same can be expected from contract WSIP/B1/NC/03.

In general, the migrant labourers residing within the contractor's purpose built construction camps. During grass root consultations at Mohammad Zaman Shar village, residents referred to problems caused by outsiders employed on Contracts WSIP/B1/NC/01 and WSIP/B1/NC/02. The problems referred to difficulties local families experienced regarding the movement of women and children throughout the sub-project area. Activities undertaken by local women and children include crop harvesting, cutting of fodder and collecting firewood. During the implementation of the previous two Nara contracts, residents close to construction camps expressed their apprehensions to allow women and children to continue to undertake these tasks in areas while non-local labourers were present in the area. In order to reduce this impact during the execution of Contract WSIP/B1/NC/03 the proposed construction camp is located 1.5 km from any major settlement (the closest settlement to the proposed camp is Loharo village at RD 63). In addition, the requirements for the Contractor's Environmental and Social Management Plan have been strengthened within the Specification for Contract WSIP/B1/NC/03, and now include the requirement for training on cultural sensitivities of the local populations to be delivered during the induction of all migrant staff. Monitoring of this training is also proposed as part of this RAP (see Chapter 11).

7. Relocation and Compensation Plan

7.1 General

This RAP has been prepared on the basis of the findings of the census survey and by adopting the legal and policy framework of Government of Pakistan and the World Bank policies as reflected in the Entitlement Matrix (see section 2.5). This Entitlement Matrix was discussed during consultations as part of the proposed mitigation measures. The Resettlement Action Plan focuses on providing assistance in the form of compensation for the lost assets and additional assistance aimed at restoring the livelihoods of PAPs to their pre-project condition. This section details the applicable entitlements, grouped by the type of loss in order to remain consistent with the Entitlement Matrix and the impacts for this project as detailed in Chapter 2.

Note that, where required, compensation rates have been inflated to 2016 prices by applying annual consumer price inflation as quoted by the World Bank¹¹ which provides inflation rates up to year 2014. For inflation beyond 2014, reference is made to Trading Economics¹².

7.2 Loss: Land (Unused)

7.2.1 Application: Permanent Loss

7.2.1.1 Entitled Person: Title Holder

Entitlement: Compensation as Per Land Acquisition Act

Acquisition of 1.52 acres of permanent land acquisition will be required for the cross-regulator at RD 18+000 (Bakhoro cross-regulator) of Mithrao canal. The cost of the permanent land will be borne by the project proponent. SIDA/AWB are responsible for the land acquisition. The AWB will write an official letter to the Deputy Commissioner (DC) of the related district with the Deh map (provided in Appendix F) and the list of land owners whose land will be acquired. DC will appoint an Assistant Commissioner as a land acquisition officer and he will deal with the land acquisition matters. AWB will arrange the funds for the land compensation payment and deposit in the office of Assistant Commissioner.

The Assistant Commissioner will follow the procedure for acquisition under the LAA, as detailed in section 2.2.2 of the RAP.

The land compensation cost per acre has been collected from the Revenue Department in Sanghar (updated in December 2015). The Assistant commissioner Sanghar is the land acquisition officer for the sub-project area and responsible for paying the land compensation to the land owners. The Revenue Department indicated that the cost of land is PKR 400,000 per acre. An additional 15% has been allowed in accordance with the Land Acquisition Act, therefore the total estimated compensation rate is PKR 460,000 per acre. As the land is uncultivated, compensation for loss of standing crops (as applicable under the Land Acquisition Act) is not included in the compensation rate.

¹¹ <http://databank.worldbank.org/data/home.aspx>

¹² <http://www.tradingeconomics.com/pakistan/inflation-cpi/forecast>

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The details of land to be acquired and the estimated compensation due are given in the following table. The Deh map is provided in Appendix F.

Table 7.1: Inventory of Land Acquisition

S.NO	Survey Number	Area (Sft)	Area (Ghunta)	Area (Acres)	Lump Sum Cost (PKR)
1	528	42,500	0-39	0.97	699,200
2	529	24,000	0-22	0.55	
Total Land		66,500	1-21	1.52	699,200

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November- 2014

The land to be acquired is privately owned by one land owner and is currently unused as it is under seepage water.

7.2.2 Application: Temporary Loss

7.2.2.1 Entitled Person: Title Holder

Entitlement: Rent of Land at Market Rate

Temporary land acquisition will be required for borrow material. The contractor will be responsible for temporary land acquisition. Monthly rent as per the market value will be paid to the owner by the contractor. The owner will be compensated for any damage to his lands or assets thereon, or else damaged assets shall be restored to their former condition at the contractor's cost.

7.3 Loss: Land (Agricultural)

7.3.1.1 Entitled Person: PAP without Title

Entitlement: Crop Compensation

Compensation shall be payable to the irrigation daroga (gate operator) who is cultivating land on the berms of the canal from RD 6 to 15. This shall compensate the irrigation daroga for any loss of income from cultivation of this land for a single season during which works to the berms are implemented. Following this, the berms of the canal shall become available again for cultivation, if so allowed by the AWB.

The compensation rate has been calculated based on the value average yield and value of cultivated crops. This information was collected from within the sub-project area by PIC, and is presented in the table below. Prices are based on 2014 market rates, with inflation to 2016 applied.

Table 7.2: Yield price and total value of affected crop/acre

Crop	Average yield (kg/acre)	Price (PKR/40Kg)	Value (PKR/acre)
Wheat	1,600	1,320	53,000
Rice	2,400	940	56,400
Cotton	1,200	2,600	78,000
Sugarcane	36,000	125	112,500
Oil seed	600	2,800	11,000
Fodder	7,200	60	9,800

The total crop compensation due is detailed in the following table.

Table 7.3: Detail of Crop Compensation

RD	Bank	Crop	Area (Acre)	Yield/ (kg/ Acre)	Price (PKR/ 40 Kg)	Compensation rate (PKR/Acre)	Total Crop Compensation
06+000 to RD 15+000	IP	Rice	5	2,400	850	56,400	282,000

7.4 Loss: Land (Residential and Commercial)

7.4.1 Application: Entire Loss

7.4.1.1 Entitled Person: PAP without Title

PAPs who shall lose the land on which their structures are located, but who do not own the title to the land on which these structures are situated are permitted to rebuild their structures at an alternative government owned site (but without the transfer of title to ownership of this land). They are also entitled to a transport allowance (regardless of whether they have opted to move to a government owned site or not).

Entitlement: Alternative Sites

The AWB shall provide alternative sites to allow 9 households (55 PAPs) resident in the Col and 25 households owning commercial structures in the Col to reconstruct their affected assets. There shall be no transfer of title from the government to the PAPs and the project shall not provide any land preparation assistance. The proposed relocation sites are relatively flat, are not located in low laying areas and are suitable for construction of residential and commercial structures. All sites are situated on barren or scrubland. At RD 18 (both resettlement sites) and RD 40 (left bank resettlement site only) PAPs will need to complete some minor site levelling adjacent to the roads prior to reconstruction. At all sites, some minor removal of scrub shall also be required. Both activities can be easily achieved by hand without the use of heavy or specialised equipment.

Of the 9 households who are resident in the Col and are to be provided with alternative sites, the livelihood of eight is as agricultural labourers, and one is from fishing. All agricultural labourers are working on farmland outside the Col, and as such do not require land to cultivate at the relocation sites. The fishing household fishes from the Mithrao Canal - please refer to section 5.4.4 for details of the impact on occupation and income to this household.

Identification of the alternative sites was made during a joint field visit in September 2014 between PIC and the following members of the Nara AWB:

- Sub-Divisional Office of Mithrao Division
- Surveyor
- Irrigation daroga (gate operator)

During this joint field visit, the team consulted with PAPs at each location, who expressed that they were willing to move to these sites. It was agreed that the PAPs shall remain within these sites and are not expected to return to the embankments following completion of the works.

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The alternative sites are identified in Table 7.4 (and also in the figures at the end of this section). Table 7.4 indicates the number of units that are expected to be established at these sites. This is based on the existing number of units to be impacted.

A house constitutes a single residential unit. Each of the following structures constitutes a single commercial unit:

- Shop
- Wooden stall
- Cabin
- Otaq

In some cases, a single household may currently own multiple commercial units, and it is assumed that they shall rebuild these as multiple units at the alternative site.

The proposed alternative sites offer a minimum of 500ft² per residential or commercial unit, equivalent to a square plot measuring 22ft by 22ft.

The locations of the alternative sites to be provided to each PAP, along with details of the residential and commercial units they are expected to rebuild at these sites are provided in Table 7.5.

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Table 7.4: Alternative Sites

#	RD	Bank	Approximate Area of Site (ft ²)	Number of Residential Units	Number of Residential Households	Number of Residential PAPs	Number of Commercial Units	Number of Commercial Households Impacted	Distance from Existing to Alternative Site	Refer to Site Plan
1	18	IP	4,000	0	0	0	8	8	< 200m	Figure 7.1
2	18	NIP	3,500	0	0	0	7	7	< 200m	Figure 7.1
3	40	IP	1,000	0	0	0	2	2	< 50m	Figure 7.2
4	40	NIP	1,000	0	0	0	2	2	< 50m	Figure 7.2
5	63	IP	5,000	8	8	46	2	1	< 1km	Figure 7.3
6	175	NIP	1,000	0	0	0	6	4	< 100m	Figure 7.4
7	354	IP	500	1	1	9	0	0	< 100m	Figure 7.5
8	354	NIP	500	0	0	0	1	1	< 100m	Figure 7.5
Total				9	9	55	28	25		

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Table 7.5: Proposed Alternative Site by Household

Name of PAP (Head of Household)	Father's Name	Existing Location (RD)	Profession	Family Size	Proposed Alternative Site	Number of Residential Units	Number of Residential PAPs	Number of Commercial Units	Animal Sheds
Shahmir Jamali	Dost Mohammad	18+000(IP)	Small Business	10	1	0	0	1	0
Altaf Hussain	Shahmir Jamali	18+000(IP)	Small Business	8	1	0	0	1	0
Mohd Yameen Lashari	Abdul Raheem	18+000(IP)	Small Business	6	1	0	0	1	0
Moti Naal Sochi	Bagchi	18+000(IP)	Small Business	10	1	0	0	1	0
Nazir Ahmed	Khada Bux Lashari	18+000(IP)	Small Business	2	1	0	0	1	0
Ghulam Sarwar Lashari	Abdul Raheem	18+000(IP)	Small Business	7	1	0	0	1	0
Ghulam Nabi Laghari	Qamar Din	18+000(IP)	Small Business	8	1	0	0	1	0
Gulzar Ahmed Laghari	Haji Ghulam Mohd	18+000(IP)	Small Business	7	1	0	0	1	0
Wahid Bux Bugti	Mir Hassan	18+000(NIP)	Small Business	6	2	0	0	1	0
Ghulam Nabi Laghari	Qamar Din	18+000(NIP)	Small Business	10	2	0	0	1	0
Khalil Ahmed Laghari	Haji Faizullah	18+000(NIP)	Small Business	7	2	0	0	1	0
Dhani Bux Laghari	Sain Bux	18+000(NIP)	Small Business	5	2	0	0	1	0
Abdulhaq Laghari	Khalil Ahmed	18+000(NIP)	Small Business	6	2	0	0	1	0
Talib hussain	Adam Khan	18+000(NIP)	Small Business	8	2	0	0	1	0
Abdul Karim Laghari	Khalil Ahmed	18+000(NIP)	Small Business	3	2	0	0	1	0
Nangar	Fazul	40+000(NIP)	Small Business	7	4	0	0	1	0
Allah Dino	Kongho Jamali	40+000(IP)	Small Business	3	3	0	0	1	0
Ameer Bux Jamali	Allah Dino	40+000(IP)	Small Business	3	3	0	0	1	0
Ali Dino Sher	Imam Bux	40+400(NIP)	Small Business	3	4	0	0	1	0
Dilber Ali	Mohammad Sharif	63+640(IP)	General Labour	3	5	1	3	0	0
Mohammad Sharif	Mir Mohammad	63+690(IP)	General Labour	5	5	1	5	0	0

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Name of PAP (Head of Household)	Father's Name	Existing Location (RD)	Profession	Family Size	Proposed Alternative Site	Number of Residential Units	Number of Residential PAPs	Number of Commercial Units	Animal Sheds
Asghar	Mohammad Sharif	63+715(IP)	General Labour	5	5	1	5	0	0
Shabir	Mohammad Hasil	63+760(IP)	General Labour	3	5	1	3	0	0
Pyaro Ali	Mir Mohammad	63+830(IP)	General Labour	11	5	1	11	0	1
Lakhano	Mir Mohammad	63+850(IP)	General Labour	8	5	1	8	0	0
Misri	Jan Mohammad	63+870(IP)	General Labour	6	5	1	6	0	1
Haq Nawaz	Peer Bux	63+890(IP)	General Labour	5	5	1	5	0	0
Bhale Dino	Mohammad Ismail	64+000(IP)	Small Business	7	5	0	0	2	0
Mir Mohd Brohi	Haji Abdul Karim	175+000(IP)	Small Business	8	6	0	0	2	0
Zahoor Din Sher	Haji Lal Mohd	175+000(NIP)	Small Business	14	6	0	0	1	0
Habib-ur- Rehman Sher	Habibullah	175+000(NIP)	Small Business	1	6	0	0	1	0
Khemchand Bheel	Nango Mal	175+000(NIP)	Small Business	3	6	0	0	2	0
Nangar Mallah	Mohammad Hashim	354+000(IP)	Fishing	9	7	1	9	0	0
Sanwan Khoso	Mirho Khan	354+200 (NIP)	Small Business	6	8	0	0	1	0
Total						9	55	28	2

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During implementation of the works under this contract, it is expected that the following small businesses shall see a moderate increase in the sale of basic commodities as a result of labourers commuting to and from their place of residence to the hydraulic structure sites which are situated within 1km of the alternative sites:

- General stores (non-fresh food and toiletries) – 12 number
- Tobacco and confectionary stores – 7 number
- Fresh fruit and vegetable store – 1 number

The following businesses are also expected to see a significant increase in trade during the execution of the works under this contract, especially from labourers seeking refreshment during breaks from construction:

- Cold drink store – 1 number
- Tea stall – 1 number

The motorcycle service station is also likely to see a moderate increase in trade as many labourers who will not reside within the construction camp are likely to commute to the work sites via motorcycle.

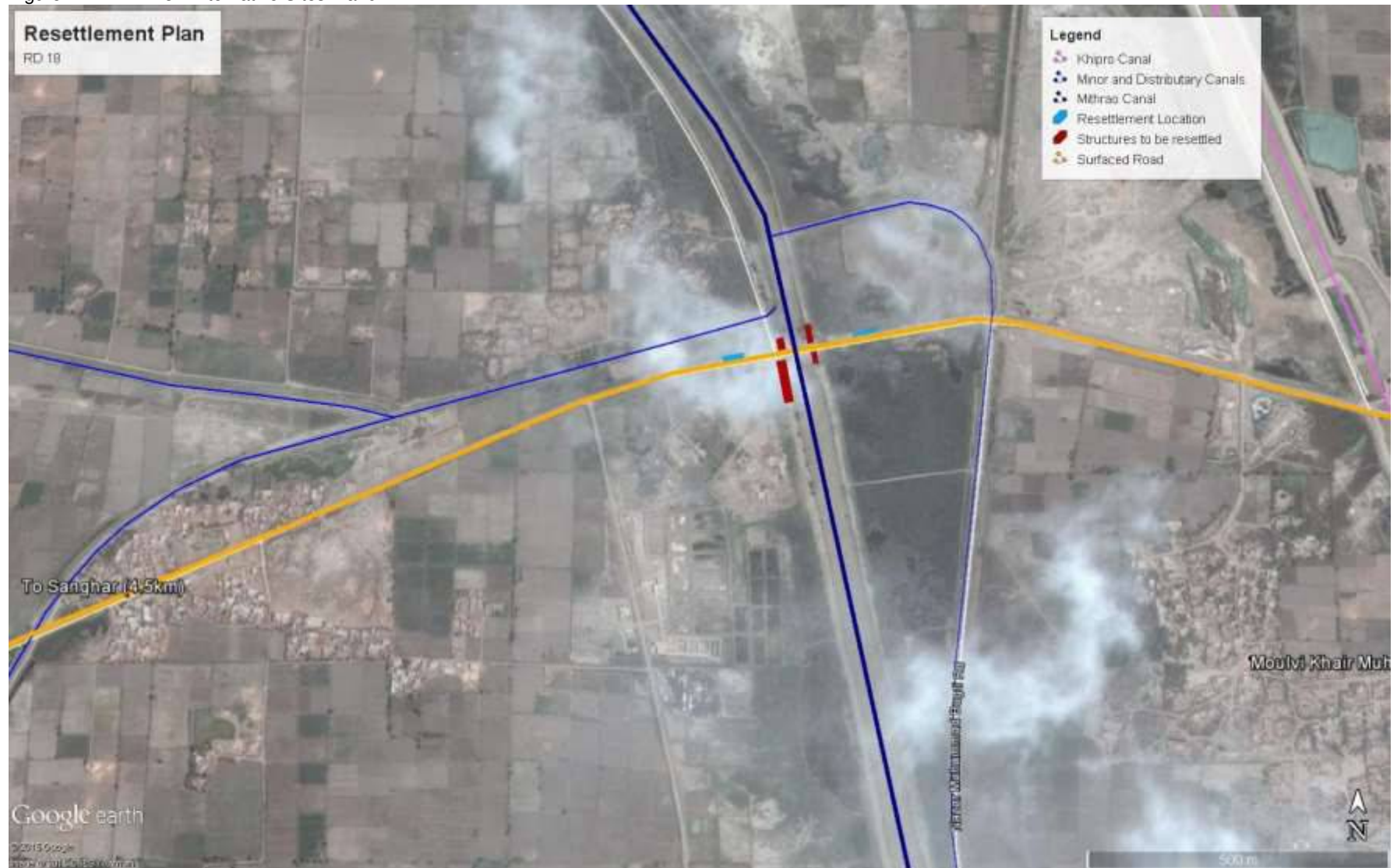
In addition, the cobbler situated at RD 18 is expected to see a minor increase in trade associated with those working at the regulation complex construction site situated nearby. There is unlikely to be an increase in trade for the blacksmith situated at RD 18 as his trade is mostly in servicing agricultural tools. The contractor is expected to make arrangement for repairs to his own tools at the main construction camp.

All impacts shall be temporal for the duration of the works only.

The alternative sites provided to the households who will be affected due to the sub-project development works are shown in the following figures as well as in the signed alternative site plans given in Appendix I. Please note that the scale of the plans in Appendix I provide a greater level of detail, while the following figures provide the context of the alternative sites.

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Figure 7.1: RD 18 - Alternative Sites 1 and 2



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Figure 7.2: RD 40 - Alternative Sites 3 and 4



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Figure 7.3: RD 63 - Alternative Sites 5



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Figure 7.4: RD 175 - Alternative Site 6



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Figure 7.5: RD 354 - Alternative Sites 7 and 8



7.4.1.2 Entitled Person: PAP without Title, living below the poverty line

Entitlement: Low Income Allowance

Note that this entitlement is in addition to entitlements listed under section 7.4.1.1.

The number of households having monthly earning below the poverty line is estimated to be 27. Their incomes are fragile and they are less able to absorb any change in their socio-economic equilibrium. For such households, in addition to the entitlements above, an additional Low Income Allowance equal to two times the monthly household income of the household (inflated to 2016 value), or equal to the equivalent of two months minimum wage in Pakistan (PKR 22,000 in 2016, assuming 10% inflation from 2014 rates), whichever is greater. This allowance is intended to increase their resilience to impacts resulting from loss of land. See more details in Appendix C.

7.5 Loss: Privately Owned Structures

7.5.1 Application: Entire Loss

7.5.1.1 Entitled Person: Owner of Structure

Owners of structures which are to be removed from the Col are eligible for compensation to rebuild the affected structure, regardless of whether they own the land on which the structure is situated or not.

Entitlement: Compensation for Replacement of Structures

All the structures are illegally built on government land. Data on assets within the Col has been collected through physical inspection and measurement of the structures. A single unit house may consist of more than one room, veranda and shed/kitchen etc. All privately owned structures and privately owned hand pumps are scattered and located along the Inspection and Non-Inspection Path of Mithrao Canal. Full details of structures are given Appendix C.

A valuation survey was undertaken by PIC for estimating the unit rate for compensation for loss of residential and commercial structures and other such assets. The rates were arrived at by PIC engineers and sociologists, in consultation with the local community/ affected people and market places as detailed in Appendix D (quoted at July 2014 rates). Using this data, the unit rates used for valuation of affected structures was determined. These are based on the prevailing market rates as of July 2014, with inflation to 2016 rates (7.2% inflation in 2014, 2.53% inflation in 2015), and the following procedures/ methods were used for the assessment of unit compensation values of different items/ assets located within the Col:

- 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.

Table 7.6: Compensation Rates for Replacement Assets

Description	Unit	Unit/Rate (Rs.)
Building Structures		

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Description	Unit	Unit/Rate (Rs.)
(i) Residential and Commercial	Sq. ft	Pacca = 952
		Semi-pacca = 650
		Kacha = 175
(ii) Straw Shed, Cattle Shed	Sq. ft.	Kacha = 204
		Straw Shed = 152
(iii) Boundary Wall	5 ft. height & 1 ft. length in running ft. measurement	Pacca = 1107
		Semi-pacca = 729
		Kacha = 379 (only mud)
Hand pump	Number	7,700

The compensation cost for privately owned structures is based on the valuation of structural assets provided in the table above. Owners of privately owned structures shall be paid compensation for replacement of their structures in full, regardless of the entitlement of the PAPs to the land in which the affected structure is located.

Full details of the compensation for privately owned assets is provided in Appendix C.

Note that compensation for loss of structures shall not be paid for cabins or wooden stalls. As cabins and wood stalls are movable structures, the owners of these structures shall not be compensated for the replacement of these structures. However, the owners of these structures shall receive a transport allowance (see section 7.4.1.1) to shift the existing structure intact. Where owners of cabins and wood stalls also own shops, sheds or houses, they shall receive compensation to reconstruct the affected shops, sheds and houses.

Entitlement: Standard Transport Allowance

A standard transport allowance shall be paid to each household losing assets from within the CoI to cover the cost of that household to shift their belongings to their new location where their new location is within 10km of their existing location. This allowance shall be paid regardless of any other assistance (i.e. this allowance shall be paid to households who will rebuild affected structures on private land or government owned land). The standard transport allowance has been valued at PKR 11,000 per household and shall cover two trucks to transport goods within a 10km radius. This allowance has been calculated based on quotes of PKR 10,000 obtained from local transporters in 2014 to use two trucks to transport goods up to 10 km.

Households whose only impact is loss of a cabin, wood stall or hand pump shall not be eligible for the standard transport allowance. Owners of impacted cabins or wood stalls (moveable assets) shall instead be entitled to a transport allowance for moveable assets – see the following section for further details.

Impacted households who are entitled to the standard transport allowance are detailed in Appendix C.

Entitlement: Transport Allowance (Moveable Assets)

As cabins and wood stalls are movable structures, the owners of these structures shall not be compensated for the replacement of these structures. However, the owners of these structures shall receive an additional transport allowance to shift the existing structure intact. This allowance shall be

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payable to owners of moveable assets, regardless of whether they are also entitled to a standard transport allowance. Impacted households who are entitled to the transport allowance (moveable assets) are detailed in Appendix C

Cabins are wooden constructions which are generally larger than wooden stalls. An example of a cabin is provided in the following figure (note that in this case the owner of the cabin also owns a shed for which the household shall be compensated separately). A cobbler works from a wooden stall (table) at RD 18, as shown in the following figure.

Figure 7.6: Cabin and Shed at RD 354+200



Figure 7.7: Wooden Stall at RD 18



Both cabins and the wooden stall can be shifted using a pickup truck. A shifting allowance of PKR 5,500 per cabin and wooden stall has been allowed to transport the structures within a 10 km radius. This allowance has been calculated based on quotes obtained from local transporters to use a single truck to transport goods up to 10 km. Seven cabins and one wooden stall are identified within the Col which may be affected due to sub-project works. .

Table 7.7: Estimation of Transport Allowance (Moveable Assets)

Sr. No.	Structure Type	Affected Structures	Allowance Rate (Rs.)	Total Amount (Rs.)
1	Cabin	7	5,500	38,500
2	Wood stall	1	5,500	5,000
	Total	8		44,000

Source: Survey of the Project Area, Project Implementation Consultants, March. 2014 to November - 2014

Note: RD- wise details are in Appendix -C

7.6 Loss: Community Structures

7.6.1 Application: Entire Loss

7.6.1.1 Entitled Person: Affected Community

Entitlement: Compensation for Replacement of Structures

The community structures to be removed from within the Col are comprised of three prayer platforms and two hand pumps. The communities have indicated their preference to be compensated for the structures in cash, and have opted to reconstruct these structures themselves. These structures are valued as for privately owned structures. Full details are provided in Appendix C.

7.7 Loss: Institutional Structures

7.7.1 Application: Entire Loss

7.7.1.1 Entitled Person: Affected Institution

Entitlement: Reconstruction of Institutional Structures

The government structures are one police chowki, eight irrigation buildings, one abandoned water supply scheme, one FO office, one SIDA office structure and three hand pumps. The rehabilitation works shall require the demolition of these structures. Reconstruction of the structures shall be included within the civil works contract. Details of the Government structures to be removed from the Col are given in the section 5.3.4.

7.8 Loss: Income

It is anticipated that the sub-project will make a positive impact on the economy of the area. A number of employment opportunities will be created during the rehabilitation work, particularly for the unskilled labour. As per estimates given by the design engineers of PIC, about 2 years and approximately 300 unskilled labourers like security guard, attendant and labour for jungle clearance etc, will be required to complete the rehabilitation work of Contract WSIP/B1/NC/03. The contractor will be bound to employ the unskilled labour from the local communities and particularly those living below the poverty line.

7.8.1 Application: Loss of Income from Commercial Structures

7.8.1.1 Entitled Person: Owner of Impacted Business

Entitlement: Livelihood Allowance

For those PAPs owning commercial structures within the Col, a Livelihood Allowance shall be paid. This allowance shall be equal to three times the monthly income of the household, or equal to the equivalent of three months minimum wage in Pakistan (PKR 33,000 in 2016 - assuming 10% inflation from 2014 rates), whichever is greater. This will be provided to support the affected families losing their sources of livelihood in order to allow them to restore their business at a new location without any economic pressure and to compensate for any lost income during transition, relocation and reconstruction of their businesses.

