



PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY

DASU HYDROPOWER PROJECT

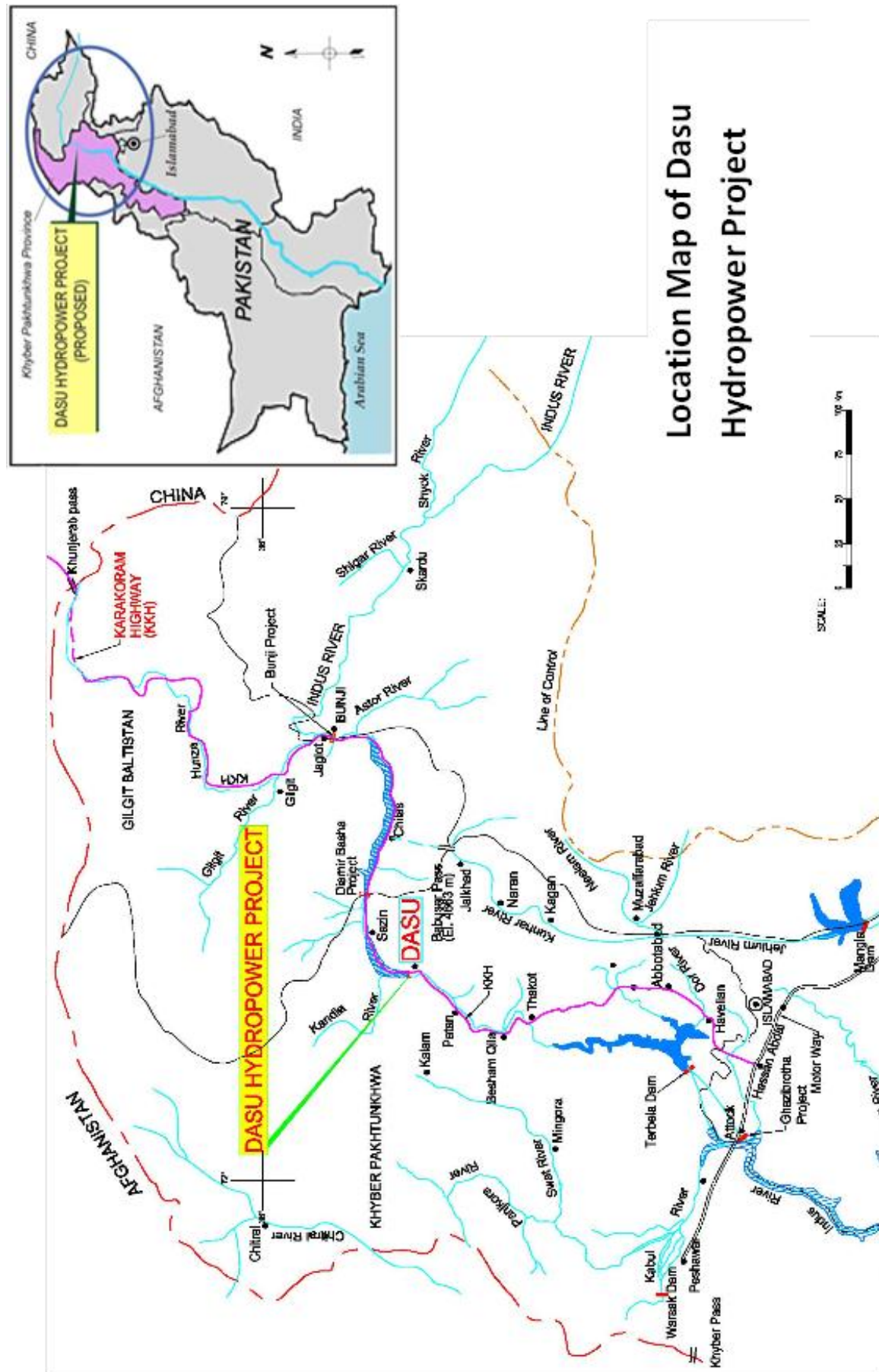


SOCIAL AND RESETTLEMENT MANAGEMENT PLAN

VOLUME 13: COSTS AND BUDGETARY PLAN

**General Manager (Hydro) Planning
WAPDA Sunny view Lahore Pakistan**

Final Version 08 March 2014



SOCIAL AND RESETTLEMENT MANAGEMENT PLAN

INDEX OF VOLUMES

Volume 1	Executive Summary
Volume 2	Socioeconomic Baseline and Impact Assessments
Volume 3	Public Consultation and Participation Plan
Volume 4	Resettlement Framework
Volume 5	Resettlement Action Plan
Volume 6	Gender Action Plan
Volume 7	Public Health Action Plan
Volume 8	Management Plan for Construction-related Impacts
Volume 9	Grievances Redress Plan
Volume 10	Communications Plan
Volume 11	Downstream Fishing Communities: Baseline and Impacts Assessment
Volume 12	Area Development and Community Support Program
Volume 13	Costs and Budgetary Plan
Volume 14	Safeguards Implementation and Monitoring Plan

ABBREVIATIONS

AAC	Additional Assistant Commissioner
AAM	Alternative Analysis Matrix
AH	Affected Household
CSC	Construction Supervision Consultants
C&W	Communication and Works Department of KPK
DC	Deputy Commissioner/Administrative Head of District
DD	Deputy Director
DHC	Dasu Hydropower Consultants
DMS	Detailed Measurement Survey
DPD	Deputy Project Director
EIA	Environmental Impact Assessment
EP	Entitled Person
EPA	Environmental Protection Agency
FGD	Focus Group Discussion
FHH	Female Headed Household
FRL	Full Reservoir Level
GAP	Gender Action Plan
GBHP	Ghazi Barotha Hydropower Project
GOP	Government of Islamic Republic of Pakistan
GRC	Grievance Redress Committee
GRP	Grievance Redress Plan
ICOLD	International Commission on Large Dams
IOL	Inventory of Losses
ILRP	Income and Livelihood Restoration Plan
KKH	Karakoram Highway
KPK	Khyber Pakhtunkhwa
LA	Land Acquisition
LAA	Land Acquisition Act
LAP	Land Acquisition Plan
LAR	Land Acquisition and Resettlement
LGO	Local Government Ordinance
LHV	Lady Health Visitors
LRW	Local Resettlement Workers
M&E	Monitoring and Evaluation
MDP	Mangla Dam Project
MDRP	Mangla Dam Raising Project
MIS	Management Information System
MOWP	Ministry of Water and Power
MPCI	Management Plan for Constructed-related Impacts
MPR	Monthly Progress Report
NARC	National Agriculture and Research Centre
NGO	Non- Governmental Organization
NRSP	National Rural Support Program
OP	Operational Policy
PAP	Project Affected Person
PATA/FATA	Provincially/Federally Administered Tribal Area
PCPP	Public Consultation and Participatory Plan
PCR	Physical Cultural Resources
PD	Project Director
PIC	Project Information Center
PKR	Pakistani Rupee
PMF	Probable Maximum Flood
IPOE	International Panel of Expert
PRO	Project Resettlement Office
PHAP	Public Health Action Plan
PMU	Project Management Unit headed by Project Director
PRA	Participatory Rapid Appraisal
RAP	Resettlement Action Plan

RCC	Roller Compact Concrete
RMU	Resettlement Monitoring Unit
R&R	Resettlement and Rehabilitation
SDF	Social Development Fund
SPT	Social Preparation Team
SRMP	Social and Resettlement Management Plan
TDP	Tarbela Dam Project
TGB	Target Group Beneficiaries
VH	Vulnerable Household
VC	Village Committee
WAPDA	Water and Power Development Authority
WCAP	Water Sector Capacity Building and Advisory Services Project
WB	World Bank

Units of Measurements

masl	Meter above Sea Level
MWh	Mega Watt Hour(Measuring Unit of Energy)
KWh	Kilo Watt Hour (Measuring Unit of Energy)
Ha	Hectares (Metric Unit of Area)
km	Kilometer (Unit of Length)
KW	Kilo Watt (Measuring Unit of Energy)

GLOSSARY OF TERMS

Adequate	Enough to satisfy a need or meet a requirement.
Appropriate	Suitable for identified needs or requirements.
Baseline	A set of pre project conditions used as a basis for project.
Community	A group of individuals broader than the household, who identify themselves as a common unit due to recognized tribal social, religious, economic and traditional ties or a shared locality.
Comprehensive	All relevant components have been considered and addressed.
Compensation	Payment in cash or in kind for an asset or resource acquired or affected by the project.
Cultural Heritage	Attributes of a group or society that are inherited past generations, maintained in the present.
Customary Law	A law passed down through oral tradition, which has now been adopted by the community as <i>riwaj</i> (presently two different types of traditional laws operate in the project area with reference to use rights and management of natural resources).
Cut-off-Date	The date of start of census for all non-land related entitlements and for land, it is the date for announcement of Section 4 notification under the LA Act of 1894. Any person entering the project area after the cut-off date is not eligible to receive the agreed upon entitlements.
Directly Affected Area	The lands and settlements physically damaged due to construction of infrastructure and inundation after reservoir impounding.
Disclosure	Openly available for public.
Economic Displacement	A loss of productive assets or usage rights or livelihood capacities because such assets, rights or capacities are located in the directly affected area.
Entitlement Cut-off Date	Date notified by the concerned Civil Administration establishing a deadline for entitlement to compensation in the reservoir and dam construction area (later used term "Impact Area"). Upto and including that date, lands, structures and crops in the impact area are eligible for compensation and or resettlement assistance. Structures and crops established in the impact area after this cut-off date are not eligible for compensation and resettlement assistance.
Elderly	Persons over the age of 70 years (as per birth certificate).
Entitlement	Means the sum total of compensation and other assistance according to the status of each individual in impact area or related therewith and dependent thereon as assessed by the designated committee or any other such body.
Expert	A person who has a high degree of skills in or knowledge of certain subject and experience and or training in that subject.
Grievance Mechanism	This is a process by which PAPs can raise their concerns to project authority.
Hamlet	Locally refer to cluster of households, often related by kinship. Hamlets are small village settlement.
Head of household	The head of household according to <i>shariahis</i> principally the husband. In case the husband is dead or disabled, the widow / respective wife can act as 'Head of Household'. Head of the household will deal with all land acquisition / resettlement affairs including getting cash compensation for land, houses and other lost properties and assets.
House	A place of residence for one or more households, including a number of residential and non-residential structures within premises along with any ancillary structures and nonagricultural land around.
Household	A group of persons living together who share the same cooking and eating facilities, and form a basic socio-economic and