See more details in Appendix C.

7.9 Provisions for Compensatory Trees

All trees within the Col are Government owned. For each tree cut down, the contractor shall replant five new trees. The details of this are discussed further in the Environmental Impact Assessment/Environmental Management Plan for Contract WSIP/B1/NC/03 and are outside the scope of this RAP.

8. Organisational Responsibilities for Implementation of the RAP

This chapter describes the institutional roles and responsibilities associated with the implementation of this RAP for the sub-project. An overview of the general institutional arrangements for WSIP is provided in section 3.1.

The responsibilities of each party in the implementation of the RAP are summarised within the context of the implementation schedule in Chapter 10.

8.1 Sindh Irrigation and Drainage Authority

SIDA are overall responsible for the implementation of this RAP through the Environmental Management Unit and Social Cell. This includes disbursement of funds for compensation, permanent acquisition of land identified in this RAP and vacation of the Col prior to mobilisation of the contractor for Contract WSIP/B1/NC/03. The AWB will assist SIDA for implementation of this RAP. Note that SIDA shall maintain overall responsible for any RAP implementation activities which may be delegated to other parties.

8.1.1 Environmental Management Unit and Social Cell

The Environment Management Unit (EMU) and Social Cell established within SIDA will be responsible for all implementation activities within the RAP. While EMU and the Social Cell shall delegate a number of these tasks to other parties (as detailed in the following sections), they shall maintain direct responsibility for the following specific tasks:

- Review this RAP
- Translation and disclosure of this RAP
- Establishment of Grievance Redress Committee (GRC)
- Settlement of any issues arising in the field
- Referring issues which cannot be solved by the project team to the GRC
- Preparation of final budget arrangement of funds through the AWB
- Notification of PAPs on embankments
- Verification of PAPs
- Completion of file of each PAP
- Preparation of relevant reports and preparation of final report on disbursement
- Under taking on stamp paper by PAP and verification
- Internal monitoring
- Supervision of permanent land acquisition

The SIDA shall oversee and monitor implementation of this RAP. A Social Organiser and two engineers from the Nara AWB will ensure the implementation of the RAP and work closely with PIC field staff and the contractor.

8.2 Nara Area Water Board

SIDA shall delegate responsibility for the following tasks to be implemented by the Nara AWB:

- Direct liaison with the Board of Revenue for permanent land acquisition required for this sub-project
- Resolution of any land acquisition issues and cases

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- Ensuring there is no further encroachment into the Col following the cut-off date defined in this RAP. This shall be achieved through the Assistant Manager for Social Mobilisation within the AWB.
- The Social Mobilisation Team of the AWB shall assist SIDA in the following:
 - Disclosure of the translated RAP among the PAPs
 - Notification of PAPs on embankments
 - Information dissemination, awareness raising and liaison with affected communities.
- Transfer of resettlement funds to Board of Revenue
- Provide support to the contractor during the construction period in order to resolve any issues arising from temporary land acquisition (borrow areas) and minimise any delays to the construction progress.
- Vacation of the Col (following compensation payment by SIDA)

Nara AWB shall designate a Social Organiser and two engineers to be responsible for RAP implementation tasks. These staff shall work closely with PIC field staff and the contractor, and shall be supervised by SIDA.

Following the practice adopted for contract WSIP/B1/NC/02 where the establishment of borrow areas was required, the Nara AWB shall depute the Social Organiser to assist the contractor with day to day temporary land acquisition requirements. The two engineers shall work under oversight of SIDA's Sociologist/Participation Specialist and coordinate the Board of Revenue and land owners for the completion of permanent land acquisition.

The experience gained by the Nara AWB in both permanent and temporary land acquisition duties under contracts WSIP/B1/NC/01 and WSIP/B1/NC/02 have shown that current staffing levels are sufficient. Early coordination from SIDA can prevent any delays in the land acquisition process, such as were experienced during contracts WSIP/B1/NC/01 and WSIP/B1/NC/02.

The implementation of the RAPs under the previous Nara contracts has provided valuable experience to the Nara AWB. AWB staff now hold experience in both arranging permanent land acquisition between land owners and the Board of Revenue as well ensuring acceptable agreements for temporary land acquisition are reached between contractors and land owners. Although such tasks have always fallen under the responsibility of the Nara AWB, there has been little cause for AWB staff to undertake these tasks in lieu of significant development works to the irrigation system. Given the previous experience of the Nara AWB under WSIP contracts, it is expected that land acquisition matters shall be resolved in a more timely manner during contract WSIP/B1/NC/03. Indeed, it is understood that, as of December 2015, arrangements for permanent land acquisition between the Board of Revenue and land owners are in process to ensure timely handover of the site to the contractor shall be possible.

8.3 Board of Revenue

The Assistant Commissioner of the Sanghar District Board of Revenue shall be responsible for permanent acquisition of land on behalf of the AWB. He shall acquire the land on behalf of the AWB following procedures of the Land Acquisition Act (see section 2.2.2). The Assistant Commissioner also acts as the Land Acquisition Officer.

The Assistant Commissioner shall also be responsible for the disbursement of funds to PAPs through cross cheques during a public event. PAPs shall present the stamp paper to the Assistant Commissioner, who shall verify the identity of the PAP, disburse the compensation through cross cheque and add his stamp to the stamp paper, confirming disbursement of the compensation.

The funds shall be provided by the AWB.

8.4 Project Coordination and Monitoring Unit (PCMU)

The Project Coordination and Monitoring Unit (PCMU) shall be responsible for coordination of the implementation of this RAP and for monitoring of implementation progress, assisted by the Monitoring and Evaluation Consultants (M&EC). PCMU shall also oversee any acquisition of public or private land or assets associated with the implementation of this sub-project.

PCMU shall undertake regular monitoring of progress in implementing this RAP to ensure timely actions are taken in response to any issues experienced.

8.5 Monitoring and Evaluation Consultants

The M&EC are responsible for reviewing and clearing this RAP. Following this, they also have a role in the implementation of the RAP as monitoring and evaluation is important tool for managers to determine the status and success of any project. The M&EC will provide continuous feedback to SIDA and PCMU on the implementation progress of this RAP, identify problems in implementation and suggest corrective actions.

The purpose of RAP monitoring is to verify that:

- Actions and commitments described in the RAP are implemented fully and on time,
- Eligible affected people receive their full compensation entitlements within the agreed timeframe,
- RAP actions and compensation measures are effective in sustainably enhancing (or at least restoring) affected people's living standards and income levels,
- Complaints and grievances lodged by PAPs are followed up and that where necessary, appropriate corrective actions are taken up and implemented,
- Progress of any community development activities or reconstruction/relocation of community structures defined in the RAP
- Performance of contractor in providing employment opportunities for PAPs, and
- Payments for loss of income.

Monitoring

The M&EC shall monitor progress of implementation of this RAP against the following indicators:

- Value of compensation disbursed against anticipated budget for each impact (refer to Chapter 9)
- Status of compensation disbursement
- Progress in acquisition of private land
- Progress in vacation of the Col
- Status of restoration of livelihood for PAPs where income has been impacted
- Grievances redress activities
- Agreements reached and arrangements made between the contractor and PAPs for temporary acquisition of assets (such as temporary land acquisition)
- Entitlement Matrix in the context of the anticipated impacts.

The M&EC shall be responsible for monitoring performance of the implementing parties against these indicators.

Evaluation

As part of their evaluation activities under this RAP, the M&EC shall evaluate the following within the sub-project area:

- Impact of construction activities in sub-project area in particular on PAPs and livestock
- Success of livelihood restoration
- Socio-economic impact and impact on the level of un-employment and household incomes amongst PAPs and within the sub-project area

The evaluation of the success of the implementation of this RAP against the objectives of the plan should be completed by the M&EC within one year of completion of the civil works contract.

8.6 Project Implementation Consultants

The Project Implementation Consultants are responsible for the preparation of this RAP.

During construction, PIC shall be responsible for supervision of the contractor, including the arrangements the contractor makes for the temporary acquisition of land required to complete his works.

8.7 Contractor

The contractor appointed to implement this sub-project under Contract WSIP/B1/NC/03 shall be responsible for all temporary land acquisition required for the completion of his works. This shall include the mutual agreement with land owners for the provision of rent or actions in kind in exchange for the temporary use of their land for the establishment of camps or borrow areas.

The contractor shall prepare and keep signed agreements between the contractor and land owners for the temporary use of private land, detailing monetary rent and/or acts in kind, agreed with the land owner in exchange for the temporary use of his land. The agreements shall also state the condition of the land that is to be handed over to the land owner following use by the contractor.

The contractor shall also be responsible for staff training, including training of migrant staff on cultural sensitivities within the local population.

8.8 Grievance Redress

8.8.1 Review of Social Task Force and Grievance Redress Committee Performance on Previous Contracts

The Resettlement Action Plans prepared for Contracts WSIP/B1/NC/01 and WSIP/B1/NC/02 included the establishment of a Social Task Force (STF) at AWB level. The objective of the STF was to ensure that measures are taken in a timely fashion to prevent potential grievances. STF was comprised of AWB, SIDA, PIC, and Board of Revenue. Initially, during the execution of Contract WSIP/B1/NC/01 and WSIP/B1/NC/02 (both within the Nara Canal AWB) the STF did not formally meet at regular periods. However, the issues on which the STF were intended to advise upon were dealt with by AWB, including land acquisition. Therefore, it has been decided that the STF shall not be re-established for implementation of contract WSIP/B1/NC/03.

Formal establishment and meetings of the GRC were rarely undertaken. Examples of grievances during the execution of these contracts were as follows:

- Delay in payment for permanent land acquisition
- Delay in payment of compensation to PAPs
- Arrangements for borrow material by contractor

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These grievances were resolved by individual members of the GRC to the satisfaction of the complainant, but rarely as a united committee. Timely establishment of the GRC may have made resolution of these grievances more efficient.

8.8.2 Grievance Redress Mechanism

The main objective of the grievance redress mechanism will be to arrive at mutually acceptable solutions to grievances through free and open discussions. It will also provide a forum to people who might have objections or concerns about their compensation to raise their objections and through conflict resolution address their issues adequately. The project will establish a grievance redress committee (GRC) at a sub-project level for the affected persons in line with the Social Impact Management Framework for WSIP. The GRC shall meet at least quarterly to consider outstanding grievances.

Grievance redress arrangements should be disseminated to the PAPs with clear information on where and how grievances can be submitted, as well as the process for grievance redress, both at the subproject level and through the court system.

The committee is responsible for the facilitation of resolution of disputes and grievances which may arise during the implementation of this plan. The committee shall be formed of the following members:

Table 8.1: Grievance Redress Committee

Representative	Members
Assistant Commissioner	Chairman
Project Director, WSIP	Member
Land Acquisition Collector	Member
Sociologist/Participation Specialist, SIDA	Member (Secretary)
Local dignitary	Member
2 nr. Affected Person Representative	Members

Any grievance which cannot be resolved at a project level (i.e. by the contractor, PIC, SIDA or AWB) shall be referred to the GRC. If the affected person is not satisfied with the decision of GRC, he/she, as a last resort may submit the complaint to the court of Law. The committee will establish community complaints register at sub-project sites. Committee will register and file any, grievance redress cases and would bring these into the notice of Project Director. Revenue department will be involved for land acquisition and crop compensation.

Grievances may be submitted to the GRC through any of the following means:

- By individual(s) through the complaints registrations system on the WSIP website (<http://www.wsip.com.pk/Complaint/>)
 - These complaints are submitted directly to the Managing Director of SIDA and the PMC/A Team Leader and will be forwarded to the GRC Chairman
- By individual(s) in writing directly to the GRC Chairman.
- By individual(s) in person at the Nara AWB office
 - Director AWB shall forward grievances to the GRC Chairman
- Referred to GRC Chairman by the Contractor or PIC (for grievances submitted to the Contractor or PIC in the first instance but that cannot be not resolved by them)

The following standards shall underpin the proposed systems for handling any submitted grievances:

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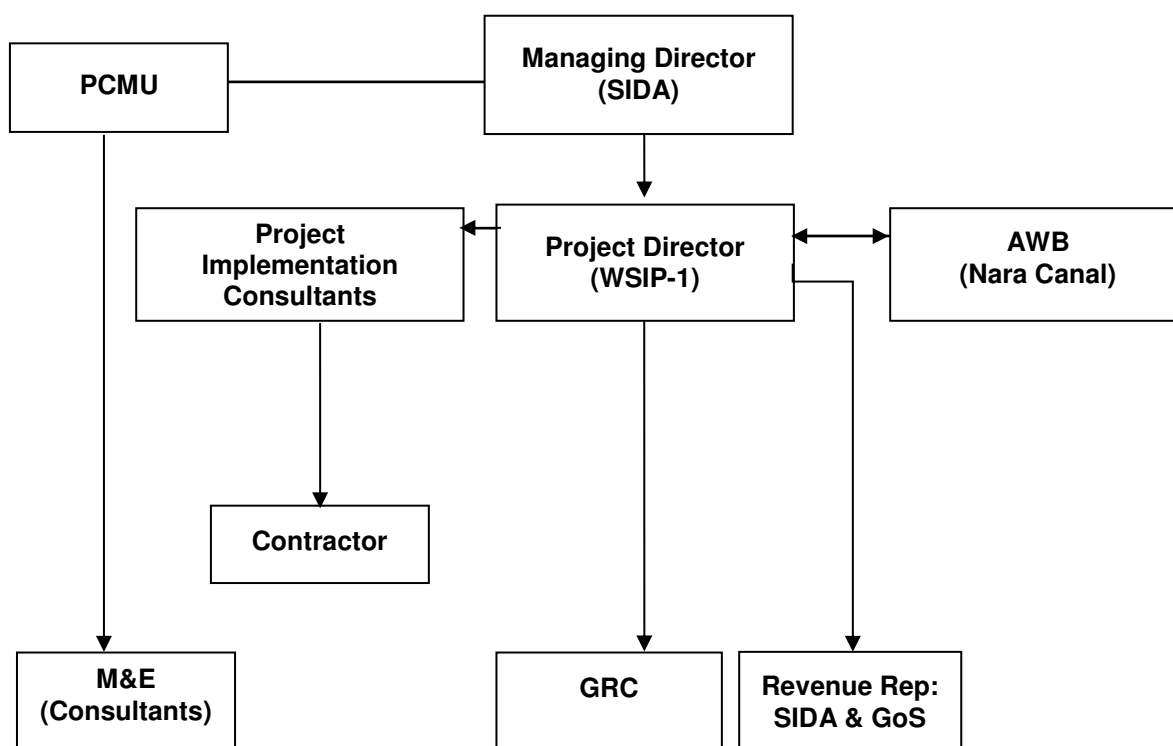
- All grievances received will be formally recorded by the GRC Chairman in a Grievance Register to be maintained by the GRC
- A written acknowledgement shall be issued by the GRC Chairman to the affected person within three working days of receipt.
- The GRC shall meet to discuss the Grievance within 5 working days of receipt. Attendees, minutes of the meeting and actions arising from the meeting shall be entered into the Grievance Register.
- If required, a second meeting of the GRC shall be held within 20 working days of receipt of the grievance, thus allowing 15 working days for deliberation by the GRC, receipt of legal advice and undertaking of investigations as may be necessary. Attendees, minutes of the meeting and actions arising from the meeting shall be entered into the Grievance Register.
- The final decision of the GRC (arising from the first or second meeting) shall be recorded in the Grievance Register, including any further actions to be taken and both shall be communicated to the affected person in writing within 30 days of receipt of the grievance.
- If a final decision cannot be reached by the GRC within 30 days, the findings of the GRC to date shall be communicated to the affected person in writing. The GRC shall agree upon a timeframe for resolution of the grievance which shall be recorded in the Grievance Register and shall also be communicated to the affected person in writing within 30 days of receipt of the grievance.
- Attendees, minutes and actions arising from any subsequent meetings shall continue to be entered into the Grievance Register, and the affected person shall be updated, in writing, on findings at 30 day intervals.
- If, at any time, the affected person is not satisfied with the decisions or findings of the GRC, they may register their complaint in a court of law.

All costs incurred by the GRC shall be borne by SIDA.

8.9 Organisational Structure

The organizational chart for the implementation of the Resettlement Action Plan is shown below:

Figure 8.1: Organisational Structure for RAP Implementation



8.10 Training and Capacity Building

Training and capacity building of all primary and secondary stakeholders is an important part of the sub-project implementation and will be an integral part of the sub-project. It helps to create and develop a similar approach among the project stakeholders. For this purpose, a training programme of two days is planned to impart training to all relevant officials of AWB representative affected people. The amount of Rs. 100,000 has been provided in the budget for two days training. The training cost will be borne by the project proponent. The training will be provided by training specialists. During the training session following topics will be covered (sections 8.10.1 to 8.10.4):

8.10.1 Principles and Procedures of Involuntary Resettlement

- World Bank policy on involuntary resettlement.
- Identification of PAPs.
- Consultations with affected persons.

8.10.2 Consultation and Participation

Training regarding sub-project objectives and its impacts will be given to the expected stakeholders. All expected impacts will be discussed with the community. How they will be satisfied and their trust gained will be ensured.

8.10.3 Grievance Redress

Training shall be provided to the GRC in order to brief them on the requirements of this Resettlement Action Plan, World Bank policy and the Pakistan legal framework under which the committee must act.

8.10.4 Skill Development

In addition to the training of the implementation stakeholders, SIDA shall complete skills development training to PAPs. Technical skill development programme for PAPs is considered essential as their regular sources of livelihood and income generation will be directly affected as a result of rehabilitation works.

Furthermore, in the contemporary world, the Sustainable Livelihoods Approach (SLA) is strongly perceived as a way to improve understanding of the livelihoods of poor people. It draws on the main factors that affect poor people's livelihoods.

9. Budget

This section provides the compensation and assistance cost estimates as well as costs for administration of the RAP.

The details of estimated budget are given in the following table.

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Type of Loss	Application	Entitled Person	Entitlement	Unit	Quantity	Unit Cost (PKR)	Cost (PKR)
A: Compensation							
Land (Unused)	Permanent Loss	Legal owner with valid title	Compensation as per Land Acquisition Act	Acres of impacted land	1.52	460,000	699,200
	Temporary Loss	Legal owner with valid title	Monthly rent at market rate	Acres of impacted land	227	Temporary acquisition is the responsibility of the contractor	
Land (Agricultural)	Temporary Loss	PAPs without title	Crop compensation - Rice	Acres of impacted land	5	56,400	282,000
Land (Residential or commercial)	Entire Loss	PAPs without title	Alternative site	Affected Households	34	0	0
		PAPs living below poverty line	Low Income Allowance	Affected Households	27	Varies - refer to Appendix C	629,200
Privately owned Structures	Entire Loss	Owner of structure	Compensation for Replacement of Structures	Affected Households	32	Varies - refer to Appendix C	3,439,845
			Standard Transport Allowance	Affected Households	31	11,000	341,000
			Transport Allowance (Moveable Assets)	Affected Households	8	5,500	44,000
Community Structures	Entire Loss	Affected community	Compensation for Replacement of Structures	Number of structures	5	Varies - refer to Appendix C	370,747
Government Structures	Entire Loss	Affected institution	Reconstruction of structure	Number of structures	15	Covered under civil works contract	
Income	Loss of Income from Commercial Structures	Owner of impacted business	Livelihood allowance	Affected Households	25	Varies - refer to Appendix C	897,600
Sub-total (A)							6,703,592
B: Training Cost							
	Training Cost	-	-	Lump Sum	-	100,000	100,000
Sub-total (B)							100,000
C: Monitoring and Evaluation							

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Type of Loss	Application	Entitled Person	Entitlement	Unit	Quantity	Unit Cost (PKR)	Cost (PKR)
	Monitoring and Evaluation	-	-	Lump Sum	-	2% of (A)	134,072
	Administrative Costs	-	-	Lump Sum	-	3% of (A)	201,108
Sub-total (C)							335,180
D: Contingencies							
	Contingency	-	-	-	-	5% of (A) + (C)	351,939
GRAND TOTAL							7,490,711
US\$ (US\$ = PKR 100)							74,907

10. Implementation of RAP

10.1 Introduction

The following implementation schedule is proposed to ensure implementation of this RAP shall be complete prior to mobilization of contractor for works under Contract WSIP/B1/NC/03. The implementation plan assumes that the contractor shall mobilise in June 2015.

Implementation schedule reflects the sequencing and duration of activities planned, the schedule recognizes that activities will be taking place simultaneously and allows within reason for staggered starts. The implementation schedule is designed to avoid conflicts, but as a contingency, time is allowed for mediation, and the impact this may have on payments is recognized in a certain period allowed for grievance resolution process. The schedule proposed shall ensure clearance of CoI and necessary land acquisition can be complete prior to mobilization of the contractor.

10.2 Implementation Schedule

The basic steps for preparation and implementation of this RAP are summarized in Table 10.1. The responsibility for each step is also detailed within. Within the schedule, the time at which Contract WSIP/B1/NC/03 is awarded is referred to as month 0.

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Table 10.1: RAP Implementation Schedule

#	Activity	Responsibility	Month													
			-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1-24	24+		
1	Preparation and Revision of RAP	PIC														
2	Review and Approve of RAP	SIDA/M&EC		X												
3	Coordinate/Monitor RAP Implementation	PCMU														
4	Prevent Encroachment into Col	AWB														
6	Establish Grievance Redress Committee	SIDA		X												
8	*Supervision of Land Acquisition	SIDA														
9	*Resolution of Land Acquisition Issues	AWB														
10	*Notification of LA to Board of Revenue (BoR)	AWB		X												
11	*Section 4 Notification under LAA	BoR		X												
12	*Surveys and Setting Out	BoR		X												
13	Translation and Disclosure of RAP	SIDA		X												
14	*Section 5 Notification under LAA	BoR			X											
15	*Period for Objections to LA	PAPs														
16	*Period for Investigation into Objections to LA	BoR														
17	Finalisation of Resettlement Budget	SIDA				X										
18	Notification of PAPs	SIDA														
19	*Review of Objections to LA by Commissioner	BoR						X								
20	Transfer of Funds to BoR	AWB						X								
22	*Section 6 Declaration under LAA	BoR						X								
23	*Preparation of Land Acquisition Plan (map)	BoR														
24	Disbursement of Compensation to PAPs	BoR														
25	*Section 9 Notification under LAA	BoR								X						
26	Vacation of PAPS from Col	AWB														
27	*Period to Register Interest in Land	PAPs														
28	*Section 11 Enquiry under LAA (if required)	BoR									X					
29	Period for Grievance Redress	GRC														
30	*Acquisition under Section 12 of LAA	BoR												X		

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#	Activity	Responsibility	Month													
			-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1-24	24+		
31	*Handover of Land to AWB	BoR												X		
32	Mobilisation of Contractor	-											X			
33	Temporary Land Acquisition	Contractor														
34	Assist in Temporary Land Acquisition	AWB														
35	Supervision of Contractor	PIC														
36	Internal Monitoring	SIDA														
37	External Monitoring	M&EC														
38	Evaluate RAP	M&EC														

* = Action required for permanent land acquisition at Bakhoro Cross-Regulator; LA = Land Acquisition; LAA = Land Acquisition Act; ? = If required

10.3 RAP Implementation Detail

The methodology for the implementation of the RAP as outlined in Table 10.1 is discussed in the following sections. SIDA shall maintain overall responsibility for implementation of the RAP.

10.3.1 General

10.3.1.1 Preparation of RAP

The RAP has now been completed by PIC and is to be reviewed and approved as per the following section. Any necessary revisions are to be agreed and incorporated by PIC.

10.3.1.2 Review and Approval of RAP

This RAP shall be submitted in the first instance to Project Director SIDA for review. SIDA shall then forward this to M&EC for their review, and approval (following any agreed revisions).

10.3.1.3 Internal and External Monitoring

SIDA shall carryout internal monitoring, and M&EC shall complete external monitoring, from the point at which the RAP is approved until completion of the civil works. Further details are provided in Chapter 11. Both parties shall monitor the land acquisition and compensation and vacation of PAPs.

10.3.1.4 Translation and Disclosure of the RAP

SIDA shall translate this RAP and ensure the translated version of this RAP remains available to the public at locations within the sub-project area.

10.3.1.5 Establish Grievance Redress Committee

SIDA shall establish the Grievance Redress Committee as detailed in Chapter 8.

10.3.1.6 Evaluate the RAP

Following completion of Contract WSIP/B1/NC/03, the M&EC shall evaluate the success of this RAP. Further details are provided in Chapter 11.

10.3.2 Land Acquisition

10.3.2.1 Supervision of Land Acquisition

SIDA shall remain active in the supervision of land acquisition. Initially they shall ensure that the Board of Revenue has been notified and the acquisition process has commenced according to the LAA.

10.3.2.2 Notification of Land Acquisition to Board or Revenue

The AWB shall notify the Board of Revenue (Sanghar District) of the permanent land acquisition requirements as soon as possible, and request the Board of Revenue to begin acquisition proceedings

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under the Land Acquisition Act on their behalf. SIDA and the AWB shall provide all required information to the Board of Revenue.

10.3.2.3 Section 4 Notification

The Board of Revenue shall issue a notification under section 4 of the LAA of intention to acquire land at Bakhoro Cross-Regulator. The notification shall be published in the official Gazette and displayed at a convenient and prominent location close to the land to be acquired. It is also recommended that the AWB begin consultations with the land owner(s) at this stage.

10.3.2.4 Surveys and Setting Out

Following the section 4 notification, officers of the Board of Revenue shall be permitted to enter the land to be acquired to take any necessary measurements if required by the Board of Revenue.

10.3.2.5 Section 5 Notification

After any investigations required (section 10.3.2.4), the Board of Revenue shall issue a notification under section 5 of the LAA stating the location and area of land to be acquired. The notification shall be published in the official Gazette and displayed at a convenient and prominent location close to the land to be acquired. The notification shall include the address to which any objections should be submitted.

10.3.2.6 Period for Objections to Land Acquisition

During this period, any person with an interest in the land, or who may be affected by its acquisition is required to raise objections within 30 days of notification under Section 5 of the LAA. Objections shall be submitted in writing to the address provided on the Section 5 notification.

10.3.2.7 Period for Investigations into Land Acquisition

The Board of Revenue shall provide any person who has submitted a written objection (within 30 days of notification under Section 5 of the LAA) an opportunity for their objection to be heard, following which the Board of Revenue shall make further enquires (if required) and shall submit the case to the Commissioner along with their recommendation and details of enquires made.

10.3.2.8 Review of Objections by Commissioner

The Commissioner shall review any objections which are submitted by the Board of Revenue and make a final decision as to any further actions required. The decision of the Commissioner shall be considered final.

10.3.2.9 Section 6 Declaration

Following review of objections (if any) by the Commissioner, the Board of Revenue shall issue a declaration under Section 6 of the LAA stating the following:

- Location of land to be acquired
- Purpose of acquisition
- Area (size) of land to be acquired

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- Location that the plan (map of acquisition) is available for inspection

This declaration shall be published in the official Gazette.

10.3.2.10 Preparation of Land Acquisition Plan

Following the Section 6 declaration, the Board of Revenue shall mark out the land to be acquired and prepare a plan (map) of the area to be acquired (if the plan has not already been prepared).

10.3.2.11 Section 9 Notification

The Board of Revenue shall place a notification on the land to be acquired stating the intention to acquire the land and notifying those with an interest in the land, or an objection to the measurements given in the section 6 declaration, that they must appear before the Board of Revenue at a time and place stated on the notification.

10.3.2.12 Period to Register Interest in Land

Following notification under Section 9, all those with an interest in the land to be acquired (including co-proprietor, sub-proprietor, mortgagee or tenant) are required to submit details of their interest (such as details of any rent and income from the land in the last three years) to the Board of Revenue. A period of no less than 15 days shall be allowed for people to register their interest.

10.3.2.13 Section 11 Enquiry

Should any objections be received during the 15 days following notification under Section 9 the Board of Revenue shall hold an enquiry to determine the true area of land, compensation due and to whom it is due. If no objections are received, there shall be no need to hold an enquiry.

10.3.2.14 Acquisition under Section 12

If no objections are received within 15 days on the Section 9 notification, the Board of Revenue shall take possession of the land. If objections are received, and an enquiry is held, the Board of Revenue shall file their findings and notify interested people of the final award and then take possession of the land.

10.3.2.15 Handover of Land to AWB

Following acquisition under Section 12, the Board of Revenue shall handover the land to the AWB.

10.3.2.16 Temporary Land Acquisition

The temporary acquisition of privately owned land for the purpose of establishing borrow areas shall be arranged between the contractor and the land owner. The contractor shall prepare and keep signed agreements for the temporary use of private land, detailing monetary rent and/or acts in kind, agreed with the land owner in exchange for the temporary use of his land. The agreements shall also state the condition of the land that is to be handed over to the land owner following use by the contractor. The contractor shall make copies of these agreements available at the request of SIDA or PIC.

10.3.2.17 Assist in Temporary Land Acquisition

In recognition of the risk of delays resulting from inefficient temporary acquisition, an officer of the AWB, with appropriate authority (delegated or otherwise), should be made available to the contractor, throughout the entire construction period, to assist in the resolution of temporary land acquisition issues.

10.3.2.18 Supervision of Contractor

PIC shall be responsible for supervision of the contractor, and shall require the contractor to submit signed copies of agreements for temporary land acquisition wherever the contractor has used private land for the completion of the works.

10.3.3 Payment of Compensation

10.3.3.1 Prevent Encroachment into the Col

The AWB shall monitor the Col and provide eviction notices to any person(s) who have arrived, or do arrive, following the cut-off date provided in this RAP. The notice should inform the person(s) of the cut-off date and inform them that they shall not be eligible for compensation or assistance under this RAP. A copy of the grievance redress mechanism should also be provided to them.

10.3.3.2 Finalisation of Resettlement Budget

SIDA shall finalise the Resettlement budget, based on the findings of this RAP.

10.3.3.3 Notifications of PAPs

SIDA shall prepare a unique package for each project affected household which includes the following information:

- Inventory of losses of each PAP in the household
- Compensation to be paid to each PAP in the household
- The date, time and venue for the disbursement of compensation
- Detailing the requirement to present their National Identity Card (NIC) and submit a copy of their NIC on the date of disbursement.
- Detailing the requirement to obtain a stamp paper from the local court confirming the PAPs identity.
- For any PAP under the age of 18 or without a NIC, the PAP must provide an affidavit with photograph signed by the head of local government.
- The requirement to hold an open a bank account in order to receive compensation
- Details of the Grievance Redress Mechanism

These packages shall be distributed to the PAPs no later than one month prior to the date of disbursement of funds.

10.3.3.4 Transfer of Funds to Board of Revenue

Following finalisation of the budget, AWB shall transfer the resettlement funds to the Board of Revenue.

10.3.3.5 Disbursement of Compensation to PAPs

Disbursement of compensation shall be carried out in public by the Board of Revenue. The identity of PAPs shall be verified through his/her NIC (or signed affidavit in the case of eligible PAPs under 18 years of age) and stamp paper. Following verification, payment of compensation shall be paid through a crossed cheque to the name of the PAPs. Payments of less than PKR 5,000 may be made in cash.

10.3.3.6 Vacation of PAPs from Col

PAPs shall be given two months from the date of disbursement of compensation to vacate the Col (except in the case of permanent land acquisition). AWB shall be responsible to vacating the Col.

10.3.3.7 Period for Grievance Redress

The GRC shall be active to review any grievances received from the time at which PAPs are formally notified. The GRC shall aim to resolve all grievances prior to mobilisation of the contractor.

11. Monitoring and Evaluation

11.1 Introduction

The World Bank requires proper monitoring of implementation of the RAP and reporting on its 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 RAP and to identify problems and successes as early as possible to allow timely adjustment to implementation arrangements. For these reasons, RAP monitoring and evaluation activities should be adequately funded, implemented by qualified specialists and integrated into the overall project management process.

Monitoring involves periodic checking to ascertain whether activities are progressing as per schedule, while evaluation is essential in reviewing the performance of the RAP against its original objectives. RAP implementation will be monitored both internally and externally.

SIDA being the proponent of the sub-project will be responsible for internal monitoring through the EMU and the Social Cell will prepare monthly progress report on the implementation of this RAP. In addition, SIDA shall engage a Resettlement Specialist to provide necessary technical assistance and monitor the implementation the RAP activities. The monitoring framework is given in Table 11.1.

11.2 Monitoring and Evaluation

Monitoring and evaluation is an important tool for managers to determine the status of any project. Only through a well-planned and organized system of monitoring and evaluation, the progress against the given targets for various components of a development project can be achieved. Such evaluation is possible through the review of quarterly and annual reports.

The purpose of RAP monitoring is to verify that:

- Actions and commitments described in the RAP are implemented fully and on time,
- Eligible affected people receive their full compensation entitlements within the agreed timeframe,
- RAP actions and compensation measures are effective in sustainably enhancing (or at least restoring) affected people's living standards and income levels,
- Complaints and grievances lodged by PAPs are followed up and that where necessary, appropriate corrective actions are taken up and implemented,
- If necessary, changes in RAP procedure are made to improve delivery of entitlements to PAPs.
- Progress of community structures reconstruction,
- Income restoration of PAPs;
- Progress of liaison with construction contractor for employment opportunities for PAPs, and
- Payments for loss of income.

11.3 Internal Monitoring

The RAP includes indicators and benchmarks for achievement of the objectives under the program, which can be categorized as under:

- Process indicators, which include project inputs, expenditures, staff deployments etc;
- Output indicators are results in terms of numbers of affected persons compensated and mitigated, additional assistance provided etc; and,

- Impact indicators related to the long-term effects/benefits of the sub-project on people's lives in the sub-project affected area.

The first two types of indicators, related to process and immediate outputs and results, will be monitored internally by SIDA. Responsibility for SIDA's internal monitoring shall be with the Social Organiser (Mr Shah Nawaz is currently appointed to this position). This information will be collected from the sub-project site and assimilated in the form of a monthly progress report to assess the progress and results of RAP implementation, and adjust the work progress, where necessary, in case of any delays or problems. Specific activities under RAP implementation that will be monitored are the following:

- Information campaign and consultation with PAPs
- Compensation for affected structures
- Land acquisition
- Status of compensation disbursement
- Status of restoration of livelihood employment opportunities for PAPs
- Grievances redress activities
- Sub-project employment
- Training of contractors migrant labour on cultural sensitivities

Field offices of SIDA will be responsible for monitoring the day-to-day RAP activities of the sub-project. SIDA's Social Organiser shall be responsible for the coordination of their monitoring. A performance data sheet will be developed to monitor the sub-project at the field level. Monthly reports will be received from the concerned quarters.

Field level monitoring will be carried out through;

- Review of census information for all PAPs.
- Consultation and informal interviews with PAPs.
- Key informant interviews
- Community public meetings and
- In depth case studies

Monthly and quarterly reports will be submitted by the field offices and SIDA will be responsible for overall monitoring at sub-project level.

11.4 External Monitoring and Evaluation

M&EC shall be responsible for external monitoring of the RAP for this sub-project and monitoring of their implementation. They shall review and clear the RAP. The M&EC shall provide continuous feedback to SIDA, via PCMU, on the sub-project's performance and impact of its various components so that corrective actions could be taken in a timely manner. The M&EC activities are likely to cover:

- Any acquisition of public and private land and assets.
- Agreements reached and arrangements made for temporary acquisition of assets (such as temporary land acquisition).
- Impact of construction activities in sub-project area in particular on population and livestock as part of the evaluation of the RAP implementation
- Socio-economic impact and impact on the level of un-employment and household incomes in the sub-project areas as part of the evaluation of the RAP implementation

- Restoration of livelihoods as part of the evaluation of the RAP implementation

11.5 Monitoring Framework

SIDA will be responsible for implementation of RAP and will prepare monthly progress reports on RAP activities and consequently submit these to the WB for review.

Table 11.1: Monitoring Framework

Aspect	Indicator	Verification
Affected Persons are compensated in a fair and mutually accepted manner for their damages by the project authorities.	The PAPs are correctly identified.	List of PAPs in resettlement plan List of PAPS updated by the SIDA staff and concerned AWB.
	Affected structures correctly recorded for compensation	List of PAPs in resettlement plan List of PAPS with affected structures updated by SIDA staff and concerned AWB
	Compensation / assistance for damaged structures is paid based upon on replacement cost	Receipts of payments made to project affected persons
Disturbance of local community by migrant labour	Contractor delivers training to migrant labourers on cultural sensitivities	Training delivered as per the contractor approved training plan
Gender/Vulnerable	Gender /Vulnerable are correctly identified.	List of gender/vulnerable and their compensation is calculated according to World Bank Policy.
Loss of community structures	Affected structures correctly recorded for reconstruction / relocation	Structures updated by SIDA staff and concerned AWB Consultation with community for reconstruction or relocation
Grievance Mechanism is in place	Social Complaint Register for checking Grievance Committee is in place	Social Complaint Register: Consultation with affected persons during internal and external monitoring
Resettlement Action Plan is effectively implemented	Staff training according to the monitoring plan	Training reports including list of trainees and types of training
	The skill and knowledge acquired during the training are effectively employed	Internal monitoring record. External monitoring visit reports
	Level of interaction and participation of stakeholders. Type of expertise and level of input and output of such expertise.	Stakeholders' suggestion incorporated. Social and Resettlement Expertise.
Local employment on the construction contract	Number of PAPs employed as unskilled labourers	Contractor's employment records
	Number of PAPs employed as skilled labourers	
	Local unskilled labourers by FO area (Nara AWB)	
	Local skilled labourers by FO area (Nara AWB)	
	Local unskilled labour employed form outside Nara AWB	
	Local skilled labour employed form	

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Aspect	Indicator	Verification
	outside Nara AWB	

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Appendix A. Additional Details of Survey Participants and Consultations

A.1. Detail of Official Participated in Field Survey

Sr. No.	Name	Designation	Organization	Contact No.
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A.1.1. List of SIDA Officials

1	Bilawal Soho	Institutional Specialist/SO	SIDA	0300-3325989
2	Mohsin Memon	Institutional Specialist/SO	SIDA	0300-3070875
3	Shakeela Laghari	Sociologist	SIDA	022-9210085
4	Rasheed Mahar	Manager Social Mobilization	SIDA	022-9210085
5	Akbar Khatian	Ecologist	SIDA	0321-4562745

A.2. Details of Officials Contacted

Sr. No.	Name	Designation	Organization	Contact No.
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A.2.1. List of Revenue Department Officials Contacted

6	Mr. Sikandar Ali Khushk	DC Sanghar	Revenue Department	0300-8262877
7	Mr. Khair Mohd Dahri	AC Sanghar	Revenue Department	0300-2527184
8	Mr. Zulfiqar Ali Chandio	Mukhtair kar Sanghar	Revenue Department	0333-2880687
9	Somar Sand	Tapedar Sanghar	Revenue Department	0346-8909049
10	Abdul Waheed	Tapedar Sanghar	Revenue Department	-
11	Mohmood	Tapedar Sanghar	Revenue Department	-
12	Subhan Ali	Makhtiarkar	Revenue Department	0301-8254425
13	Muhammad Saleem	Supervisor	Revenue Department	0300-3245638

A.2.2. List of Irrigation Department Officials Contacted

14	Mr. Gullam Mustafa Ujan	Director AWB	Irrigation Department	0333-2960886
15	Mr. Mansoor Memon	XEN Thar Division	Irrigation Department	0300-3201187
16	Mr. Neyaz Ahmed	XEN Mithrao Canal	Irrigation Department	0302-3975775
17	Mr. Ali Dino	SDO Mithrao	Irrigation Department	0345-3726006
18	Mr. Waso mal	SDO Khipro	Irrigation Department	0300-3304263
19	Mr. Ishfaq Ali Memon	SDO Khipro	Irrigation Department	0300-3310241
20	Mr. Arshad Soomaro	Surveyor	Irrigation Department	0300-7024140
21	Mohd Hanif	Darogo	Irrigation Department	0300-3314071

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Sr. No.	Name	Designation	Organization	Contact No.
22	Atta Mohammad	Darogo	Irrigation Department	0344-3725250
23	Nawab Mangrio	Canal Asistant	Irrigation Department	0303-3979885
24	Ali Hyder Shar (Khipro)	Baildar	Irrigation Department	0344-3236653
25	Aziz-ullah Sher	Gate Keeper (Dhararo Cross Regulator) (RD -170)	Irrigation Department	0344-8919442
26	Mubark Chandio	Tendail (RD 90+000)	Irrigation Department	0343-3471519
27	Khan Muhammad Chandio	Beldar (RD 90+000)	Irrigation Department	0344-3799580
28	Ghulam Sarwar Shar	Darogha	Irrigation Department	0346-3611164
29	Hyder Bux	Tendail	Irrigation Department	0307-2437094
30	Sono Khan Khoso	Tendail	Irrigation Department	0301-3919948
31	Sajwal Khoso	Khalasi (RD -337)	Irrigation Department	0305-2557095
32	Kentosh	Surveyor	Irrigation Department	0336-3762108
33	Ghulam Nabi Khoso	Pump House Operator	Irrigation Department	0305-2913369
34	Jaffar Hussain	Darogha	Irrigation Department	0300-3053301
35	M. Kewro Hingoro	Tendail	Irrigation Department	0303-3454734
36	M. Wahid Bux Bhtlani	Tendail (RD 382)	Irrigation Department	0307-3077326
37	M Altaf Hussain Khoso	Tendail (RD 354 NIP)	Irrigation Department	0303- 3152714
38	Sobho Chandio (Khipro)	Tendail (RD 137)	Irrigation Department	0345-6126951
39	M. Yousif Hingorjo	Tendail (RD 195)	Irrigation Department	0305-3263345

A.2.3. List of Fisheries Department Officials Contacted

40	Habib Rehman Narejo	DD Fisheries	Directorate of Fisheries	0300-3076840
41	Abdul Majeed Chachar	DD Fisheries	Directorate of Fisheries	0333-2672147

A.2.4. List of Agriculture Department Officials Contacted

42	Naeem Ahmed Korejo	DG Agri-Extension	Agriculture Extension	022-9200060
43	Wali Muhammad Soomro	Deputy Coordinator IPNM	Agriculture Extension	0323-3944390
44	Tauqeer Ahmad Shaikh	Agriculture Officer	Agriculture Extension	0300-3057458
45	Ghulam Mustafa Nangraj	PRO	Agriculture Extension	0300-3036689
46	Zaheer Ahmad Channa	Agriculture Officer	Agriculture Extension	-
47	Chetan Mal	Agriculture Officer	Agriculture Extension	-

A.2.5. List of Public Work Department Officials Contacted

48	Aftab Ahmed Soomro	Director	Public Works Department	022-9200087 0300-3210121
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Sr. No.	Name	Designation	Organization	Contact No.
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A.2.6. List of Education Department Officials Contacted

49	Mr. Tunveer Hussain Shah	Sr. Engineer	Education Works Department	-
50	Amir Azam Wasan	Executive Engineer	Education Works Department	0301-3362456

A.2.7. List of Education Department Officials Contacted

51	SP Sanghar	SP	Police Department	023-5541615
52	DSP Sanghar	DSP	Police Department	023-5541302
53	Police Station Sanghar	POS	Police Department	023-5542053
54	Zulifqar Kilyar	ASP Hyderabad	Police Department	-
55	Mohammad Ali Baloch	SSP Ther Parkar	Police Department	-
56	Mumtaz Ali Junejo	SSP DIB Hyderabad	Police Department	-

A.3. Detail of Local Consulted During Grass Root Stakeholders Consultations

Sr. No.	Name	Designation	Contact No.
Mithrao Canal			
1	Muhammad Khan Mallah	Land Lord	0343-3463470
2	Qurban Ali Mallah	Tenant	0345-6423577
3	Nisar Ali	Tenant	-
4	Irfan Ali	Tenant	-
5	Muhammad Hussain	Tenant	-
6	Allah Rakhio	Land Lord	0302-2567695
7	Muhammad Amain	Tenant	NIC-44106-7166358-5
8	Ali Muhammad	Tenant	0301-2485144
9	Haji	Tenant	-
10	Rasool Bux	Land Lord	-
11	Sher Muhammad	Land Lord	-
12	Pir Bux	-	NIC-480-23-058790
13	Shahmir Ahmed	Landlord	0343-8348870
14	Ghulam Nabi	Landlord	0315-5077272
15	Muhammad Amain	Landlord	0346-8909185
16	Abdul Salam	Landlord	-
17	Sahib Khan Laghari	Landlord	0346-8929025
18	Adam	Landlord	0303-3974720
19	Khuda Bux	Tenant	-
20	Muhammad Sharif	Tenant	-
21	Ahmed Din Laghari	Landlord	0332-2622956

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Sr. No.	Name	Designation	Contact No.
22	Rustam Ali	Landlord	0321-3656899
23	Ali Akbar	Landlord	0333-2921445
24	M. Waris	Tenant	-
25	Gul Muhammad	Landlord	0345-3746526
26	Ali Muhammad	Landlord	0307-6851821
27	Mir Muhammad	Landlord	-
28	Bashir Ahmed	Tenant	NIC-44203-5161980-3
29	Muhammad Urs	Landlord	0307-3561831
30	Allah Bux	Landlord	0305-2668969
31	Muhammad Bashir	Landlord	0302-2699505
32	Kundho	Tenant	-
22	Ghulam Hussain	Tenant	NIC 44203-2525881-1
23	Ghulam Mustafa	Tenant	
24	Essa Mallah	Landlord	0301-3873430
25	Zahid Laghari	Cabin Holder	0312-2911611
26	Muhammad Rafique Laghari	Barber Shop	0334-3881807
27	Dost Muhammad	Tenant	0313-3124082
28	Aftab Jamali	Landlord	0313-3124082
29	Arshad	Shop Holder	0344-3767479
30	Ali Murtza Laghari	Shop Holder	0302-3211115
31	Muhammad Yameen Lashari	Shop Holder	0333-3547537
32	Sanaullah Laghari	Cabin Holder	0313-3359338
33	Nazir Ahmed	Tea Stall Holder	0308-2201606
34	Ghulam Sarwar	Tea Stall Holder	0333-2864287
35	Liqat Ali Burdi	Shop Holder	0301-2648359
36	Ghulam Nabi Laghari	Shop Holder	0306-3356692
37	Ghulzar Ahmed Laghari	Government Service	0333-2918843
40	Hassan Ali	Tea Stall Holder	0333-2922369
41	Wahid Bus Bughti	Shop Holder	NIC 44203-5699884-9
42	Shah Bux Bughati	Shop Holder	0334-3349906
43	Saeed Khan	Shop Holder	NIC 44203-5588809-9
44	Khalil Ahmed	Shop Holder	0334-2880819
45	Dhani Bux	Shop Holder	0301-3534561
46	Abdul Karim	Shop Holder	0303-3963669
47	Muhammad Younis	Barber Shop	0332-3513196
48	Ali Raza Yousifzai	Shop Holder	0333-2922111
49	Allah Dino	Shop Holder	0305-2673188
50	Hadi Bux	Landlord	-

A.4. Details of Female Consultees

Sr. No.	Name	Profession	Village
1	Daria Khaton	Land Lord	Mir Mohammad Hingoro

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Sr. No.	Name	Profession	Village
2	Rashma Bheel	Tenant	Mir Mohammad Hingoro
3	Somi Mallah	Tenant	Mir Mohammad Hingoro
4	Kanji Bheel	Tenant	Mir Mohammad Hingoro
5	Lal Khaton Mallah	Tenant	Mir Mohammad Hingoro
6	Hyatan Mallah	Tenant	Mir Mohammad Hingoro
7	Shimum	Tenant	Mir Mohammad Hingoro
8	Pathani	Tenant	Ahmed Din Laghari
9	Haleema	Tenant	Ahmed Din Laghari
10	Izat Mallah	Tenant	Ahmed Din Laghari
11	Choti	Tenant	Ahmed Din Laghari
12	Naheed Akhtar	Tenant	Ahmed Din Laghari
13	Jimalla	Tenant	Abdul Rehman Laghari
14	Fehmida	Tenant	Abdul Rehman Laghari
15	Sira	Tenant	Abdul Rehman Laghari
16	Anilla	Tenant	Abdul Rehman Laghari
17	Nori	Land Lord	Shahmir Jamali
18	Sami	Land Lord	Shahmir Jamali
19	Janat	Tenant	Shahmir Jamali
20	Khaton	Tenant	Shahmir Jamali
21	Sukhan	Tenant	Shahmir Jamali
22	Sabi	Tenant	Shahmir Jamali
23	Marvi	Tenant	Shahmir Jamali
24	Basran	Tenant	Allahdad Chandio
25	Mithi	Tenant	Allahdad Chandio
26	Sony	Tenant	Allahdad Chandio
27	Bhan	Land Lord	Allahdad Chandio
28	Nimy	Land Lord	Allahdad Chandio
29	Nazra	Land Lord	Allahdad Chandio
30	Lela	Tenant	Allahdad Chandio
31	Morzadi	Tenant	Allahdad Chandio
32	Shadul	Tenant	Allahdad Chandio

A.5. Names of Sample Surveyed Villages

Names Of Sample Villages			
Sr.#	Name of Village	Name of Canals	Location (RD)
1	Mir Mohammad Hingoro	Mithrao Canal	Head (IP)
2	Ahmed Din Laghari	Mithrao Canal	RD 18+000 (IP)
3	Abdul Rehman Laghari (Molvi Faizullah)	Mithrao Canal	RD 18+000 (IP)
4	Shahmir Jamali	Mithrao Canal	RD 19+000 (IP)
5	Khameso Khan Mallah (Loharirro Stop)	Mithrao Canal	RD 65+000 (IP)
6	Sajar Khan Zardari	Mithrao Canal	RD 136+000 (NIP)
7	Allahdad Chandio	Mithrao Canal	RD 353+000 (IP)
8	Soomar Khan Khoso	Mithrao Canal	RD 353+000 (NIP)

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Appendix B. Survey Questionnaires and Data Collection Tools

ASSETS INVENTORY CENSUS QUESTIONNAIRE Water Sector Improvement Project (WSIP) SOCIAL AND ENVIRONMENT ASSESMENT STUDY

ID.No. _____

1. Location Name of Distry /Minor: _____

1.2 RD: _____

2. IDENTIFICATION

2.1 Name of Affected Person: _____

2.2 Father's Name: _____

2.3 Respondent NIC No: _____

2.4 Permanent Address of the Respondent:

Village: _____ Sub-Village _____ Town _____

Tehsil _____ District: _____

2.5 Category of Respondent: (Tick relevant)

1	Resident Land Owner	2	Absentee Land Owner	3	Tenant
4	Business Owner Operator	5	Business Tenant Operator	6	Encroacher
7	Squatter/ Informal Settlers	8	Other (Specify) _____		

2.6 Demographic Profile of Respondent (Children up to 10 yrs (#): M __, FM __=T __)

Sr. No.	Relationship with Respondent (See codes)	Sex Male=1 Female=2	Age (Yrs.)	Education (See Codes)	Name of Business/ Occupation (See Codes)		Income from Business/ Occupation (Rs. / Annum)		Health Condition
					Main	Secondary	Main	Secondary	
1	SELF								
2									
3									
4									
5									
6									
7									
8									
9									
10									

Demographic Codes: a) **Relationship:** 1=Self, 2=Wife, 3=Son, 4=Daughter, 5=Father, 6=Mother, 7=Brother, 8=Sister, 9=Grand Father, 10=Grand Mother, 11=Sister in Law, 12=Nephew, 13=Father-in-Law, 14=Mother- in- Law, 15=Niece, 17=Uncle, 18=Aunty, 19=other

b) **Sex:** 1=Male, 2=Female(c).

c) **Education:** 1= Primary 2= Middle 3= Metric, 4= Intermediate, 5= BA/BSc, 6= MA/MSc, 7=LLB, 8=Engineer, 9=MBBS, 10=Technical Diploma, 11=Dars-e-Nizami, 12=Can Read Quran, 13= Can Insert Signatures, 14= Illiterate

d) **Occupations:** 1=Agriculturist, 2=Shopkeeper, 3= Trader, 4= Govt. Servant, 5=Private Servant, 6=Timber Labor, 7=General Labor, 8=Livestock, 9=Fishing, 10=Driver, 11=Health Related, 12=Educator/Teacher, 13=House-Maid, 14= House Wife, 15=Gone Abroad, 16=Gone out City within Pakistan

e) Health: **1= Good, 2= Average, 3= Poor**

3. DETAIL OF AFFECTED PROPERTY

3.1 Type of Affected Property (a) Land (b) Structure (c) Land & Structure

Sindh Water Sector Improvement Project

3.2 Offset from the Outer Edge of Existing RoW _____ Ft.

3.3 Located At (RS / LS) _____

3.4 In case of affected land provide following details:

Type of Land	Total Land Owned Acre (within and outside this village)	Affected Land	
		Width (ft.)	Length (ft.)
a) Agriculture			
b) Commercial			
c) Residential			
d) Grazing Land			
e) Forest Land			
f) Wasteland			
g) Others (specify)			

3.5 If Structure, specify category of Structure: (tick relevant)

(a).Commercial_____ (b).Residential_____ (c).Otaq (Guest House)_____

3.6 Information about Commercial Structures:

Structure	Size (ft)		Type of structure (codes)			Estimated cost (Rs.)	Year of construction	Affected structures (ft.)	Ownership documents Yes-----No---
	W	L	Roof	Wall	Floor				
Shop									
Cabin									
Adda									
Other									

3.7 Information About Residential Structure:

Structure	Sr. No	Size (ft)		Type of Structure			Estimated cost (Rs.)	Year of construc- tion	Similar const. cost at present (Rs.)	Affected structures (ft) (WxL)	Owners hip status
		W	L	Roof	Wall	Floor					
Living Rooms	1										
	2										
	3										
	4										
Kitchen	1										
	2										
Bathroom/ Latrine	1										
	2										
Shed (Animal)	1										
	2										
Other	1										
	2										

Types of Structures (codes)

Walls: 1= Bricks + Cement + Cement Plaster 2= Bricks+Cement+Mud Plaster 3= Bricks+Mud+Mud Plaster 4= Mud Masonry

Roofs: 1= RCC 2= RBC 3=Tiles+T.Irons+Girders 4= Tiles+Wooden Planks 5= Asbestos/ Iron Sheets 6= Mud+Wood 7=Mud+Thatched

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Floors: 1= Mosaic 2= Concrete with Plaster 3= Bricks+Cement 4= Mud

3.6 Details about Shareholders, if any:

Sr.No.	Name	Relationship with Respondent	Share in % age	Document Available (Yes/No)
1.				
2.				
3.				
4.				
5.				

3.7 Details about Affected Crops:

Sr. No.	Crops	Area		Production (Kgs)	Total Costs (Rs.)	Qty Sold (Kgs)	Price (Rs./40Kgs)
		Marla	Kanal				
1.							
2.							
3.							
4.							
5.							

3.10 Details about other Affected Assets

Type of Asset	No.	Value (Rs.)	When Purchased / Installed (No. of Yrs.)
Peter Engine			
Hand Pump/Donkey Pump			
Electric Motor			
Tube Well			
Lined Watercourse			
Other (specify)			

4. COMPENSATION PREFERENCES

4.1 Do you have some other place to move? Yes _____ No _____

4.2 In case of Yes:

a) How far away from this place? _____ (km)

b) Do you own this place? Yes _____ No _____

5. IN CASE OF TENANT

5.1 Name of Owner: _____ Name of Occupation / Business _____

Av. Monthly Income (Rs.) _____ Av. Monthly Rent (Rs.) _____

5.2 Type of Tenancy a) Residential b) Commercial c) Agriculture Land

5.3 For how long you are at tenancy: _____ Month _____ Year

5.4 Have you made any investment: Yes _____ No _____

5.5 If yes, Provide following details:

Structure	Size (ft)		Estimated Cost (Rs.)	Year of Construction	Cost for Similar Replacement (Rs.)
	W	L			
House (Rooms)					
Shop					
Cabin					
Other(specify)					

7. COMMENTS / OBSERVATIONS

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7.1 General Remarks of the Respondents

General Observations of Interviewers

Name of Interviewer _____ Dated _____

Sindh Water Sector Improvement Project

Socio-economic and Poverty Assessment Baseline Survey Water Sector Improvement Project (WSIP) SOCIO-ECONOMIC AND POVERTY ASSESSMENT BASE LINE SURVEY

IDENTIFICATION

Case No. _____

1.1 Name of Respondent _____ 1.2 Father's Name _____

1.3 Respondent NIC No: _____

1.4 Permanent Address of the Respondent:

Village: _____ Town _____ Tehsil _____ District: _____

1.5 Located At: Head / Middle / Tail (of the Distributary / Minor)

1.6 Category of Respondent: (Tick relevant)

1 Resident Land Owner	2 Absentee Land Owner	3 Tenant
4 Business Owner Operator	5 Business Tenant Operator	6 Encroacher
7 Squatter/ Informal Settlers	8 Other (Specify) _____	9

1.7 Demographic Profile of Respondent (Children up to 10 yrs (#): M __, FM __=T __)

Sr. No.	Relationship with Respondent (See codes)	Sex Male=1 Female=2	Age (Yrs.)	Education (See Codes)	Name of Business/ Occupation (See Codes)		Income from Business/ Occupation (Rs. / Annum)		Health Condition
					Main	Secondary	Main	Secondary	
1	SELF								
2									
3									
4									
5									
6									
7									
8									
9									
10									

Demographic Codes:

- a) Relationship: 1=Self, 2=Wife, 3=Son, 4=Daughter, 5=Father, 6=Mother, 7=Brother, 8=Sister, 9=Grand Father, 10=Grand Mother, 11=Sister in Law, 12=Nephew, 13=Father -in-Law, 14=Mother- in- Law, 15=Niece, 16=Uncle, 17=Aunt, 18=Others
- b) Sex: 1=Male, 2=Female
- c) Education: 1= Primary 2= Middle 3= Matric, 4= Intermediate, 5= BA/BSc, 6= MA/MSc, 7=LLB, 8=Engineer, 9=MBBS, 10=Technical Diploma, 11=Dars-e-Nizami, 12=CanRead Quran, 13= Can Insert Signatures, 14= Illiterate
- d) Occupations: 1=Agriculturist, 2=Shopkeeper, 3= Trader, 4= Govt. Servant, 5=Private Servant, 6=Timber Labour, 7=General Labour, 8=Livestock, 9=Fishing, 10=Driver, 11=Health Related, 12=Educator/Teacher, 13=House-Maid, 14= House Wife, 15=Gone Abroad, 16=Gone out City within Pakistan
- e) Health Condition 1=Good, 2=Average, 3=Poor

Sindh Water Sector Improvement Project

2. LANGUAGE SPOKEN _____

3. Agriculture

3.1 Agricultural Implements

Sr. No.	Items	Nos.	Year of Purchase	Present Value
1	Tractor			
2	Fodder Cutter			
3	Seed Drill			
4	Reaper Machine			
5	Thresher			
6	Spray Pump			
7	Scraper			
8	Others			

3.2 LAND UTILIZATION

Land	Acres	Kanal	Marla
Total Area owned			
Total Cultivated Area			
a. Area Under Rabi (winter) Crops			
b. Area Under Kharif (summer) Crops			
Uncultivated Area			

3.3 Cropping Pattern, Yield and Cost

Code	Crops	Area Sown		Production (Kgs)	Total costs incurred (Rs.)	Price (Rs/40kg)
		Acres	Kanal			
1	Rice					
2	Sugarcane					
3	Cotton					
4	Maize					
5	Millets					
6	Potato					
7	Fodder (kharif)					
8	Vegetables(kharif)					
9	Barley					
10	Wheat					
11	Oilseed					
12	Fodder (Rabi)					
13	Vegetables(Rabi)					
14	Orchards					
15	Other					

3.4 Source of Irrigation

1. Canal 2. Tube well 3. Canal + Tube well 4. Lift Irrigation 5. Barani 6. Other. _____

3.5 Prevalent Land Rate

Residential _____ Agriculture Land _____
Cultivable Waste _____ Other _____

3.6 Land Rent (Rs./ Year) _____

3.7 Tube well Water (Rs./Hr.) _____

4. POSSESSION OF HOUSEHOLD ITEMS

Item	No	Value (Rs.)	Item	No	Value (Rs.)
Refrigerator			Van/Pickup		
Deep Freezer			Gas Cylinder		

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Television			VCR		
Electric Fan			Telephone/PTCL		
Electric Iron			Mobile		
Radio/Tape Recorder			Electric Water Pump		
Bicycle			Computer		
Motor Cycle/Scooter			Air Cooler		
Car			Other		

5. AVERAGE MONTHLY EXPENDITURE ON FOOD AND NON- FOOD ITEMS (RS.)

a. Food Items	Expenses	b. Non-Food Items	Expenses
Meat		Bath Soap	
Ghee		Washing Soap	
Sugar		Gas Cylinder	
Flour		Fuel Wood	
Legumes		Kerosene Oil	
Vegetables		Other	
Species			
Tea Leaves			
Others			

c. Estimated Monthly Expenditure

1. Kitchen _____ 2. Others _____

5.. HOUSING CONDITIONS

5.1 Total Area of the House: _____ Kanal _____ Marla

5.2 Year of Construction _____

5.3 Present Value of the House (Rs.) _____

5.4 Type of Structure a) Katcha _____ b) Pacca _____ c) Semi-Pacca _____

6. ACCESS TO SOCIAL AMENITIES (TICK)

Social Amenities	Available	Satisfactory	Non-Satisfactory	No Access
Electricity				
Gas				
Water Supply				
Telephone				
Sewerage/Drainage				
BHU				
School				

7. LIVESTOCK INVENTORY

Livestock	No.	Present Value (Rs.)
Buffaloes		
Cows		
Horse		
Donkey		
Camel		
Sheep/Goat		
Poultry		
Other		

9. WOMEN'S PARTICIPATION AND ROLE IN DIFFERENT HOUSEHOLD ACTIVITIES

9.1 Participation and Decision Making (Tick):
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Activities

- Household activities
- Child caring
- Farm/Crop activities
- Livestock rearing
- Sale & Purchase of properties
- Social obligations (marriage, birthday & other functions)
- Local representation (councilor/political gathering)

Participation Extent (%)	Decision Making Extent (%)

10. PERCEPTION OF RESPONDENT FOR ACTION ASSOCIATED WITH THE PROJECT

Possible impacts/effects of the Project	1	Increase	2	Decrease
Employment opportunities				
Industrial Development Opportunities				
Living standard				
Unemployment				
Income generating activities				
Electricity Supply Quality				
Mobility (Access to Resources)				
Other specify				

11. Does any NGO / FO Exist in your Area?

Yes _____ No _____

If yes,

Name of NGO / FO _____

Are you member of this NGO / FO _____

Are you member of this NGO / FO _____

Role of NGO / FO _____

12. General Observations of Interviewers

Name of Interviewer _____ Date. _____

Village Profile
Water Sector Improvement Project
 ENVIRONMENTAL AND SOCIAL ASSESSMENT STUDY

Serial No. _____

IDENTIFICATION:

- a. Name of Union Council: _____
- b. Name of Main Village: _____
- c. Total Number of Settlements in the Village: _____
- d. Name of Settlement / Chak of Scoping Session: _____
- e. Persons Attending the Scoping Session: Total _____ Males _____ Females _____

1. ETHNICITY AND POPULATION

Name of the Main Caste	Name of the Clan	Name of HEAD or Prominent Member of Caste / Clan	Total Household of Respective Caste	Population		
				Male	Female	Total
1						
2						
3						
4						
5						
6						
7						
8						

2. LANGUAGES SPOKEN IN THE VILLAGE:

- 2.1 Urdu _____
- 2.2 Sindhi _____
- 2.3 Punjabi _____
- 2.4 Others _____

NUMBER OF EDUCATED PERSONS IN THE SETTLEMENT / VILLAGE

Level	Male (No.)	Female (No.)	Total (M+F)
Primary Level			
Middle			
Metric			
Intermediate			
Graduation			
Post Graduation			
Others			

3. EDUCATION FACILITIES AVAILABLE IN THE SETTLEMENT / VILLAGE

Description	No. of institutions		Enrolment		No. of Teachers	
	Boys	Girls	Boys	Girls	Male	Female
Primary School.						
Middle School						
High School						
Inter College						
Degree College						
Madrassa						
Vocational						

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4. HEATH FACILITIES (Within Village)

Facility Within Village	Exists Yes=1 No=2	Whether Functioning Yes=1 No=2	Medical Staff Available (Nos.)	Nearby Similar facility (near of place)
Hospital				
Basic Health Unit				
Mother Child Care Centre				
Child Immunization Centre				

4. IS THERE ANY PRIVATE MEDICAL PRACTITIONER IN THE VILLAGE?

1 .M.B.B.S (No.)_____
 2 Homeopathic (No.)_____
 3 Hakeem (No.)_____
 4 Paramedical (No.)_____

5. DOES ANY CHILD BIRTH ATTENDANT AVAILABLE IN THE VILLAGE? YES No

If yes, what type?

- 1) Doctor
 2) Others Specify

6. OCCURRENCE OF DISEASES DURING LAST FIVE YEARS

1 Malaria
 2 Typhoid
 3 Cholera
 4 HIV
 5 Measles
 6 Polio
 7 T.B.
 8 Diahorea
 9 Hepatitis
 10 Others Specify

7. NUMBER OF HOUSES IN THE VILLAGE

1. Katcha_____ 2) Pacca_____ 3) Semi-Pacca_____ 4) Hut _____

8. AVAILABLE UTILITIES(No. of houses having facility)

8.1 Water supply system

Municipal Supply	<input type="text"/> 1	Spring	<input type="text"/> 2	Hand Pump,	<input type="text"/> 3
Electric Motor Pump,	<input type="text"/> 4	Water Channel	<input type="text"/> 5	Other,	<input type="text"/> 6

Water Carrying System

Self Carried	<input type="text"/> 1	Tanker	<input type="text"/> 2	Donkey Back	<input type="text"/> 3
Tapped	<input type="text"/> 4	Other	<input type="text"/> 5		

Wastewater Disposal System:

Sewerage System, 1 Open Drains, 2 Soakage Pits 3

Latrine:

Fields 1 Within House, Flush System 2

Electricity: Yes 1 No 2

Sindh Water Sector Improvement Project

9. ACCESS TO SOCIAL AMENITIES

Type of Amenity	Available in the Village 1= Yes 2= No	Available in Nearby Village / Locality 1= Yes 2= No	Distance from the Village (km)
Electricity			
Gas			
Fuel cylinder			
Telephone (Land Line)			
Post Office			
Bank			
Mosque			
Graveyard			
Other			

10. ACCESSIBILITY OF THE VILLAGE THROUGH:

1. Metalled Road _____ 2. Soling _____ 3. Katcha _____.

11. DISTANCE OF VILLAGE FROM ROAD / TRACK: ----- km

12. AVAILABILITY OF TRANSPORT IN THE VILLAGE?

Public Transport Yes _____ No _____

Private Transport Yes _____ No _____

13. OCCUPATIONAL STATISTICS (No of Households with Major Source of Income of the head of family)

1. Agriculturist _____
2. Shopkeepers _____
3. Transporters _____
4. Livestock Farmers _____
5. Employment (Public) _____
6. Employment (Private) _____
7. Daily wage Earners /Laborer _____
8. Poultry Farmers _____

14. LAND STATISTICS OF VILLAGE

Acres

Kanal

- | | | |
|-----------------------------------|-------|-------|
| 1) Cultivated Land | _____ | _____ |
| 2) Fallow Land | _____ | _____ |
| 3) Cultivable Waste Land (Banjar) | _____ | _____ |

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- 4) Ghair Mumkin _____
- 5) Total Land _____

15 IRRIGATION WATER SOURCE AND AREA IRRIGATED

	Acres	Kanal
1. Canal Only	_____	_____
2. Tube well Only	_____	_____
3. Canal+ Tube well	_____	_____
4. Barani	_____	_____

16 Do the farmers sell water to other farmers?

- Yes No

If yes why? _____

17. CONFLICT RESOLUTION MECHANISM

17.1 Who are the influential in your village?

1. Politician / Landlord
2. Nazim / Councilor
3. Religious Scholars
4. Heads of Families
5. Others(Specify)

18.2 How the matters related to property, dispute about the control and consumption of the natural

resources of the area are and matters of common interest settled?

- a) Punchyat
- b) Head of the Caste
- c) Nazim of the Area
- d) Head of Families

19. NUMBER OF ANIMAL IN THE VILLAGE

Animal type	Masculine		Feminine		Total
	Young Stock (upto 3 yrs)	Adult	Young Stock (upto 3 yrs)	Adult	
Buffalo					
Cow					
Sheep					
Goat					
Horses					
Donkeys					

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Gender Data Collection

Year: _____

Questionnaire No. _____

1. Location /Identification

- a. Name of village _____
- b. Name of canal _____
- c. WC/minor/ distributary no. _____
- d. Taluka / Distt. _____

2. Biographical Data

- a. Name of respondent _____
- b. Father's/ Husband's name _____
- c. Marital status:
 - i. Married _____
 - ii. Single _____
 - iii. Widow _____
 - iv. Divorced _____
- d. Literacy status
 - i. Literate _____
 - ii. Illiterate _____
- e. If literate years of schooling/ level of education
 - i. Primary _____
 - ii. Middle _____
 - iii. High _____
 - iv. Graduate _____
 - v. Others _____
- f. Do you own any property in your name?
 - i. Yes _____
 - ii. No _____
- g. If yes, then
 - i. Land _____
 - ii. House _____
 - iii. Livestock _____
 - iv. Any other _____
- h. What is total house hold composition?
 - i. Boys _____
 - ii. Girls _____

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iii. Total _____

i. What are your specific household activities?

- i. Food preparation _____
- ii. Cleaning / housekeeping _____
- iii. Manage house budget _____
- iv. Caring of children _____
- v. Any other, (specify) _____

j. What are your specific farm activities?

- i. Livestock rearing _____
- ii. Poultry farming _____
- iii. Milking of animals _____
- iv. Harvesting of crops _____
- v. Weeding _____
- vi. Vegetable sowing / harvesting _____
- vii. Any other (specify) _____

k. Role Of Women In Decision Making

- i. Are you involved in : _____
- ii. Marriage of children yes _____, No _____
- iii. Sale & purchase of property yes _____, No _____
- iv. Decision regarding schooling of children yes _____, No _____
- v. Decision to attend social factions yes _____, No _____

l. How many adult female including you are living in this house?

- i. 1 _____, 2 _____, 3 _____, 4 _____, 5 _____

m. Mention three basic facilities that women need most:

- i. _____
- ii. _____
- iii. _____

3. Health

a. Which of health facilities are available at your village?

- i. BHU _____
- ii. Dispensary _____
- iii. Private doctor _____
- iv. Hakeem _____

b. Which were the strongly hit diseases in last year?

- i. Diarrhea _____
- ii. Measles _____
- iii. Hepatitis _____
- iv. Typhoid _____
- v. Tuberculosis _____
- vi. Heart diseases _____

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- c.** In case of emergency who takes you to hospital?
- i. Husband _____
 - ii. Mother-in-law _____
 - iii. Father in law _____
 - iv. Alone _____
- d.** Do you face any problem / difficulty for transport while rushing towards hospital?
- i. Yes _____
 - ii. No _____
- e.** If yes, then what would you prefer
- i. Have proper transport arrangement _____
 - ii. To be reside at some proper place _____
- f.** What are the basic health needs or facilities which you want in your area?
- i. _____
 - ii. _____
 - iii. _____

4. Education

- a.** Is there any school for girls in the village?
- i. Yes _____ No _____
- b.** If yes, then how many girls of village are studying in that school?
- i. _____ %

5. Participation in FO/ WCA

- a.** Did women aware about their land ownership?
- i. Yes _____
 - ii. No _____
- b.** How many members are there in FO/WCA? _____
- c.** Status of membership
- i. Ordinary membership yes _____, No _____
 - ii. Office bearers yes _____, No _____
- d.** What was women contribution in FO/ WCA affairs?
- i. _____
 - ii. _____
 - iii. _____
- e.** Do you receive any training for this? Yes _____, No _____
- f.** If yes, state the following

Month / year	Place	Type of Training	Organization / Project

--	--	--	--

g. Do you think that participation of women in FO/ WCA affairs will make it successful?

i. Yes _____, No _____

h. If yes ; state the reasons

i. What are the suggestions for efficient and effective functioning of FO/WCA?

j. What factors prohibit an average woman of this village to come forward and participate effectively in FA/WCA affairs at village level?

6. Income Generation

a. Do you contribute to family income

i. Yes _____, No _____

b. If yes, what is source of your income?

Sources

Annual Income (Rs)

- | | |
|--------------------------|-------|
| i. Farm labour | _____ |
| ii. Fire wood collection | _____ |
| iii. Embroidery | _____ |
| iv. Domestic Services | _____ |
| v. Any other | _____ |

7. Skill Development

a. Do you think that different kind of trainings can enhance your income generating resources?

i. Yes _____, No _____

b. If yes, which training you would like to obtain?

- | | |
|------------------------|-------|
| i. Sewing/ stitching | _____ |
| ii. Embroidery | _____ |
| iii. Teaching | _____ |
| iv. Handicrafts | _____ |
| v. Any other (specify) | _____ |

8. Pressing needs of women in project area

Sr. no	Needs / facilities	To what extent in %age

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Name of interviewer: _____

Appendix C. Details of Project Affected Persons and Assets

C.1. Details of Affected Structures of Mithrao Canal and Estimated Compensation Cost

Sr.No.	Name of Affected Person	Father's Name	Address				Poverty Status				Affected structure								
			Name of Canal	Deh/ Village	Taluka	District	Coordinates	RD	Profession	Monthly Income	Family Size	Per Capita Income	Status (Above/Below)	Structure	Details of rooms	Type of Construction	Size of Structure (Sft/Rft)/No.	Unit Rate (RS.)	Total Cost of Structure
1	Shahmir Jamali	Dost Mohammad	Mithrao Canal	Malook Jamali	Sanghar	Sanghar	N.26°04'06.0	18+000(IP)	Small Business	8,500	10	850	B	Shop	Store front	Pacca	360	952	342,720
							E.069°00'25.2								Shed	Iron	330	650	214,500
2	Altaf Hussain	Shahmir Jamali	Mithrao Canal	Malook Jamali	Sanghar	Sanghar	N.26°04'05.5	18+000(IP)	Small Business	12,000	8	1500	B	Shop	Store front	Pacca	143	952	136,136
							E.069°00'25.0								Shed	Iron	60	650	39,000
3	Mohd Yameen Lashari	Abdul Raheem	Mithrao Canal	Sanghar City	Sanghar	Sanghar	N.26°04'06.0	18+000(IP)	Small Business	4,500	6	750	B	Shop	Shed	Straw	88	152	13,376
							E.069°00'26.1								Store front	Pacca	126	952	119,952
4	Moti Naal Sochi	Bagchi	Mithrao Canal	Sanghar	Sanghar	Sanghar	N.26°04'05.8	18+000(IP)	Small Business	6,000	10	600	B	Wooden Stall	-	Wooden	1nr	N/A	0
5	Nazir Ahmed	Khada Bux Lashari	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.8	18+000(IP)	Small Business	9,000	2	4,500	A	Shop	Shed	Straw	858	152	130,416
							E.069°00'25.7								Store front	Kacha	120	175	21,000
6	Ghulam Sarwar Lashari	Abdul Raheem	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.8	18+000(IP)	Small Business	9,000	7	1,286	B	Shop	Store front	Straw	182	152	27,664
7	Ghulam Nabi Laghari	Qamar Din	Mithrao Canal	Molvi Khair Mohammad	Sanghar	Sanghar	N.26°04'05.9	18+000(IP)	Small Business	15,000	8	1,875	B	Shop	Store front	Pacca	140	952	133,280
							E.069°00'25.4								Shed	Iron	50	650	32,500
8	Gulzar Ahmed Laghari	Haji Ghulam Mohd	Mithrao Canal	Haji Ahmed Laghari	Sanghar	Sanghar	N.26°04'05.8	18+000(IP)	Small Business	20,000	7	2,857	A	Shop	Store front	Pacca	140	952	133,280
							E.069°00'25.2								Shed	Iron	90	650	58,500
9	Wahid Bux Bugti	Mir Hassan	Mithrao Canal	Naseer Khan Bugti	Sanghar	Sanghar	N.26°04'06.4	18+000(NIP)	Small Business	11,000	6	1,833	B	Shop	Store front	Kacha	168	175	29,400
10	Ghulam Nabi Laghari	Qamar Din	Mithrao Canal	M.Alam Landharh	Sanghar	Sanghar	N.26°04'05.6	18+000(NIP)	Small Business	11,000	10	1,100	B	Shop	Store front	Kacha	156	175	27,300
							E.069°00'28.2								Store front	Kacha	187	175	32,725
							Shed								Straw	460	152	69,920	
11	Khalil Ahmed Laghari	Haji Faizullah	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.6	18+000(NIP)	Small Business	10,000	7	1,428	B	Shop	Store front	Kacha	120	175	21,000
							E.069°00'28.2							Hand pump	-	-	1 nr.	7,700	7,700
12	Dhani Bux Laghari	Sain Bux	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.4	18+000(NIP)	Small Business	9,000	5	1,800	B	Shop	Store front	Straw	228	152	34,656

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Sr.No.	Name of Affected		Address		Taluka	District	Coordinates	RD	Profession	Poverty Status			Status (Above/)	Affected structure					
	Person	Father's Name	Name of	Deh/ Village						Monthly Income	Family Size	Per Capita Income		Structure	Details of rooms	Type of Construction	Size of Structure	Unit Rate (RS.)	Total Cost of
13	Abdulhaq Laghari	Khalil Ahmed	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.4 E.069°00'28.2	18+000(NIP)	Small Business	10,000	6	1,667	B	Shop	Store front	Semi Pacca	266	650	172,900
															Store	Semi Pacca	63	650	40,950
14	Talib hussain	Adam Khan	Mithrao Canal		Sanghar	Sanghar		18+000(NIP)	Small Business	12,000	8	1,500	B	Motor cycle service platform	-	Wall pacca	60	952	57,120
15	Abdul Karim Laghari	Khalil Ahmed	Mithrao Canal		Sanghar	Sanghar	N.26°04'06.4 E.069°00'28.3	18+000(NIP)	Small Business	10,000	3	3,333	A	Shop	Store front	Semi Pacca	63	650	40,950
16	Nangar	Fazul	Mithrao Canal		Sanghar	Sanghar	N.26°00'09.9 E.069°01'15.6	40+000(NIP)	Small Business	6,000	7	857	B	Cabin	-	Wooden	1nr	N/A	0
														Hand pump	-	-	1nr	7,700	7,700
17	Allah Dino	Kongho Jamali	Mithrao Canal		Sanghar	Sanghar	N.26°00'30.5 E.069°01'13.8	40+000(IP)	Small Business	5,000	3	1,667	B	Cabin	-	Wooden	1nr	N/A	0
18	Ameer Bux Jamali	Allah Dino	Mithrao Canal	Mohammad Jamali	Sanghar	Sanghar	N.26°00'30.5 E.069°01'13.8	40+000(IP)	Small Business	9,000	3	3,000	A	Shop	Shop	Kacha	252	175	44,100
															Shed	Straw	143	152	21,736
19	Ali Dino Sher	Imam Bux	Mithrao Canal		Sanghar	Sanghar	N.26°00'30.4	40+400(NIP)	Small Business	8,000	3	2,667	A	Shop	Shop	Pacca	187	952	178,024
															Shop	Pacca	187	952	178,024
20	Dilber Ali	Mohammad Sharif	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+640(IP)	General Labour	6000	3	2000	B	House	Room 1	Straw	168	152	25,536
															Shed	Straw	144	152	21,888
21	Mohammad Sharif	Mir Mohammad	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+690(IP)	General Labour	8000	5	1600	B	House	Room 1	Straw	168	152	25,536
22	Asghar	Mohammad Sharif	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+715(IP)	General Labour	7,500	5	1,500	B	House	Room 1	Straw	168	152	25,536
23	Shabir	Mohammad Hasil	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+760(IP)	General Labour	5500	3	1833	B	House	Room 1	Straw	168	152	25,536
															Room 2	Straw	168	152	25,536
24	Pyaro Ali	Mir Mohammad	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+830(IP)	General Labour	14000	11	1273	B	House	Room 1	Straw	168	152	25,536
															Room 2	Straw	168	152	25,536
															Room 3	Straw	168	152	25,536
															Animal Shed	Straw	192	152	29,184
													Hand pump	-	-	1nr	7700	7,700	
25	Lakhano	Mir Mohammad	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'59.8	63+850(IP)	General Labour	8500	8	1062	B	House	Room 1	Straw	224	152	34,048

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Sr.No.	Name of Affected		Address		Taluka	District	Coordinates	RD	Profession	Poverty Status			Status (Above/	Affected structure					
	Person	Father's Name	Name of	Deh/ Village						Monthly Income	Family Size	Per Capita Income		Structure	Details of rooms	Type of Construction	Size of Structure	Unit Rate (RS.)	Total Cost of
							E.069°02'46.3							Room 2	Straw	196	152	29,792	
														Kitchen	Straw	40	152	6,080	
26	Misri	Jan Mohammad	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'59.8 E.069°02'46.3	63+870(IP)	General Labour	7000	6	1167	B	House	Room 1	Straw	168	152	25,536
														Animal Shed	Straw	140	152	21,280	
27	Haq Nawaz	Peer Bux	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°57'02.7 E.069°02'44.2	63+890(IP)	General Labour	7,500	5	1,500	B	House	Room 1	Straw	224	152	34,048
28	Bhale Dino	Mohammad Ismail	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	64+000(IP)	Small Business	8,000	7	1,143	B	Otaq	Room 1	Pacca	120	952	114,240
														Cabin	-	Wooden	1nr	N/A	0
29	Mir Mohd Brohi	Haji Abdul Karim	Mithrao Canal	Haji Ghulam Karim	Sanghar	Sanghar	N.25°41'02.8 E.069°09'52.7	175+000(IP)	Small Business	11,000	8	1,375	B	Shop	Store front	Kacha	209	175	36,575
														Cabin	-	Wooden	1nr	N/A	0
														Hand pump	-	-	1nr	7,700	7,700
30	Zahoor Din Sher	Haji Lal Mohd	Mithrao Canal	Shahbudin Sher	Sanghar	Sanghar	N.25°41'04.4 E.069°09'55.3	175+000(NIP)	Small Business	10,000	14	714	B	Shop	Storefront	Straw	496	152	75,392
														Storefront	Pacca	30	952	28,560	
														Storefront	Semi Pacca	182	650	118,300	
31	Habib-ur- Rehman Sher	Habibullah	Mithrao Canal	Shahbudin Sher	Sanghar	Sanghar	N.25°41'04.4 E.069°09'55.6	175+000(NIP)	Small Business	4,500	1	4,500	A	Cabin	-	Wooden	1nr	N/A	0
														Shed	Shed	Straw	220	152	33,440
32	Khemchand Bheel	Nango Mal	Mithrao Canal	Duthro Mori	Sanghar	Sanghar	N.25°41'04.1 E.069°09'55.9	175+000(NIP)	Small Business	7,500	3	2,500	A	Shop	Storefront	Kacha	99	175	17,325
														Shed	Straw	63	152	9,576	
														Cabin	-	Wooden	1nr	N/A	0
33	Abandoned *		Mithrao Canal		Sanghar	Sanghar	N.25°19'43.5 E.069°20'27.9	337+000(NIP)						Shop	Shop	Kacha	108	175	18,900
34	Nangar Mallah	Mohammad Hashim	Mithrao Canal		Samaro	Umerkot	N.25°17'13.4 E.069°21'52.0	354+000(IP)	Fishing	8000	9	889	B	House	Room 1	Kacha	168	175	29,400
														Room 2	Kacha	168	175	29,400	
														Room 3	Kacha	168	175	29,400	
														Shed	Straw	210	152	31,920	
35	Sanwan Khoso	Mirho Khan	Mithrao Canal	Soomar Khan Khoso	Samaro	Umerkot	N.25°17'10.1 E.069°21'55.7	354+200 (IP)	Small Business	5,500	6	916	B	Cabin	-	Wooden	1nr	N/A	0
														Shed	Shed	Straw	522	152	79,344
Total										213			3,439,845						

C.2. PAPs Eligible for Standard Transport Allowance

Name of PAP (Head of Household)	Father's Name	Existing Location (RD)	Profession	Family Size	Affected Structure	Details of rooms	Type of Construction	Standard Transport Allowance
Shahmir Jamali	Dost Mohammad	18+000(IP)	Small Business	10	Shop	Store front Shed	Pacca Iron	11,000
Altaf Hussain	Shahmir Jamali	18+000(IP)	Small Business	8	Shop	Store front Shed	Pacca Iron	11,000
Mohd Yameen Lashari	Abdul Raheem	18+000(IP)	Small Business	6	Shop	Shed Store front	Straw Pacca	11,000
Nazir Ahmed	Khada Bux Lashari	18+000(IP)	Small Business	2	Shop	Shed Store front	Straw Kacha	11,000
Ghulam Sarwar Lashari	Abdul Raheem	18+000(IP)	Small Business	7	Shop	Store front	Straw	11,000
Ghulam Nabi Laghari	Qamar Din	18+000(IP)	Small Business	8	Shop	Store front Shed	Pacca Iron	11,000
Gulzar Ahmed Laghari	Haji Ghulam Mohd	18+000(IP)	Small Business	7	Shop	Store front Shed	Pacca Iron	11,000
Wahid Bux Bugti	Mir Hassan	18+000(NIP)	Small Business	6	Shop	Store front	Kacha	11,000
Ghulam Nabi Laghari	Qamar Din	18+000(NIP)	Small Business	10	Shop	Store front Shed	Kacha Straw	11,000
Khalil Ahmed Laghari	Haji Faizullah	18+000(NIP)	Small Business	7	Shop Hand pump	Store front -	Kacha -	11,000
Dhani Bux Laghari	Sain Bux	18+000(NIP)	Small Business	5	Shop	Store front	Straw	11,000
Abdulhaq Laghari	Khalil Ahmed	18+000(NIP)	Small Business	6	Shop	Store front Store	Semi Pacca Semi Pacca	11,000
Talib hussain	Adam Khan	18+000(NIP)	Small Business	8	Motor cycle service platform	-	Wall pacca	11,000
Abdul Karim Laghari	Khalil Ahmed	18+000(NIP)	Small Business	3	Shop	Store front	Semi Pacca	11,000
Ameer Bux Jamali	Allah Dino	40+000(IP)	Small Business	3	Shop	Shop Shed	Kacha Straw	11,000
Ali Dino Sher	Imam Bux	40+400(NIP)	Small Business	3	Shop	Shop Shop	Pacca Pacca	11,000
Dilber Ali	Mohammad Sharif	63+640(IP)	General Labour	3	House	Room 1 Shed	Straw Straw	11,000
Mohammad Sharif	Mir Mohammad	63+690(IP)	General Labour	5	House	Room 1	Straw	11,000
Asghar	Mohammad Sharif	63+715(IP)	General Labour	5	House	Room 1	Straw	11,000
Shabir	Mohammad Hasil	63+760(IP)	General Labour	3	House	Room 1 Room 2	Straw Straw	11,000
Pyaro Ali	Mir Mohammad	63+830(IP)	General Labour	11	House	Room 1	Straw	11,000

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Name of PAP (Head of Household)	Father's Name	Existing Location (RD)	Profession	Family Size	Affected Structure	Details of rooms	Type of Construction	Standard Transport Allowance
						Room 2	Straw	
						Room 3	Straw	
						Animal Shed	Straw	
					Hand pump	-	-	
Lakhano	Mir Mohammad	63+850(IP)	General Labour	8	House	Room 1	Straw	11,000
						Room 2	Straw	
						Kitchen	Straw	
Misri	Jan Mohammad	63+870(IP)	General Labour	6	House	Room 1	Straw	11,000
						Animal Shed	Straw	
Haq Nawaz	Peer Bux	63+890(IP)	General Labour	5	House	Room 1	Straw	11,000
Bhale Dino	Mohammad Ismail	64+000(IP)	Small Business	7	Otaq	Room 1	Pacca	11,000
					Cabin	-	Wooden	
Mir Mohd Brohi	Haji Abdul Karim	175+000(IP)	Small Business	8	Shop	Store front	Kacha	11,000
					Cabin	-	Wooden	
					Hand pump	-	-	
Zahoor Din Sher	Haji Lal Mohd	175+000(NIP)	Small Business	14	Shop	Storefront	Straw	11,000
						Storefront	Pacca	
						Storefront	Semi Pacca	
Habib-ur- Rehman Sher	Habibullah	175+000(NIP)	Small Business	1	Cabin	-	Wooden	11,000
					Shed	Shed	Straw	
Khemchand Bheel	Nango Mal	175+000(NIP)	Small Business	3	Shop	Storefront	Kacha	11,000
						Shed	Straw	
					Cabin	-	Wooden	
Nangar Mallah	Mohammad Hashim	354+000(IP)	Fishing	9	House	Room 1	Kacha	11,000
						Room 2	Kacha	
						Room 3	Kacha	
						Shed	Straw	
Sanwan Khoso	Mirho Khan	354+200 (NIP)	Small Business	6	Cabin	-	Wooden	11,000
					Shed	Shed	Straw	
Total								341,000

C.3. PAPs Eligible for Transport Allowance (Moveable Assets)

Name of PAP (Head of Household)	Father's Name	Existing Location (RD)	Profession	Family Size	Affected Structure	Details of rooms	Type of Construction	Transport Allowance (Moveable Assets)
Moti Naal Sochi	Bagchi	18+000(IP)	Small Business	10	Wooden Stall	-	Wooden	5,500
Nangar	Fazul	40+000(NIP)	Small Business	7	Cabin	-	Wooden	5,500
					Hand pump	-	-	
Allah Dino	Kongho Jamali	40+000(IP)	Small Business	3	Cabin	-	Wooden	5,500
Bhale Dino	Mohammad Ismail	64+000(IP)	Small Business	7	Otaq	Room 1	Pacca	5,500
					Cabin	-	Wooden	

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Name of PAP (Head of Household)	Father's Name	Existing Location (RD)	Profession	Family Size	Affected Structure	Details of rooms	Type of Construction	Transport Allowance (Moveable Assets)
Mir Mohd Brohi	Haji Abdul Karim	175+000(IP)	Small Business	8	Shop	Store front	Kacha	5,500
					Cabin	-	Wooden	
					Hand pump	-	-	
Habib-ur- Rehman Sher	Habibullah	175+000(NIP)	Small Business	1	Cabin	-	Wooden	5,500
					Shed	Shed	Straw	
Khemchand Bheel	Nango Mal	175+000(NIP)	Small Business	3	Shop	Storefront	Kacha	5,500
						Shed	Straw	
					Cabin	-	Wooden	
Sanwan Khoso	Mirho Khan	354+200 (NIP)	Small Business	6	Cabin	-	Wooden	5,500
					Shed	Shed	Straw	
Total								44,000

C.4. Low Income Allowance

Sr Nr.	Name of Affected Person	Father's Name	Deh/ Village	Taluka	District	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status (Above/Below)	Vulnerability allowance (PKR)
1	Shahmir Jamali	Dost Mohammad	Malook Jamali	Sanghar	Sanghar	18+000(IP)	Small Business	8,500	9,350	10	850	B	22,000
2	Altaf Hussain	Shahmir Jamali	Malook Jamali	Sanghar	Sanghar	18+000(IP)	Small Business	12,000	13,200	8	1500	B	26,400
3	Mohd Yameen Lashari	Abdul Raheem	Sanghar City	Sanghar	Sanghar	18+000(IP)	Small Business	4,500	4,950	6	750	B	22,000
4	Moti Naal Sochi	Bagchi	Sanghar	Sanghar	Sanghar	18+000(IP)	Small Business	6,000	6,600	10	600	B	22,000
5	Ghulam Sarwar Lashari	Abdul Raheem		Sanghar	Sanghar	18+000(IP)	Small Business	9,000	9,900		7	B	22,000
6	Ghulam Nabi Laghari	Qamar Din	Molvi Khair Mohammad	Sanghar	Sanghar	18+000(IP)	Small Business	15,000	16,500	8	1,875	B	33,000
7	Wahid Bux Bugti	Mir Hassan	Naseer Khan Bugti	Sanghar	Sanghar	18+000(NIP)	Small Business	11,000	12,100	6	1,833	B	24,200
8	Ghulam Nabi Laghari	Qamar Din	M.Alam Landharh	Sanghar	Sanghar	18+000(NIP)	Small Business	11,000	12,100	10	1,100	B	24,200
9	Khalil Ahmed Laghari	Haji Faizullah		Sanghar	Sanghar	18+000(NIP)	Small Business	10,000	11,000		7	B	22,000
10	Dhani Bux Laghari	Sain Bux		Sanghar	Sanghar	18+000(NIP)	Small Business	9,000	9,900	5	1,800	B	22,000
11	Abdulhaq Laghari	Khalil Ahmed		Sanghar	Sanghar	18+000(NIP)	Small Business	10,000	11,000		6	B	22,000
12	Talib hussain	Adam Khan		Sanghar	Sanghar	18+000(NIP)	Small Business	12,000	13,200	8	1,500	B	26,400
13	Nangar	Fazul		Sanghar	Sanghar	40+000(NIP)	Small Business	6,000	6,600	7	857	B	22,000
14	Allah Dino	Kongho Jamali		Sanghar	Sanghar	40+000(IP)	Small Business	5,000	5,500		3	B	22,000
15	Dilber Ali	Mohammad Sharif	Qaim Shar	Sanghar	Sanghar	63+640(IP)	General Labour	6000	6,600	3	2000	B	22,000
16	Mohammad Sharif	Mir Mohammad	Qaim Shar	Sanghar	Sanghar	63+690(IP)	General Labour	8000	8,800	5	1600	B	22,000
17	Asghar	Mohammad Sharif	Qaim Shar	Sanghar	Sanghar	63+715(IP)	General Labour	7,500	8,250	5	1,500	B	22,000
18	Shabir	Mohammad Hasil	Qaim Shar	Sanghar	Sanghar	63+760(IP)	General Labour	5500	6,050	3	1833	B	22,000
19	Pyaro Ali	Mir Mohammad	Qaim Shar	Sanghar	Sanghar	63+830(IP)	General Labour	14000	15,400	11	1273	B	30,800
20	Lakhano	Mir Mohammad	Qaim Shar	Sanghar	Sanghar	63+850(IP)	General Labour	8500	9,350	8	1062	B	22,000
21	Misri	Jan Mohammad	Qaim Shar	Sanghar	Sanghar	63+870(IP)	General Labour	7000	7,700	6	1167	B	22,000
22	Haq Nawaz	Peer Bux	Qaim Shar	Sanghar	Sanghar	63+890(IP)	General Labour	7,500	8,250	5	1,500	B	22,000
23	Bhale Dino	Mohammad Ismail	Qaim Shar	Sanghar	Sanghar	64+000(IP)	Small Business	8,000	8,800	7	1,143	B	22,000
24	Mir Mohd Brohi	Haji Abdul Karim	Haji Ghulam Karim	Sanghar	Sanghar	175+000(IP)	Small Business	11,000	12,100	8	1,375	B	24,200
25	Zahoor Din Sher	Haji Lal Mohd	Shahbudin Sher	Sanghar	Sanghar	175+000(NIP)	Small Business	10,000	11,000	14	714	B	22,000
26	Nangar Mallah	Mohammad Hashim		Samaro	Umerkot	354+000(IP)	Fishing	8000	8,800		9	B	22,000
27	Sanwan Khoso	Mirho Khan	Soomar Khan Khoso	Samaro	Umerkot	354+200 (IP)	Small Business	5,500	6,050	6	916	B	22,000
Total (PKR)													629,200

C.5. Details of Livelihood Allowance

Sr. No	Name of Affected			Address				Poverty Status							Affected structure				
	Person	Father's Name	Name of Canal	Deh/ Village	Taluka	District	Coordinates	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status (Above/Below)	Name of Structure	Type of Construction	Livelihood Allowance	Months	Total Livelihood Allowance
1	Shahmir Jamali	Dost Mohammad	Mithrao Canal	Malook Jamali	Sanghar	Sanghar	N.26°04'06.0 E.069°00'25.2	18+000(IP)	Small Business	8,500	9,350	10	850	B	Shop Shed	Pacca Iron	11,000	3	33,000
2	Altat Hussain	Shahmir Jamali	Mithrao Canal	Malook Jamali	Sanghar	Sanghar	N.26°04'05.5 E.069°00'25.0	18+000(IP)	Small Business	12,000	13,200	8	1,500	B	Shop Shed	Pacca Iron	11,001	3	39,600
3	Mohd Yameen Lashari	Abdul Raheem	Mithrao Canal	Sanghar City	Sanghar	Sanghar	N.26°04'06.0 E.069°00'26.1	18+000(IP)	Small Business	4,500	4,950	6	750	B	Shed Shop	Straw Pacca	11,002	3	33,000
4	Nazir Ahmed	Khada Bux Lashari	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.8 E.069°00'25.7	18+000(IP)	Small Business	9,000	9,900	2	4,500	A	Shed Shop	Straw Kacha	11,003	3	33,000
5	Ghulam Sarwar Lashari	Abdul Raheem	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.8 E.069°00'25.7	18+000(IP)	Small Business	9,000	9,900	7	1,286	B	Shop	Straw	11,004	3	33,000
6	Ghulam Nabi Laghari	Qamar Din	Mithrao Canal	Molvi Khair Mohammad	Sanghar	Sanghar	N.26°04'05.9 E.069°00'25.4	18+000(IP)	Small Business	15,000	16,500	8	1,875	B	Shop Shed	Pacca Iron	11,005	3	49,500
7	Gulzar Ahmed Laghari	Haji Ghulam Mohd	Mithrao Canal	Haji Ahmed Laghari	Sanghar	Sanghar	N.26°04'05.8 E.069°00'25.2	18+000(IP)	Small Business	20,000	22,000	7	2,857	A	Shop Shed	Pacca Iron	11,006	3	66,000
8	Wahid Bux Bugti	Mir Hassan	Mithrao Canal	Naseer Khan Bugti	Sanghar	Sanghar	N.26°04'06.4 E.069°00'28.2	18+000(NIP)	Small Business	11,000	12,100	6	1,833	B	Shop	Kacha	11,007	3	36,300
9	Ghulam Nabi Laghari	Qamar Din	Mithrao Canal	M.Alam Landharh	Sanghar	Sanghar	N.26°04'05.6 E.069°00'28.2	18+000(NIP)	Small Business	11,000	12,100	10	1,100	B	Shop Shop Shed	Kacha Kacha Straw	11,000	3	36,300
10	Khalil Ahmed Laghari	Haji Faizullah	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.6 E.069°00'28.2	18+000(NIP)	Small Business	10,000	11,000	7	1,428	B	Shop Hand pump	Kacha	11,000	3	33,000
11	Dhani Bux Laghari	Sain Bux	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.4 E.069°00'28.2	18+000(NIP)	Small Business	9,000	9,900	5	1,800	B	Shop	Straw	11,000	3	33,000
12	Abdulhaq Laghari	Khalil Ahmed	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.4 E.069°00'28.2	18+000(NIP)	Small Business	10,000	11,000	6	1,667	B	Shop Store	Semi Pacca Semi Pacca	11,000	3	33,000
13	Abdul Karim Laghari	Khalil Ahmed	Mithrao Canal		Sanghar	Sanghar	N.26°04'06.4 E.069°00'28.3	18+000(NIP)	Small Business	10,000	11,000	3	3,333	A	Shop	Semi Pacca	11,000	3	33,000
14	Talib hussain	Adam Khan	Mithrao Canal		Sanghar	Sanghar		18+000(NIP)	Small Business	12,000	13,200	8	1,500	B	Motor cycle service	Wall pacca	11,000	3	39,600

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Sr. No	Name of Affected		Address				Poverty Status					Affected structure							
	Person	Father's Name	Name of Canal	Deh/ Village	Taluka	District	Coordinates	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status (Above/Below)	Name of Structure	Type of Construction	Livelihood Allowance	Months	Total Livelihood Allowance
15	Ameer Bux Jamali	Allah Dino	Mithrao Canal	Mohammad Jamali	Sanghar	Sanghar	N.26°00'30.5 E.069°01'13.8	40+000(IP)	Small Business	9,000	9,900	3	3,000	A	Shop Shed	Kacha Straw	11,000	3	33,000
16	Ali Dino Sher	Imam Bux	Mithrao Canal		Sanghar	Sanghar	N.26°00'30.4 E.069°01'15.8	40+000(NIP)	Small Business	8,000	8,800	3	2,667	A	Shop Shop	Pacca Pacca	11,000	3	33,000
17	Mir Mohd Brohi	Haji Abdul Karim	Mithrao Canal	Haji Ghulam Karim	Sanghar	Sanghar	N.25°41'02.8 E.069°09'52.7	175+000(IP)	Small Business	11,000	12,100	8	1,375	B	Shop Cabin	Kacha Wooden	11,000	3	36,300
18	Zahoor Din Sher	Haji Lal Mohd	Mithrao Canal	Shahbudin Sher	Sanghar	Sanghar	N.25°41'04.4 E.069°09'55.3	175+000(NIP)	Small Business	10,000	11,000	14	714	B	Shop Shop Shop	Straw Pacca Semi Pacca	1,000	3	33,000
19	Khemchand Bheel	Nango Mal	Mithrao Canal	Duthro Mori	Sanghar	Sanghar	N.25°41'04.1 E.069°09'55.9	175+000(NIP)	Small Business	7,500	8,250	3	2,500	A	Shop Cabin Shed	Kacha Wooden Straw	11,000	3	33,000
20	Moti Naal Sochi	Bagchi	Mithrao Canal	Sanghar	Sanghar	Sanghar	N.26°04'05.8	18+000(IP)	Small Business	6,000	6,600	10	600	B	Wooden Stall	Wooden	11,000	3	33,000
21	Nangar	Fazul	Mithrao Canal	Sanghar	Sanghar	Sanghar	N.26°00'09.9	40+000(NIP)	Small Business	6,000	6,600	7	857	B	Cabin	Wooden	11,000	3	33,000
22	Allah Dino	Kongho Jamali	Mithrao Canal	Sanghar	Sanghar	Sanghar	N.26°00'30.5	40+000(IP)	Small Business	5,000	5,500	3	1,667	B	Cabin	Wooden	11,000	3	33,000
23	Bhale Dino	Mohammad Ismail	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2	64+000(IP)	Small Business	8,000	8,800	7	1,143	B	Otaq	Pacca	11,000	3	33,000
24	Habib-ur- Rehman Sher	Habibullah	Mithrao Canal	Shahbudin Sher	Sanghar	Sanghar	N.25°41'04.4	175+000(NIP)	Small Business	4,500	4,950	1	4,500	A	Cabin	Wooden	11,000	3	33,000
25	Sanwan Khoso	Mirho Khan	Mithrao Canal	Soomar Khan Khoso	Samaro	Umerkot	N.25°17'10.1	354+200 (IP)	Small Business	5,500	6,050	6	916	B	Cabin	Wooden	11,000	3	33,000
Total																		897,600	

C.6. List of Community Structures/Hand Pumps and Estimated Compensation Cost (Mithrao Canal)

Sr. No	Name of Structure	RD	Coordinates	Type of Structure	Size of Structure (Sft/Rft)	Unit Cost (Sft/Rft)/unit	Total Cost (Rs.)
1	Mosque	18+000(IP)	N.26°04'05.4	Room (Pacca)	1122	952	
			E.069°00'25.9	Room (Semi Pacca)	930	650	
				Shed Straw	84	152	
				Washroom Wall	72	1,107	
				Hand Pump	1	7,700	7,700
2	Graves Structure	40+000(IP)	N.26°00'32.1	Room (Pacca)	522	952	
			E.069°01'13.1	B/W pacca	366	1,107	
3	Prayer Platform	64+000(IP)	N.25°56'55.9	B/W pacca	240	1,107	265,680
			E.069°02'48.9				
4	Mosque	175+000(NIP)	N.25°41'04.3	Room (Pacca)	560	952	
			E.069°09'54.9	B/W pacca	144	1,107	
5	Prayer Platform	253+000(IP)	N.25°29'27.4	B/W pacca	66	1,107	73,062
			E.069°11'59.0	Hand Pump	1	7,700	7,700
6	Prayer Platform	420+000(IP)	N.25°07'06.1	B/W pacca	15	1,107	16,605
			E.069°24'59.0				
Total							370,747

C.7. Household Monthly Income and Expenditure

Sr.No.	Name of Affected Person	Father's Name	Address Name of Canal	Deh/ Village	Taluka	District	Coordinates	RD	Profession	Poverty Status			Status (Above/Below)	Monthly Expenditure
										Monthly Income	Family Size	Per Capita Income		
1	Shahmir Jamali	Dost Mohammad	Mithrao Canal	Malook Jamali	Sanghar	Sanghar	N.26°04'06.0 E.069°00'25.2	18+000(IP)	Small Business	8,500	10	850	B	14,000
2	Altaf Hussain	Shahmir Jamali	Mithrao Canal	Malook Jamali	Sanghar	Sanghar	N.26°04'05.5 E.069°00'25.0	18+000(IP)	Small Business	12,000	8	1500	B	11,000
3	Mohd Yameen Lashari	Abdul Raheem	Mithrao Canal	Sanghar City	Sanghar	Sanghar	N.26°04'06.0 E.069°00'26.1	18+000(IP)	Small Business	4,500	6	750	B	7,000
4	Moti Naal Sochi	Bagchi	Mithrao Canal	Sanghar	Sanghar	Sanghar	N.26°04'05.8 E.069°00'25.7	18+000(IP)	Small Business	6,000	10	600	B	15,000
5	Nazir Ahmed	Khada Bux Lashari	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.8 E.069°00'25.7	18+000(IP)	Small Business	9,000	2	4,500	A	6,000
6	Ghulam Sarwar Lashari	Abdul Raheem	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.8 E.069°00'25.7	18+000(IP)	Small Business	9,000	7	1,286	B	10,500
7	Ghulam Nabi Laghari	Qamar Din	Mithrao Canal	Molvi Khair Mohammad	Sanghar	Sanghar	N.26°04'05.9 E.069°00'25.4	18+000(IP)	Small Business	15,000	8	1,875	B	14,000
8	Gulzar Ahmed Laghari	Haji Ghulam Mohd	Mithrao Canal	Haji Ahmed Laghari	Sanghar	Sanghar	N.26°04'05.8 E.069°00'25.2	18+000(IP)	Small Business	20,000	7	2,857	A	12,000
9	Wahid Bux Bugti	Mir Hassan	Mithrao Canal	Naseer Khan Bugti	Sanghar	Sanghar	N.26°04'06.4 E.069°00'28.2	18+000(NIP)	Small Business	11,000	6	1,833	B	9,000
10	Ghulam Nabi Laghari	Qamar Din	Mithrao Canal	M.Alam Landharh	Sanghar	Sanghar	N.26°04'05.6 E.069°00'28.2	18+000(NIP)	Small Business	11,000	10	1,100	B	15,500
11	Khalil Ahmed Laghari	Haji Faizullah	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.6 E.069°00'28.2	18+000(NIP)	Small Business	10,000	7	1,428	B	10,500
12	Dhani Bux Laghari	Sain Bux	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.4 E.069°00'28.2	18+000(NIP)	Small Business	9,000	5	1,800	B	9,000
13	Abdulhaq Laghari	Khalil Ahmed	Mithrao Canal		Sanghar	Sanghar	N.26°04'05.4 E.069°00'28.2	18+000(NIP)	Small Business	10,000	6	1,667	B	9,500
14	Talib hussain	Adam Khan	Mithrao Canal		Sanghar	Sanghar		18+000(NIP)	Small Business	12,000	8	1,500	B	12,000
15	Abdul Karim Laghari	Khalil Ahmed	Mithrao Canal		Sanghar	Sanghar	N.26°04'06.4 E.069°00'28.3	18+000(NIP)	Small Business	10,000	3	3,333	A	9,000
16	Nangar	Fazul	Mithrao Canal		Sanghar	Sanghar	N.26°00'09.9	40+000(NIP)	Small		7	857	B	

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Sr.No.	Name of Affected Person	Father's Name	Address Name of Canal	Deh/ Village	Taluka	District	Coordinates	RD	Profession	Poverty Status			Status (Above/ Below)	Monthly Expenditure
										Monthly Income	Family Size	Per Capita Income		
							E.069°01'15.6		Business	6,000				11,000
17	Allah Dino	Kongho Jamali	Mithrao Canal		Sanghar	Sanghar	N.26°00'30.5 E.069°01'13.8 E.069°01'15.8	40+000(IP)	Small Business	5,000	3	1,667	B	7,000
18	Dilber Ali	Mohammad Sharif	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+640(IP)	General Labour	6000	3	2000	B	7,500
19	Mohammad Sharif	Mir Mohammad	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+690(IP)	General Labour	8000	5	1600	B	7,500
20	Asghar	Mohammad Sharif	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+715(IP)	General Labour	7,500	5	1,500	B	8,000
21	Shabir	Mohammad Hasil	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+760(IP)	General Labour	5500	3	1833	B	7,000
22	Pyaro Ali	Mir Mohammad	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	63+830(IP)	General Labour	14000	11	1273	B	14,000
23	Lakhano	Mir Mohammad	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'59.8 E.069°02'46.3	63+850(IP)	General Labour	8500	8	1062	B	9,500
24	Misri	Jan Mohammad	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'59.8 E.069°02'46.3	63+870(IP)	General Labour	7000	6	1167	B	8,000
25	Haq Nawaz	Peer Bux	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°57'02.7 E.069°02'44.2	63+890(IP)	General Labour	7,500	5	1,500	B	9,000
26	Bhale Dino	Mohammad Ismail	Mithrao Canal	Qaim Shar	Sanghar	Sanghar	N.25°56'57.2 E.069°02'47.5	64+000(IP)	Small Business	8,000	7	1,143	B	9,500
27	Mir Mohd Brohi	Haji Abdul Karim	Mithrao Canal	Haji Ghulam Karim	Sanghar	Sanghar	N.25°41'02.8 E.069°09'52.7	175+000(IP)	Small Business	11,000	8	1,375	B	11,000
28	Zahoor Din Sher	Haji Lal Mohd	Mithrao Canal	Shahbudin Sher	Sanghar	Sanghar	N.25°41'04.4 E.069°09'55.3	175+000(NIP)	Small Business	10,000	14	714	B	18,000
29	Habib-ur- Rehman Sher	Habibullah	Mithrao Canal	Shahbudin Sher	Sanghar	Sanghar	N.25°41'04.4 E.069°09'55.6	175+000(NIP)	Small Business	4,500	1	4,500	A	5,000
30	Khemchand Bheel	Nango Mal	Mithrao Canal	Duthro Mori	Sanghar	Sanghar	N.25°41'04.1 E.069°09'55.9	175+000(NIP)	Small Business	7,500	3	2,500	A	7,000
31	Abandoned *		Mithrao Canal		Sanghar	Sanghar	N.25°19'43.5 E.069°20'27.9	337+000(NIP)						
32	Nangar Mallah	Mohammad Hashim	Mithrao Canal		Samaro	Umerkot	N.25°17'13.4 E.069°21'52.0	354+000(IP)	Fishing	8000	9	889	B	10,500
33	Sanwan Khoso	Mirho Khan	Mithrao Canal	Soomar Khan Khoso	Samaro	Umerkot	N.25°17'10.1 E.069°21'55.7	354+200 (IP)	Small Business	5,500	6	916	B	7,500
	Total										213			

Appendix D. Record of Grass Root Consultations

Location	Names and No. of Participants	Key Issues Discussed
Place: Bakhoro Mori	PIC	The Aims & Objectives of Consultative Meeting.
Consultation Date: 06-11-2014	1. Nazeer Ahmed Lashari 2. Mohammad Rahim 3. Ashfaque Ali Makhdom 4. Mujeeb-ur-Rahman	Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the project work. Under WSIP project the rehabilitation will be carried out under Contract WSIP/B1/NC/03.
Total No. of Participants: 27	5. MohammadJuman 6. Nadir Shah	Objectives of the consultative meeting were to brief the participants about the civil works, those will be carried out under Contract WSIP/B1/NC/03:
	M&ECs	Following issues were also discussed:
	1. Mohammad Sajjad 2. Habib Ullah Memon	<ul style="list-style-type: none"> • During consultation meeting the participants were informed about the project works /those will be carried out under contract WSIP/B1/NC/03 • Project works will be carried through SIDA , Consultants by the Government of Sindh with the help of Government of Pakistan and World Bank • Due to the project works water supply efficiency of Mithrao Canal will be improved
	SIDA	Q: What is your suggestion /opinion on project works?
	1. Shahnwaz Umrani	Ans: Development works shall be carried out to improve the water supply in the Mithrao canal
	Community	<ul style="list-style-type: none"> • We hope water supply in minor / Distributary will also improve • We hope water supply will reach in the tail of the canal, minor and distributary which are dry at present • If water reach at tail ends of the system , more land will be under crop • It will improve the socio economic condition of the area and farmers • Govt: shall take immediate steps to control seepage from canal /which created water logging and salinity in the area
	1.Shahmir Ahmed 2.Ghulam Nabi 3.Mohammad Amin 4.Abdul Salman 5.Jan Mohammad 6.Habib Ullah 7.Hafiz Mir Dost 8.Dost Ali 9.Fida Hussain 10.Dost Mohammad 11.Altaf Hussain 12.Sadam Hussain 13.Ghulam Rasool 14.Shahzad 15.Mohammad Ramzan 16.Kundho 17.Mohammad 18.Ghulam Ali	Q: How to control water logging and salinity?
		<ul style="list-style-type: none"> • SIDA/Government shall line the Mithrao canal • Excavate the silt from canal • Canal bank shall be lined
		It is very expensive to line a big canal. Farmers shall apply water to crops as/ crop required.
		Q:Canal Head Regulators will be reconstructed to pass more water
		Ans: Head Regulators shall be constructed to increase flow of water
		Q: For the construction of new Head Regulators private land may be required shall you people cooperate to get some private land?
		Ans: We are small land owner and will not provide land .Govt: shall pay cost of land according to the market rates.
		Q; Construction of Head Regulators, strengthen the canal banks un-authorized structures will be damage

Sindh Water Sector Improvement Project

Location	Names and No. of Participants	Key Issues Discussed
		<p>Q: During Construction workss houses / shops and religious structures on the canal banks will be affected?</p> <p>Ans: We shall cooperate with contractor to carry out the canal works.</p> <p>Contractor shll bound to employ local community in project works</p> <p>Construction and rehabilitation works may be carried out by International Contractor, so that to maintain the quality of work</p> <p>Construction work shall be carried out during the closure period of canal</p> <p>Project shall provide education and health facilities in the command of Mithrao canal.</p>
Place: Nazar Mohammad Bugti	<p>PIC</p> <ol style="list-style-type: none"> 1. Nazeer Ahmed Lashari 2. Mohammad Rahim 3. Ashfaque Ali Makhdom 4. Mujeeb-ur-Rahman 5. Mohammad Juman 6. Nadir Shah 	<p>The Aims & objectives of Consultative Meeting.</p> <p>Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the project work. Under WSIP project the rehabilitation will be carried out under Contract WSIP/B1/NC/03</p>
Consultation Date: 06-11-2014		<p>Objectives of the consultative meeting were to brief the participants about the civil works, which will be carried out under Contract WSIP/B1/NC/03:</p>
Total No. of Participants: 21	<p>M&ECs</p> <ol style="list-style-type: none"> 1. Mohammad Sajjad 2. Habib Ullah Memon 	<p>Following issues were also discussed:</p> <ul style="list-style-type: none"> • During consultation meeting the participants were informed about the project works /those will be carried out under contract WSIP/B1/NC/03 • Project works will be carried through SIDA , Consultants by the Government of Sindh with the help of Government of Pakistan and World Bank • Due to the project works water supply efficiency of Mithrao Canal will be improved
	<p>SIDA</p> <ol style="list-style-type: none"> 1. Shahnwaz Umrani 	
	<p>Community</p> <ol style="list-style-type: none"> 1.Mohammad Farooq Bugti 2.Ustad AAjiz Bugti 3.Abdul Majeed 4.Amjad Ali 5.Molvi Ghulam Ali Jatoi 6.Ali Ghulam 7.Ali Mardan 8.Bashir Jamali 9.Anwar Ali 10.Shahid Bugti 11.Mohammad Aslam 12.Mohammad Khan 	<p>Q: What is your suggestion /opinion on project works?</p> <p>Ans; Canal created water logging desilting in the area</p> <ul style="list-style-type: none"> • Canal bed and banks shall be linned from RD-0 to RD-63 • Canal bank shall be raised about 6 to 8 feets, it is urgently required desilting. • Stone pitching shall be carried out the canal banks. • de-silting of the canal shall be done and silt shall be disposd on the outer side of toe • Avoid to damage the housed/shops. • Religeous structure shall be avoided to damage. • There are gaps between the houses to dispose the silt. • We shall cooperate with contractor to carry out the canal works. <p>Health and education facilities must be provided in the area so that local population shll be benefited</p> <p>Contractor shll bound to employ local community in project works</p> <p>Construction and rehabilitation works may be carried out by</p>

Sindh Water Sector Improvement Project

Location	Names and No. of Participants	Key Issues Discussed
		International Contractor, so that to maintain the quality of work Construction work shall be carried out during the closure period of canal
Place: Pir ji Landhi near RD 40+000 Consultation Date: 07-11-2014 Total No. of Participants: 21	<p>PIC</p> <ol style="list-style-type: none"> 1. Mohammad Rahim 2. Ashfaque Ali Makhdom 3. Mujeeb-ur-Rahman 4. Mohammad Juman 5. Nadir Shah <p>M&ECs</p> <ol style="list-style-type: none"> 1. Mohammad Sajjad 2. Habib Ullah Memon <p>SIDA</p> <ol style="list-style-type: none"> 1. Shahnwaz Umrani <p>Community</p> <ol style="list-style-type: none"> 1. Mohammad arshad 2. Nangar Jamali 3. Ayoub Shar 4. Khan Mohammad Shar 5. Mureed Ali 6. Allah dino 7. Mir Dost 8. Ghulam Hussain 9. Ajab Khan 10. Haji Wazeer Malik 11. Allah Rakhio 12. Mohammad amin 13. Rasool Bux 14. Uras 	<p>The Aims & objectives of Consultative Meeting.</p> <p>Mr. Mohammad Raheem, Sr: Sociologist (PIC), briefed about the project work. Under WSIP project the rehabilitation will be carried out under Contract WSIP/B1/NC/03.</p> <p>Objectives of the consultative meeting were to brief the participants about the civil works, those will be carried out under Contract WSIP/B1/NC/03:</p> <p>Following issues were also discussed:</p> <ul style="list-style-type: none"> • During consultation meeting the participants were informed about the project works /those will be carried out under contract WSIP/B1/NC/03 • Project works will be carried through SIDA, Consultants by the Government of Sindh with the help of Government of Pakistan and World Bank. • Due to the project works water supply efficiency of Mithrao Canal will be improved <p>Q: Do you think that the agriculture community /landlords will be benefited?</p> <p>Ans: If the works are carried out with sincerity and honestly, the landlords will definitely be benefited.</p> <p>Mithrao canal created water logging and salinity in the area, one third of the area in the head reaches of the canal is abandoned.</p> <ul style="list-style-type: none"> • Crop yield are very low • Road , houses in the area are severely affected • Water logging create disease in the area , Malaria, typhoid , hepatitis B & C ets <p>There are drainage walls and drains in between Mithrao and East Jamrao.</p> <p>Q; Does the drainage system made any positive impact on your land?</p> <p>Ans: Drainage system was good and our lands have been reclaimed but after five years the well stoped working and drains are full with weed and no flow of the water, land again became water logged.</p> <p>Government shall clean the drains to allow the flow of drainage.</p> <p>Mithrao canl shll be lined and it is the solution of waterlogging and salinity</p> <p>Linning of the canal is very expensive.</p> <p>Canal banks shll be linned/ stone piching and juck works shall be carried out</p> <p>China company done a good job on Khipro Canal, similar type of works shall be carried out on Mithrao canal</p> <p>Waterlogging has decreased in the area due to Khipro canal works</p> <p>Emplyment in the project works is our right , local poor people shall be employed in the projectworks</p> <p>Out sider were employed during Nara Canal and Khipro Canal development works.</p>

Sindh Water Sector Improvement Project

Location	Names and No. of Participants	Key Issues Discussed
		Schools and Basic health facilities must be provided under the project.
Place: Mohammad Zaman Shar	PIC 1.Mohammad Rahim 2. Ashfaque Ali Makhdum 3. Mujeeb-ur-Rahman 4. Mohammad Juman 5. Nadir Shah	The Aims & objectives of Consultative Meeting. Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the project work. Under WSIP project the rehabilitation will be carried out under Contract WSIP/B1/NC/03.
Consultation Date: 08-11-2014		Objectives of the consultative meeting were to brief the participants about the civil works, those will be carried out under Contract WSIP/B1/NC/03:
Total No. of Participants: 15	Community 1.Abdul Majeed Shar 2.Shahab u din Shar 3.Hussain Bux 4.Abdul Rahim 5.Mohammad Hassan 6.Haji Brohi 7.Zahoor din Shar 8.Habit mari 9.Aziz Ullah Shar 10.Noor Ahmed	<p>Following issues were also discussed:</p> <ul style="list-style-type: none"> • During consultation meeting the participants were informed about the project works /those will be carried out under contract WSIP/B1/NC/03 • Project works will be carried through SIDA , Consultants by the Government of Sindh with the help of Government of Pakistan and World Bank • Due to the project works water supply efficiency of Mithrao Canal will be improved <p>Following issues were also discussed:</p> <ul style="list-style-type: none"> • Construction works shall be carried out in a way to avoid demolishing houses and business structures. • It is very difficult to shift from here we have no other place to live. <p>Govt/ irrigation department will prove the place to shift If Govt:/irrigation Department will provide the space we will move from here</p> <ul style="list-style-type: none"> • Berms of the canal shall be strengthening by making juck work. • We shall provide a way for machinery during construction work. • Excavated material shall be place in right of way. • If some structure will be affected during construction we shall coordinate to with Irrigation Department. • Local contractor will not do the proper work. • It will be better to give contract to foreign construction company. • Local people shall be employed in construction work. <p>During construction works of Nara Canal and Khipro canal outsiders were employed as drivers, guard and cook.</p> <ul style="list-style-type: none"> • Outsiders are creating problem for local people. • SIDA & Consultant assure the employment of local people. • Local people are the owners of the project they shall be benefited. <p>Q: Have you observed the benefits due to civil works on Khipro canal Ans: Yes water logging is decreased and we are cultivating lands which were abandoned since last twenty years</p>

Sindh Water Sector Improvement Project

Location	Names and No. of Participants	Key Issues Discussed
		<ul style="list-style-type: none"> • Crop yield are also increased. • We hope that project works on Mithrao canal will be beneficial for the local people and crop/land development. • We hope due to the development works waterlogging and salinity will decrease • We will reclaim our land ,more water will be available • Tail ends will get their due share of water • Crop yields will increase.
<p>Place: Haji Malook Rajar</p> <p>Consultation Date: 09-11-2014</p> <p>Total No. of Participants: 17</p>	<p>PIC</p> <ol style="list-style-type: none"> 1.Mohammad Rahim 2. Ashfaque Ali Makhdom 3. Mujeeb-ur-Rahman 4. Mohammad Juman 5. Nadir Shah <p>Community</p> <ol style="list-style-type: none"> 1.Chutro kolhi 2.kewal 3.Tulsi 4. Jagsi kolhi 5.Mangho 6.Wazeer 7.Arbab 8.Dittal 9.Nawaz 10.Walan 11.karimo 12.jeewand 	<p>The Aims & objectives of Consultative Meeting.</p> <p>Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the project work. Under WSIP project the rehabilitation will be carried out under Contract WSIP/B1/NC/03.</p> <p>Objectives of the consultative meeting were briefed to the participants and also about the civil works, those will be carried out under Contract WSIP/B1/NC/03:</p> <p>Following issues were also discussed:</p> <ul style="list-style-type: none"> • During consultation meeting the participants were informed about the project works /those will be carried out under contract WSIP/B1/NC/03 • Project works will be carried through SIDA , Consultants by the Government of Sindh with the help of Government of Pakistan and World Bank • Due to the project works water supply efficiency of Mithrao Canal will be improved <p>Reply of the participants</p> <ul style="list-style-type: none"> • Project works are necessary to improve canal efficiency. • Desilting must be carried out. • Canal shall be lined; if not possible stone pitching shall be carried out. • Very poor people are residing near the canal banks their houses shall be avoided to demolish. • We will cooperate with contractor and find the way for machinery. • Local people shall give employed in project works. • Contractor shall keep the staff at work place and camp. • Ensure the free mobility of women was working in field for crop harvesting/threshing, fodder cutting etc. • During Nara canal development works outsiders were employed. • Employment has not been given to local skill people. • Ensure the employment of local skill and unskilled people.

Response of Religious Structure: The outcome of the meetings with the affectees regarding religious structures is that, first priority should be given to avoid these structures because shifting of the structures is not acceptable to the

Sindh Water Sector Improvement Project

Location	Names and No. of Participants	Key Issues Discussed
affectees.		

Appendix E. Details of Asset Valuation

E.1. Detail of market Rates for Kacha Hut

KACHA HUT (10' x 12')					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Kacha Walls	484	Sft	15.00	7,260.00
2	Supply of Mud (Trolly)	1	No	1,200.00	1,200.00
3	Wheat Straw (Bou)	2.00		400.00	800.00
4	Stem	120.00	Rft	25.00	3,000.00
5	Bamboo	156.00	Rft	12.00	1,872.00
6	Kiri	156.00	Sft	7.00	1,092.00
7	Bushes	143.00	Sft	4.00	572.00
8	Plastic Sheet	13.3	Sq.Yard	22.00	293.33
9	Rope	30.0	Kg	100.00	3,000.00
			Total Material Rate		19,089.33
Labour / Equipment					
S.no	Description	Qty	Unit	Hiring Charges	Amount (rs)
1	Skilled Labour	1	2.00 day	600.00	1,200.00
2	Unskilled	1	2.00 day	400.00	800.00
3	Carriage		L.S		1,200.00
			Total Labour/ Material Charges		3,200.00
	Total Cost of One Kacha House				22,289.33
			Total Covered Area Sft		120.00
			Rate Per Sft		185.74
			Say		186.00

E.2. Detail of market Rates for Straw Hut

STRAW HUT (10' x 8')					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Stem	80.00	Rft	25.00	2,000.00
2	Bamboo	14.00	Rft	12.00	168.00
3	Kiri	264.00	Sft	7.00	1,848.00
4	Bushes	140.00	Sft	4.00	560.00
5	Rope	30.00	Kg	100.00	3,000.00
				Total Material Rate	7,576.00
Labour / Equipment					
S.no	Description	Qty	Unit	Hiring Charges	Amount (rs)
1	Skilled Labour	1	2.00 day	600	1,200.00
2	Unskilled	1	2.00 day	400	800.00
3	Carriage		L.S		1,500.00
				Total Labour/ Material Charges	3,500.00
Total Cost of One Kacha House					11,076.00
Total Covered Area Sft					80.00
Rate Per Sft					138.45
Say					138.00

E.3. Detail of market Rates for Pacca House

PACCA HOME					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Bricks	11,305	No	5.50	62,175.96
2	Ceiling Bricks	607	No	11.00	6,679.20
3	Cement bags	98.77	Bags	550.00	54,320.98
4	Fine Sand	468.71	Cft	28.00	13,123.75
5	Course Sand	380.75	Cft	36.00	13,707.04
6	Plastic Sheet	36.375	Sq.Yard	22.00	800.25
7	Distemper	1,670.50	SFT	3.50	5,846.75
8	Iron Grider	35.75	Rft	205.00	7,328.75
9	Iron Tee	299.00	Rft	66.00	19,734.00
10	Steel Door (3.5' x 6')	21.00	SFT	300.00	6,300.00
11	Steel Window (4' x 4')	16.00	SFT	390.00	6,240.00
12	Steel ventilator (1' x 2')	4.00	SFT	300.00	1,200.00
13	Water Spout	2	No	300.00	600.00
Total Material Rate					198,056.69
Labour / Equipment					
S.no	Description	Qty	Unit	Hire Charges	Amount (rs)
1	Mason	1	12.00 day	1,000.00	12,000.00
2	Skilled Labour	1	12.00 day	600.00	7,200.00
2	Un-Skilled Labour	2	15.00 day	400.00	12,000.00
3	Cooli	1	15.00 day	380.00	5,700.00
4	Wheel barrow	1	15.00 day	80.00	1,200.00
5	Scaffolding		L.S		3,000.00
6	Carriage		L.S		17,000.00
Total Labour/ Material Charges					58,100.00
Total Cost of One Pacca Home					256,156.69
Total Covered Area Sft					295.75
Rate Per Sft					866.13
Say					866.00

E.4. Detail of market Rates for Semi Pacca House

SEMI PACCA HOME					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Bricks	11,305	No	5.50	62,175.96
3	Cement bags	59.46	Bags	550.00	32,705.29
4	Fine Sand	272.20	Cft	28.00	7,621.58
5	Coarse Sand	175.95	Cft	36.00	6,334.14
6	Supply of Mud (Trolley)	2	No	1,200.00	2,400.00
7	Wheat Straw (Bou)	3.00		400.00	1,200.00
8	Iron Grider	35.75	Rft	205.00	7,328.75
9	Bamboo	280.00	Rft	12.00	3,360.00
9	Kiri	288.00	Sft	7.00	2,016.00
10	Bushes	312.00	Sft	4.00	1,248.00
11	Plastic Sheet	34.7	Sq.Yard	22.00	762.67
12	Steel Door (3.5' x 6')	21.00	SFT	300.00	6,300.00
13	Steel Window (4' x 4')	16.00	SFT	390.00	6,240.00
14	Steel ventilator (1' x 2')	2.00	SFT	300.00	600.00
Total Material Rate					140,292.39
Labour / Equipment					
S.no	Description	Qty	Unit	Hire Charges	Amount (rs)
1	Masson	1	10.00 day	1,000.00	10,000.00
2	Skilled Labour	1	14.00 day	600.00	8,400.00
3	Unskilled	1	16.00 day	400.00	6,400.00
4	Cooli	1	3.00 day	380.00	1,140.00
5	Wheel barrow	1	14.00 day	80.00	1,120.00
6	Scaffolding		L.S		3,000.00
7	Carriage		L.S		14,000.00
Total Labour/ Material Charges					44,060.00
Total Cost of One Semi Pacca House					184,352.39
Total Covered Area Sft					312.00
Rate Per Sft					590.87
Say					591.00

E.5. Detail of market Rates for Kacha House

KACHA HOME					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	kacha Walls	966	Sft	15.00	14,490.00
2	Supply of Mud (Trolley)	2	No	1,200.00	2,400.00
3	Wheat Straw (Bou)	5.00		400.00	2,000.00
4	Stem	26.00	Rft	25.00	650.00
5	Bamboo	280.00	Rft	12.00	3,360.00
6	Kiri	288.00	Sft	7.00	2,016.00
7	Bushes	312.00	Sft	4.00	1,248.00
8	Plastic Sheet	34.7	Sq.Yard	22.00	762.67
9	Wooden Door (3.5' x 6')	21.00	SFT	300.00	6,300.00
10	Wooden Window (4' x 4')	16.00	SFT	390.00	6,240.00
11	Wooden ventilator (1' x 2')	2.00	SFT	300.00	600.00
				Total Material Rate	40,066.67
Labour / Equipment					
S.no	Description	Qty	Unit	Hiring Charges	Amount (rs)
1	Masson	1	2.00 day	1,000.00	2,000.00
2	Skilled Labour	1	3.00 day	600.00	1,800.00
3	Unskilled	1	3.00 day	400.00	1,200.00
4	Cooli	1	1.00 day	380.00	380.00
5	Wheel barrow	1	3.00 day	80.00	240.00
6	Hiring Charges of equipments		L.S		2,000.00
7	Carriage		L.S		2,000.00
				Total Labour/ Material Charges	9,620.00
				Total Cost of One Kacha House	49,686.67
				Total Covered Area Sft	312.00
				Rate Per Sft	159.25
				Say	159.00

E.6. Detail of market Rates for Semi Pacca Boundary Wall

Semi Pacca Boundary Wall (unit = one Rft) (New Structure)					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Bricks	65.813	No	5.50	361.97
2	Cement bags	0.071	Bags	550.00	39.09
3	Fine Sand	0.355	Cft	28.00	9.95
4	Course Sand	0.711	Cft	36.00	25.59
5	Mud		L.S	20.00	20.00
				Total Material Rate	456.60
Labour / Equipment					
S.no	Description	Qty	Unit	Hire Charges	Amount (rs)
1	Mason	1	0.10per day	1,000.00	100.00
2	Skilled Labour	1	0.10per day	600.00	60.00
3	Cooli	1	0.10per day	380.00	38.00
4	Wheel barrow	1	0.10per day	80.00	8.00
				Total Labour/ Material Charges	206.00
Total Cost of Boundary Wall per RFT					662.60
					Say
					663.00

E.7. Detail of market Rates for Kacha Boundary Wall

Kacha Boundary Wall (unit = one Rft)

Material

S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Kacha Wall	6.13	Sft	15.00	91.88
2	Wheat Straw		L.S	25.00	25.00
3	Mud		L.S	20.00	20.00
Total Material Rate					136.88

Labour / Equipment

S.no	Description	Qty	Unit	Hire Charges	Amount (rs)
1	Mason	1	0.10per day	1,000.00	100.00
2	Skilled Labour	1	0.10per day	600.00	60.00
3	Cooli	1	0.10per day	380.00	38.00
4	Wheel barrow	1	0.10per day	80.00	8.00
Total Labour/ Material Charges					206.00

Total Cost of Boundary Wall per RFT**342.88**

Say

345.00

E.8. Detail of market Rates for Pacca Boundary Wall

Pacca Boundary Wall (unit = one Rft)

Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Bricks	65.81	No	5.50	361.97
2	Cement bags	0.46	Bags	550.00	251.78
3	Fine Sand	2.142614	Cft	28.00	59.99
4	Course Sand	0.710769	Cft	36.00	25.59
			Total Material Rate		699.32
Labour / Equipment					
S.no	Description	Qty	Unit	Hire Charges	Amount (Rs)
1	Mason	1	0.10per day	1,000.00	100.00
2	Skilled Labour	2	0.10per day	600.00	120.00
3	Un skilled Cooli	1	0.20per day	380.00	76.00
4	Wheel barrow	1	0.10per day	80.00	8.00
			Total Labour/ Material Charges		304.00
Total Cost of Boundary Wall per RFT					1,003.32
					Say 1,007.00

Sindh Water Sector Improvement Project

Permanent Land Required for the Re-Alignment RD 18+000

Mithrao Canal RD 18+000

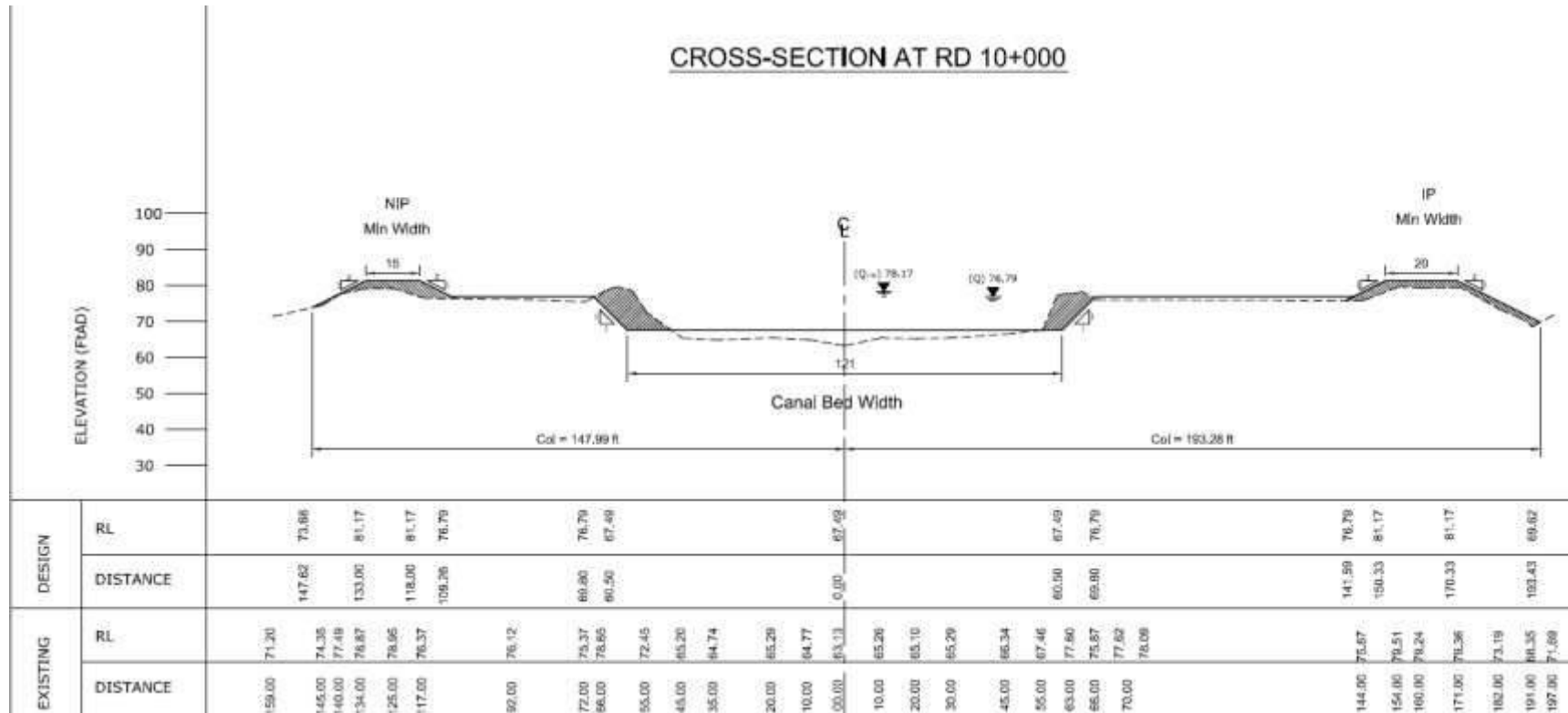
Parmanent Land Required for the Re-Allingment of Road IP & NIP side.

Deh Gharo & Bakhoro

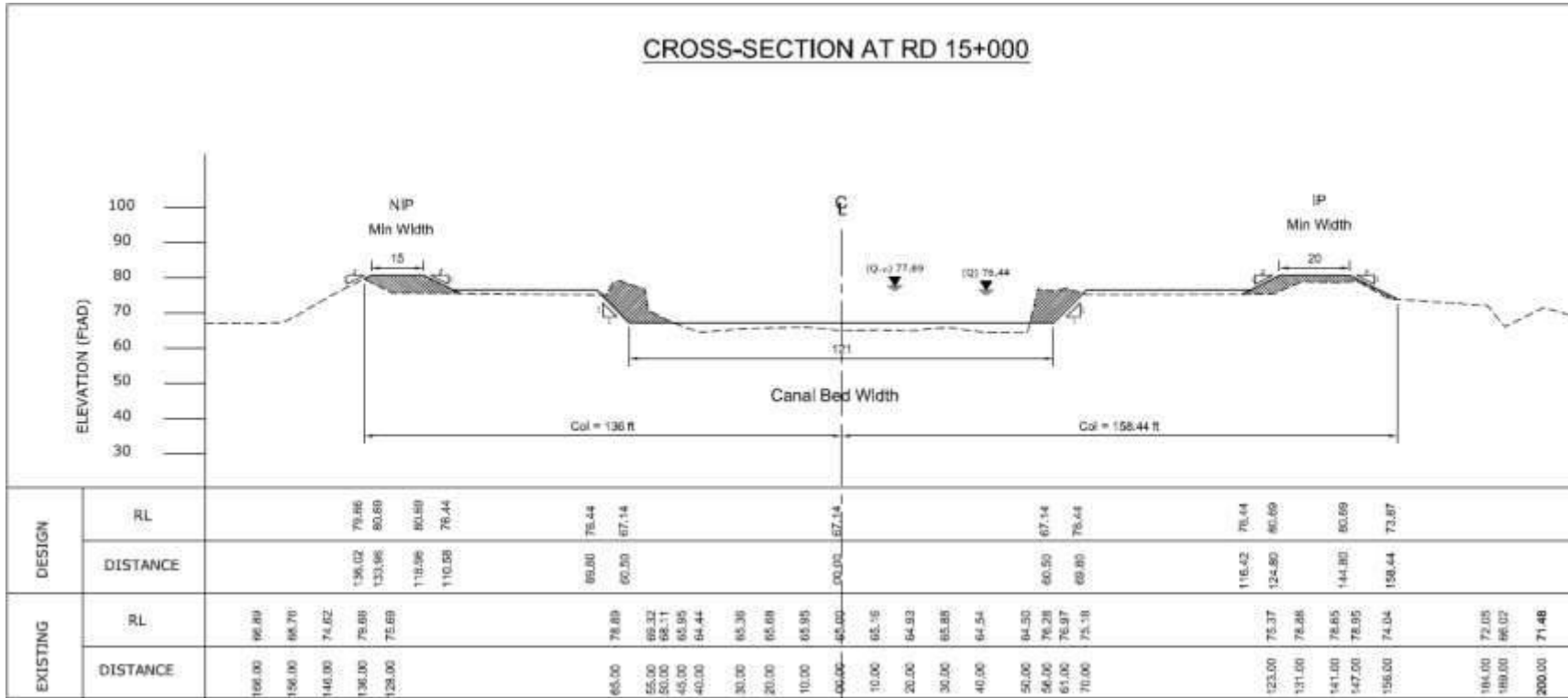
S.NO	Location	Survey Number	Area	Area	Area
			sft	Ghunta	Acrs
1	NIP	528 Deh Gharo	42500	0-39	0.976
2	NIP	529 Deh Gharo	24000	0-22	0.551
3	IP	692 Deh Bakhoro	66000	1-21	1.515
Total Land			132500	3-02	3.042

Note: The width of road as per cross section and the average width of road calculate is 80 feet. The total lenth of road allingment is 1650 feet (NIP Side is 825 feet and IP Side is 825 feet).

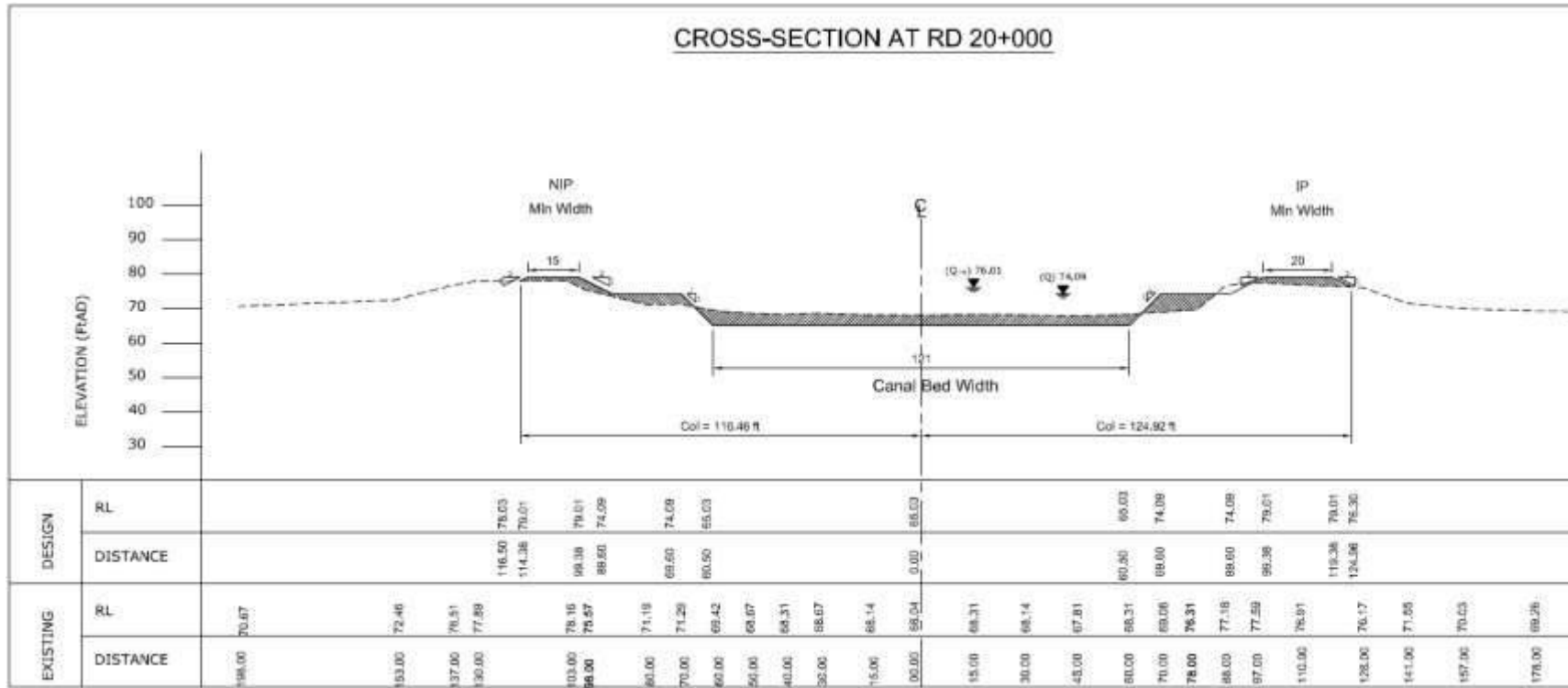
Appendix G. Corridor of Impact Cross-Sections



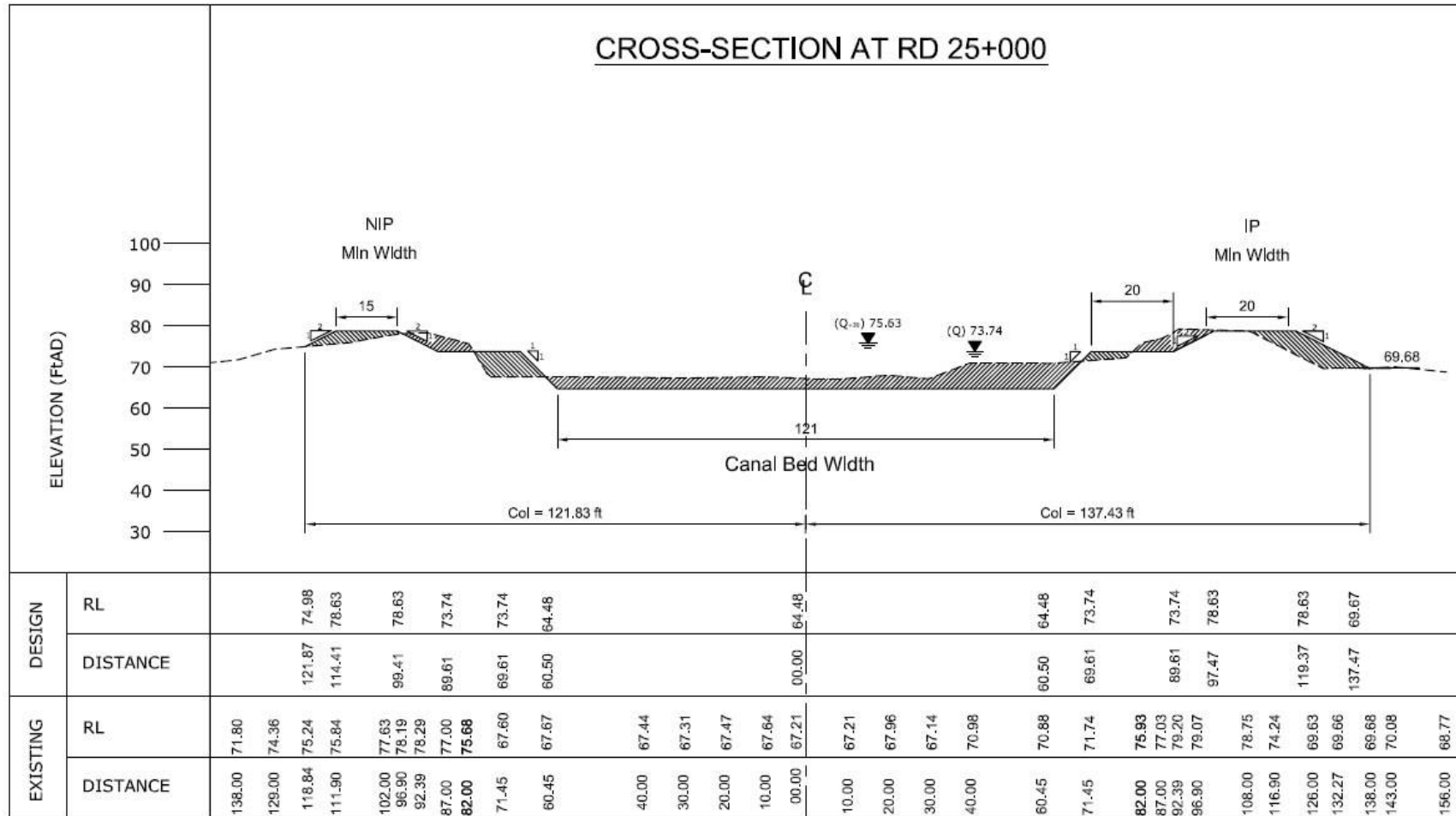
Sindh Water Sector Improvement Project



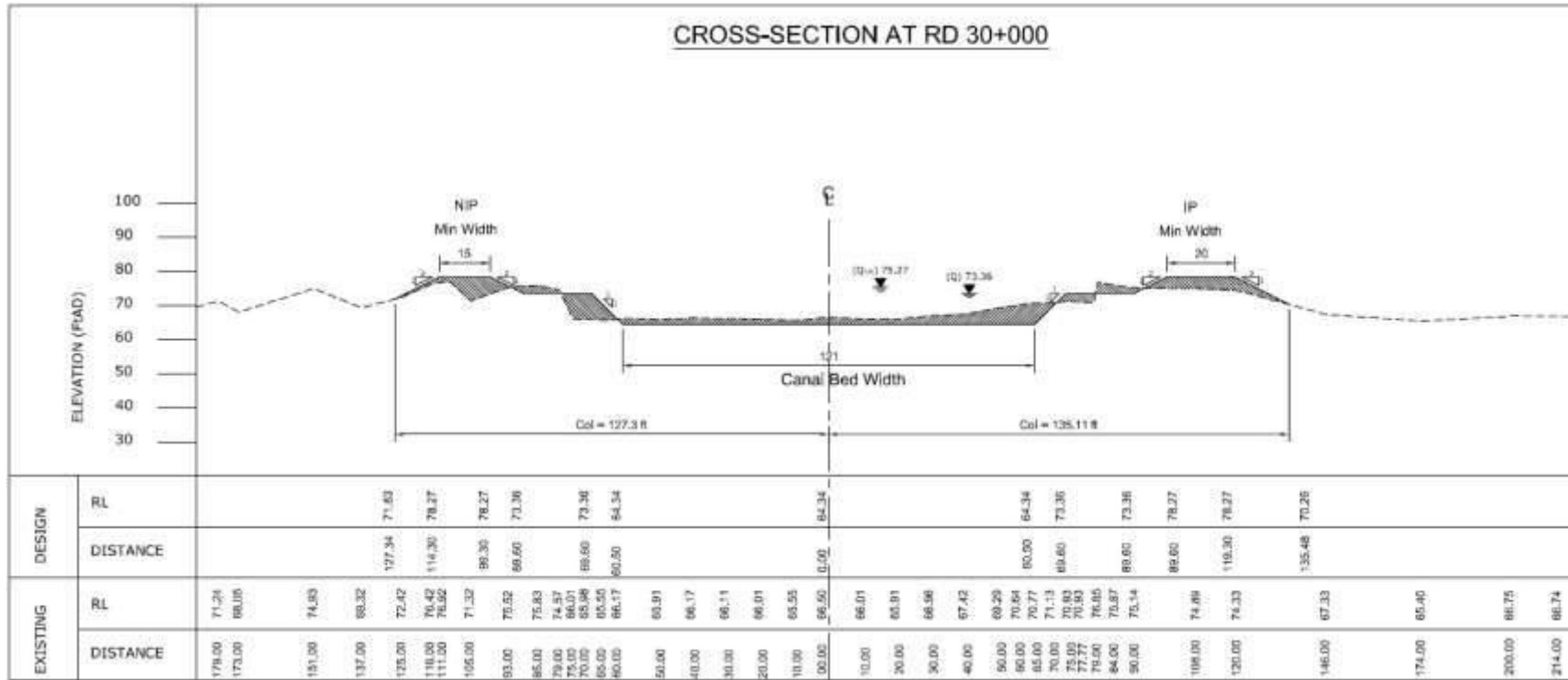
Sindh Water Sector Improvement Project



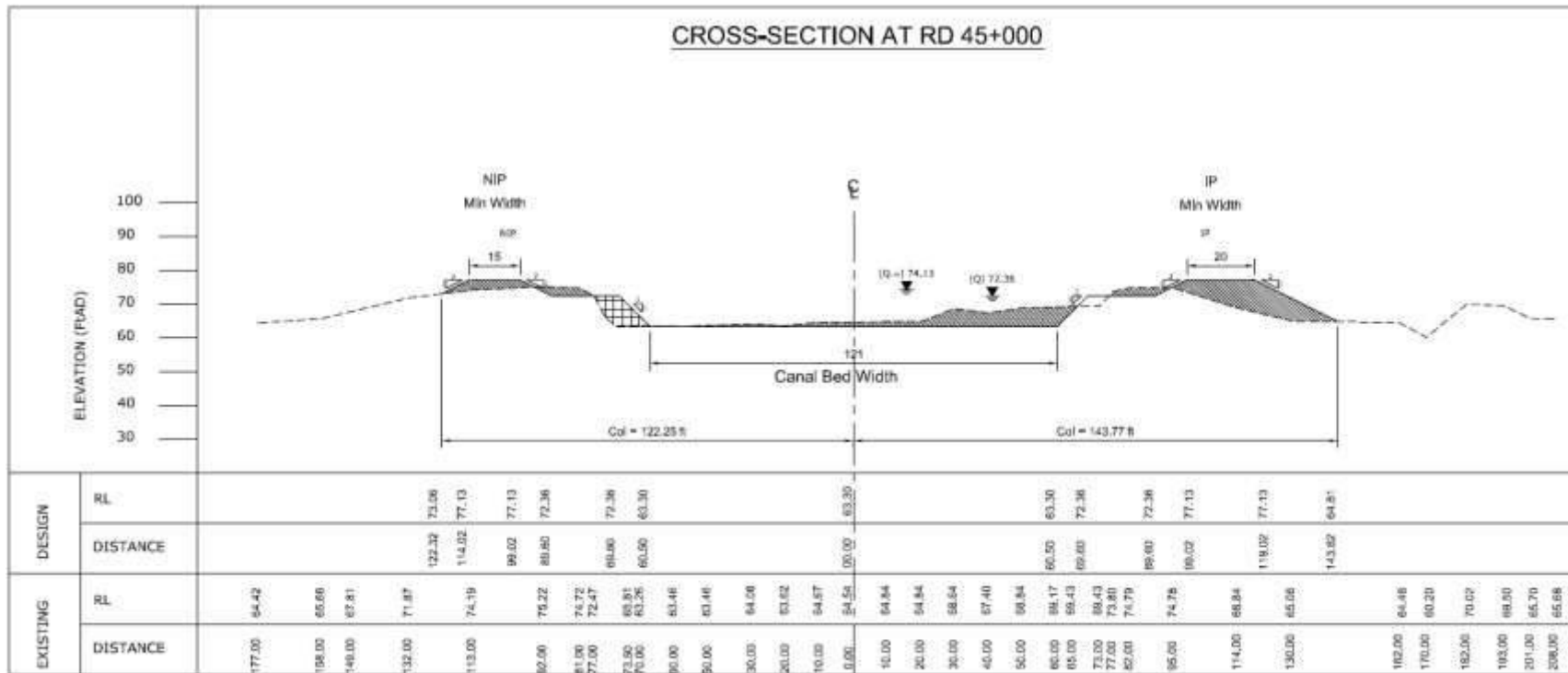
Sindh Water Sector Improvement Project



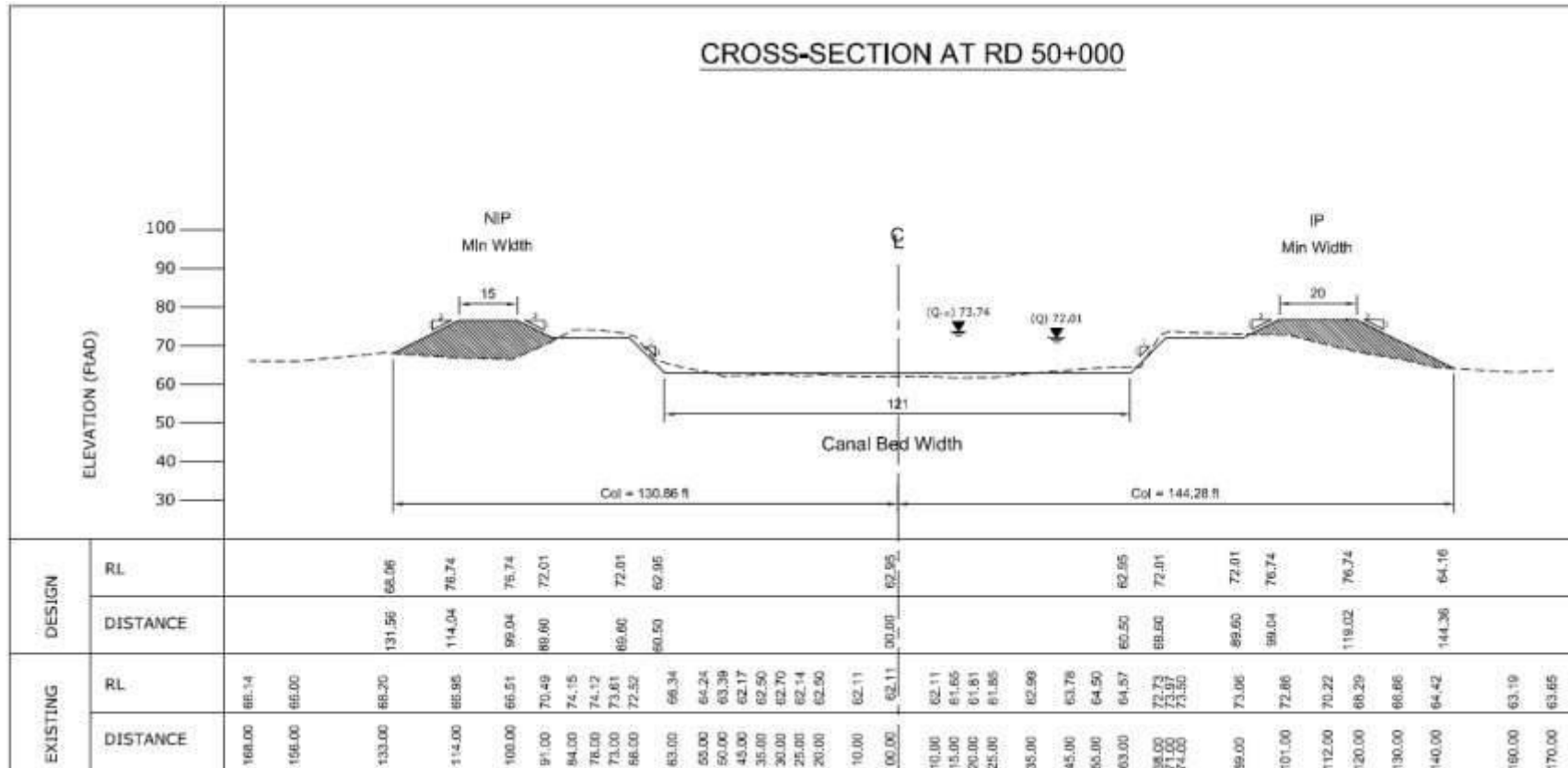
Sindh Water Sector Improvement Project

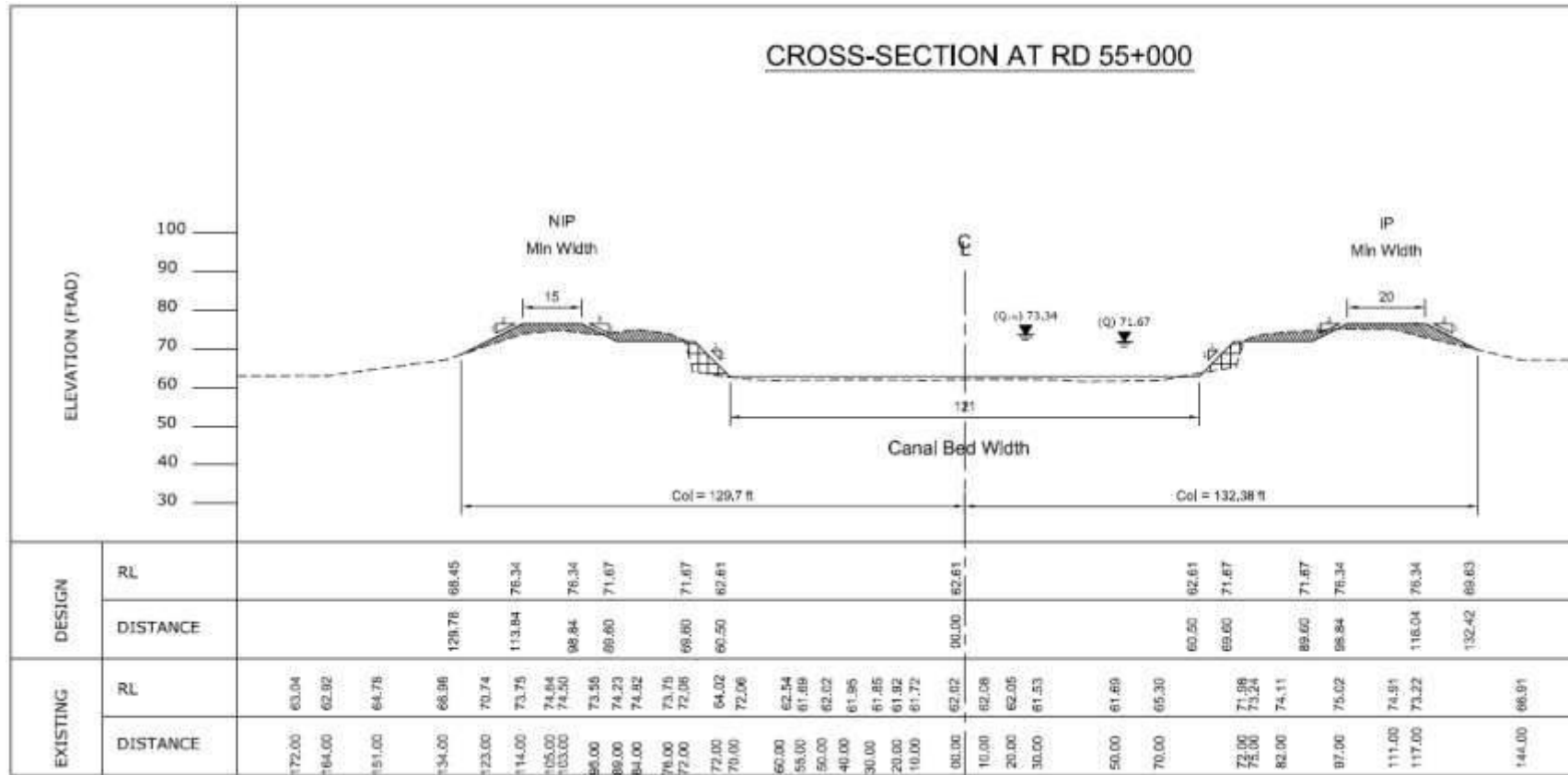


Sindh Water Sector Improvement Project

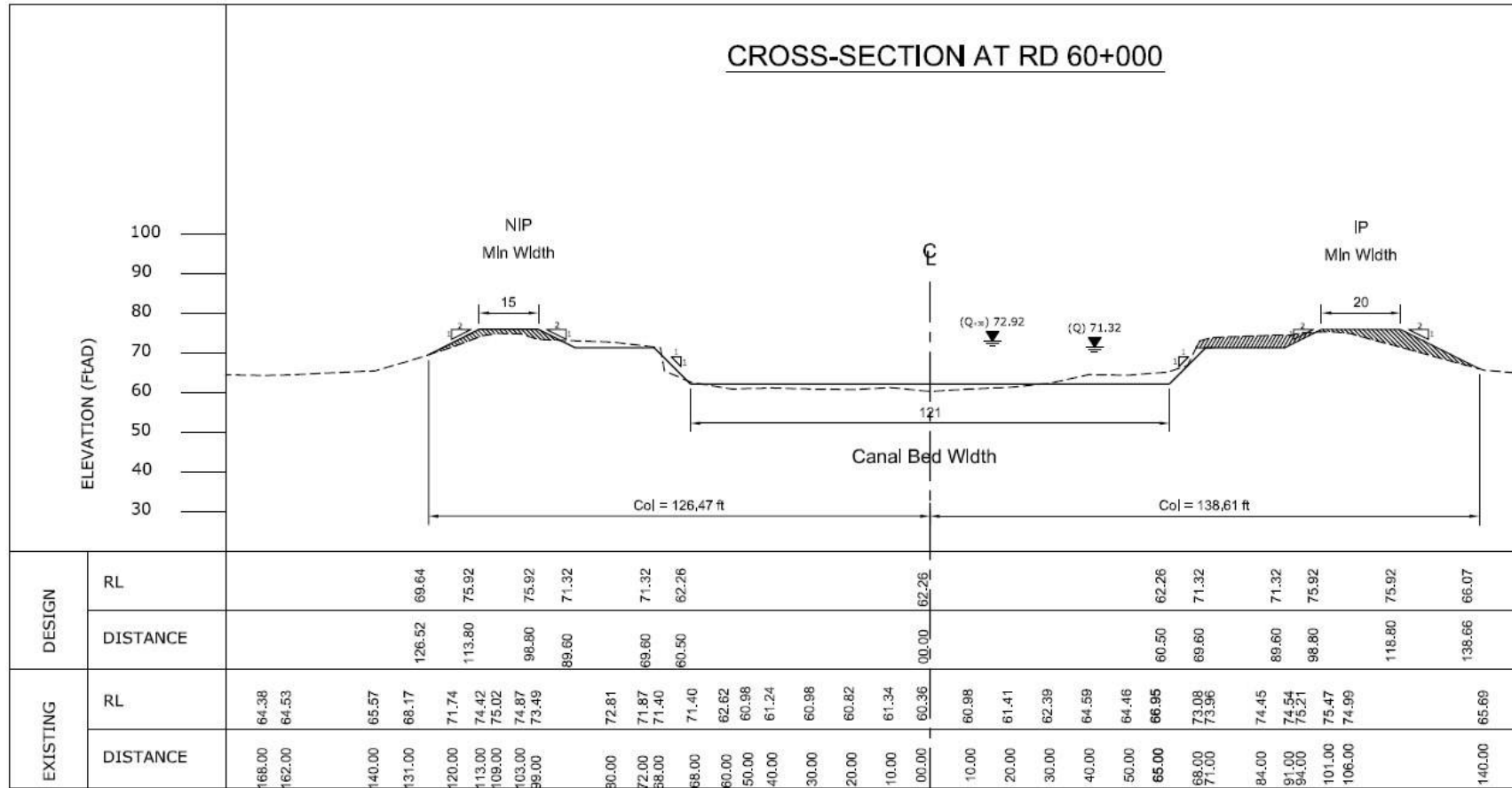


Sindh Water Sector Improvement Project

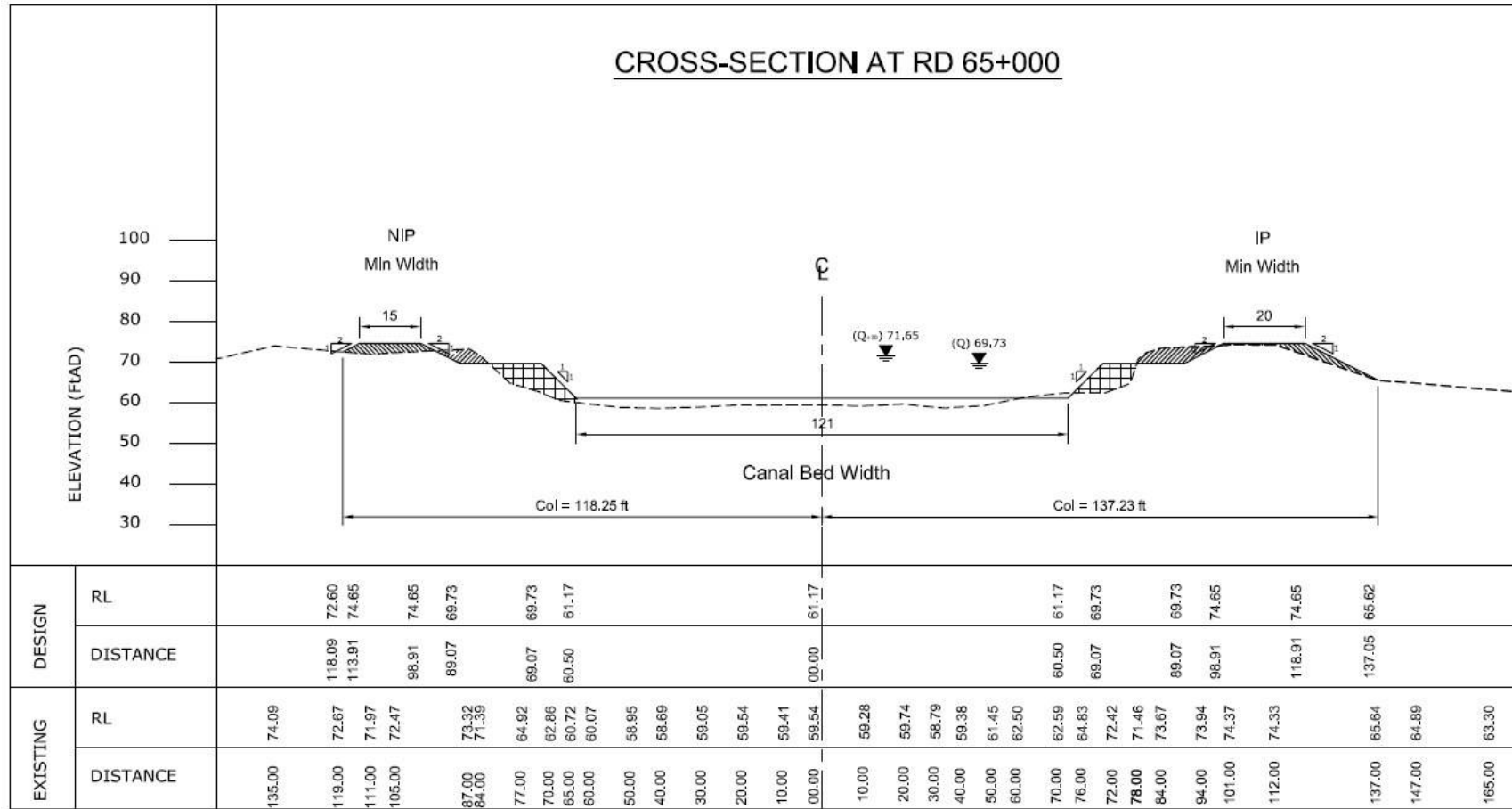




Sindh Water Sector Improvement Project



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Appendix H. Pictorial View

H.1. Pictorial View of Grass Root Consultations



H.2. Affected Assets

H.2.1. Straw House at Mithrao canal



H.2.2. Guest House (Otaq) at Mithrao canal



H.2.3. Mosque at Mithrao canal



H.2.4. Straw House at Mithrao canal



H.2.5. Fruit Shop at Mithrao canal



H.2.6. Wooden stall at Mithrao canal



H.2.7. Confectionery Shop at Mithrao canal



H.2.8. Confectionery Shop at Mithrao canal



H.2.9. Cold Drink Corner at Mithrao canal



H.3. Women Consultation in the Project Area

H.3.1. A woman headed Land Owner at Mithrao Canal



H.3.2. Gender Specialist of PIC appraisal of the women headed and their Hari (Tenant) at Mithrao Canal



H.3.3. Women Consultation with affected household at Mithrao Canal



H.3.4. Gender Specialist consultation with women who is preparing food at Mithrao Canal



H.3.5. Women Consultation at Mithrao Canal

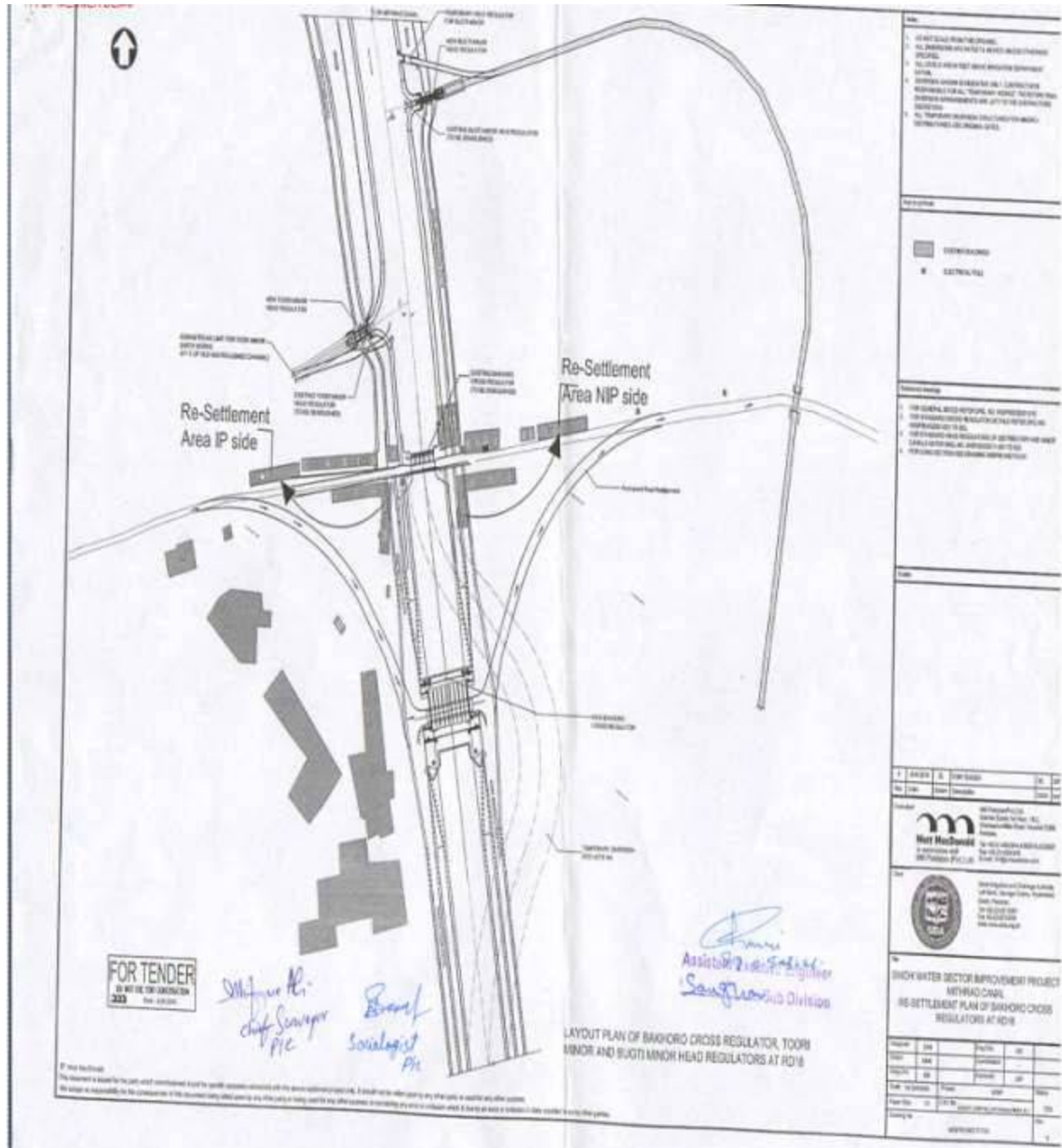


H.3.6. Women Consultation with affected household within Col at Mithrao Canal



Appendix I. Alternative Site Plans

Resettlement Site at RD 18



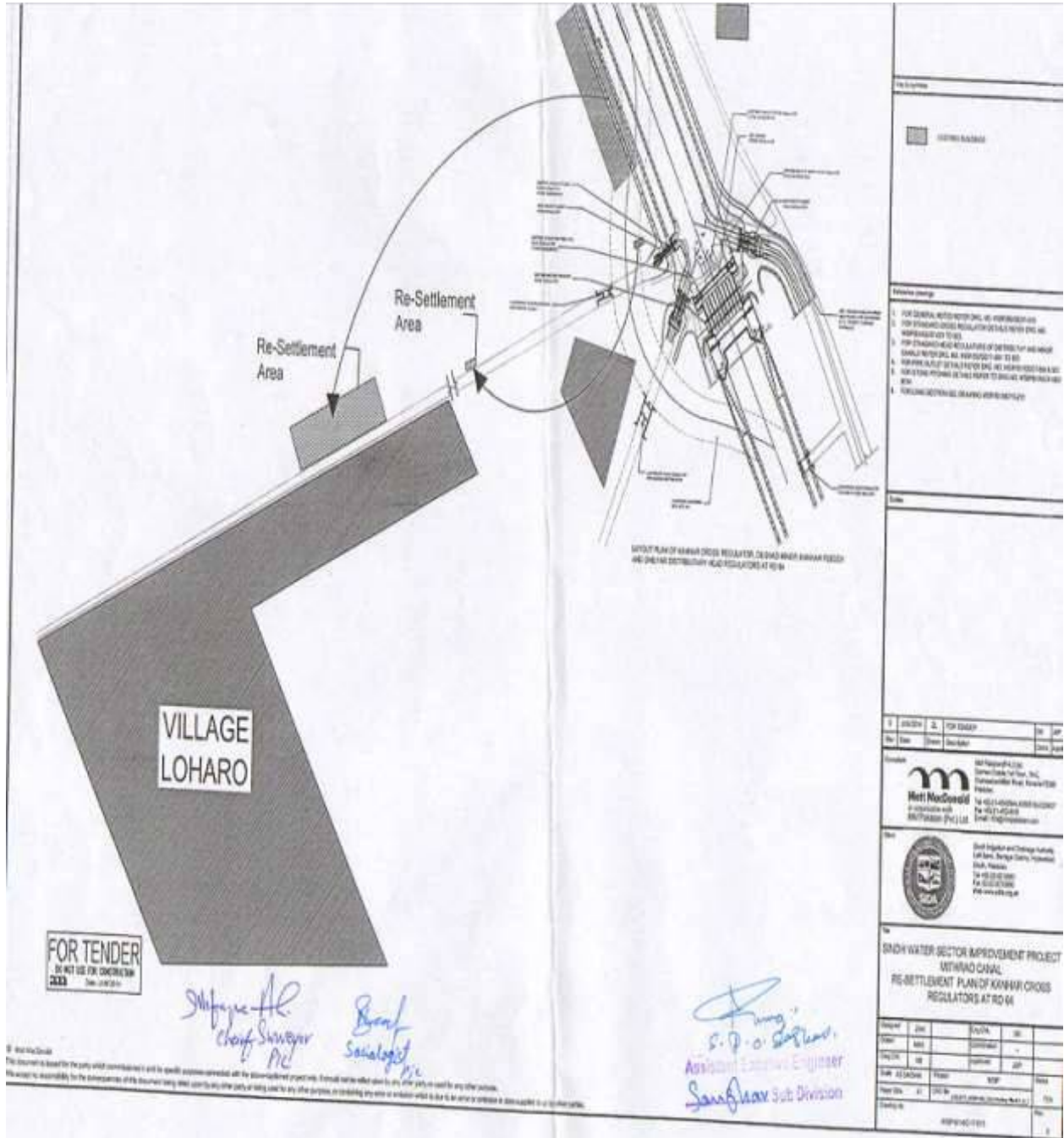
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Resettlement Site at RD 40



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Resettlement Site at RD 64



Appendix J. Borrow Area Inventory

Table J.1: Details of Borrow Areas for Contract WSIP/B1/NC/03

Borrow Area Number	RD	Bank	Area (acres)
1	4	IP	23.45
2	10	IP	3.6275
3	23+500	IP	28.9725
4	26+500	IP	22.3125
5	50	IP	2.0275
6	51	IP	12.965
7	55	IP	34.4325
8	7	NIP	7.5
9	12	NIP	32.0175
10	24	NIP	8.89
11	26	NIP	5.9175
12	28	NIP	5.89
13	36	NIP	6.3175
14	37	NIP	15.1325
15	39	NIP	5.45
16	50	NIP	4.9425
17	58	NIP	5.255
18	62	NIP	2.2175
	Total		227

The following images provide a baseline record of the borrow areas which have been identified for Contract WSIP/B1/NC/03. Note that these photographs have been taken between December and February when these areas are transitioning between seasonal wetland and barren land.



Borrow area-01 on IP of Mithrao canal RD- 04
N 26;6;31.44 E 69;0;25.61



Borrow area-02 on IP of Mithrao canal RD- 10
N 26;5;22.95 E 68;59;49.66

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Borrow area-03 on IP of Mithrao canal RD- 23
N 26;3;36.02 E 69;0;32.36



Borrow area-04 on IP of Mithrao canal RD26+500
N 26;3;28.66 E 69;0;33.32



Borrow area-05 on IP of Mithrao canal RD- 50
N 25;58;35.82 E 69;1;28.15



Borrow area-06 on IP of Mithrao canal RD- 51
N 25;58;35.29 E 69;1;28.68



Borrow area-07 on IP of Mithrao canal RD- 55
N 25;57;59.68 E 68;1;59.47



Borrow area-08 on NIP of Mithrao canal RD- 07
N 26;5;54.49 E 69;0;3.56

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Borrow area-09 on NIP of Mithrao canal RD- 12
N 26;4;45.22 E 69;0;4.56



Borrow area-10 on NIP of Mithrao canal RD- 10
N 26;3;15.64 E 69;0;40.51



Borrow area-11 on NIP of Mithrao canal RD- 26
N 26;2;46.90 E 69;0;46.89



Borrow area-12 on NIP of Mithrao canal RD- 28
N 26;2;31.60 E 69;0;50.34



Borrow area-14 on NIP of Mithrao canal RD-37
N 26;0;34.505 E 69;1;15.62



Borrow area-13 on NIP of Mithrao canal RD-36
N 26;1;7.902 E 69;1;8.15

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Borrow area-15 on NIP of Mithrao canal RD-39
N 26;3;0.005 E 69;0;40.42



Borrow area-16 on NIP of Mithrao canal RD-50
N 26;0;23.40 E 69;1;19.95



Borrow area-17 on NIP of Mithrao canal RD-58
N 25;59;2.32 E 69;1;22.18



Borrow area-18 on NIP of Mithrao canal RD-62
N 25;57;27.35 E 69;2;28.66