	decision-making unit. One or more households often occupy a house.
Impact Area	The area which is directly affected by project activities.
Independent Reviewer	A person who reviews project documents but not employed by DHC.
Indigenous	Customary, cultural, economic, social or political institutions those are separate from the dominant society and culture.
Indirectly Affected Area	The lands, settlements and infrastructure, though not lying within the impact area to be affected by the project construction / operation activities, which could be affected in the form of: social disturbance; denial of public amenities (education, health, utilities); and disruption of access (roads, bridges) and communication linkages.
Involuntary Resettlement	The process of resettlement without informed consent of the displaced persons or if they give their consent without having the power to refuse resettlement.
<i>Jirga</i>	An assembly of elder men/notable to discuss and decide about economic / social / cultural affairs of a village or community including dispute resolution between individuals. Established traditional judicial practice in the project area.
Land Acquisition	Means the process whereby a person is compelled under eminent domain by a public agency to alienate all or part of the land he owns or possesses, to the ownership and possession of that agency, for public purpose in return for compensation.
Land Holding	The basic unit mostly occupied by one household, consisting of: house(s); side building(s); land; trees; and irrigation facilities.
Land Owner	Anyone among the potentially Project Affected Peoples area who has the legal title or physical possession of the parcels of residential / cultivated lands/land or is living as absentee landlord due to historic rights on these parcels.
Landless People(s)	People(s) of the project area that do not own any parcel of residential or cultivated land or other type of land, but have close attachments with the landowners or businessmen to work as daily or casual laborers for their day-to-day earnings.
Livelihood	Means of resources required for living.
Living standards	Access to well-being indicators to individual, group or nation such as health, education drinking water, sanitation, employment, nutrition, housing, transport, electricity etc.
<i>Malik</i>	Head of tribe/sub tribe responsible for dealing at village level with the matters of land; law and order; benefits of community and community conflict.
Management Plan	It is tool use for managing particular issues and establishes the way to solves them.
Market Value	The value of asset determined by market transaction of similar assets and finally arrived at with the stakeholders, after taking into account the depreciated value of tangible assets.
Mitigation	Relief of a negative impact.
<i>Patwari</i>	An official of the District Administration from District Revenue Office deputed at village level that is responsible for all land and revenue related matters.
Physical Displacement	A loss of residential and related non-residential structures including physical assets due to location in the project impact area.
Poor	Those who are under the nationally defined poverty line
Process	A chain of actions bringing about a result.
Project Area	Means the area specified by the Project Director to DC and notified in the official Gazette.
Project Affected Area	The associated area affected by project interventions.
Project-Affected Household	All members of a household, whether related or not, operating as a single economic unit, who are affected by the project.
Project Affected Persons	Are the peoples (households) adversely affected by any project

(PAPs)	related change or changes in use of land, water or other natural resources, or the person(s) who loses his/her/their asset or property movable or fixed, in full or in part including land, with or without displacement, after the commencement and during execution of a project.
Project Components	Project components include construction of right bank access roads RAR-01, RAR-02, RAR-03, construction of KKH-01 & KKH-02, project colony, disposal area, dam and quarry area, etc.
Project Resettlement Office (PRO)	WAPDA's organization responsible for implementation of the Resettlement Action Plan, including liaison with the related civil administration, affectees and other stake holders.
Relocation	Means physical movement to an alternate location of the assets and infrastructure permanently lost due to the project impact. It may include: houses; public service facilities; religious and other objects.
Replacement Cost	The amount of cash compensation determined on rate basis by District Collector after negotiation with affectees to replace the lost assets without taking into account any salvages value.
Reservoir	Any pond or lake used or created by project for the storage of water.
Resettlement Assistance	Support provided to the peoples who are physically displaced by a project, to enable smooth resettlement, including food, shelter, and social services. Assistance may also include cash allowances to compensate affected people for the inconvenience associated with resettlement at a new location.
<i>Shariah</i>	The Islamic Law as laid down in the Holy Quran and practiced by the Holy Prophet and his followers and covering all aspects of the human life.
Short-Term	Means day to day related.
Significant	Important with regard to impact.
Stakeholders	Include affected persons and communities, proponents, private businesses, NGOs, host communities, EPA's and other relevant local, provincial, federal departments and financing institutions.
Suitable	Appropriate for the desired purpose, condition or occasion.
<i>Tehsil</i>	Sub-district Administrative area/jurisdiction below a district (A district is divided into more than one Tehsil).
Tenant	A farmer who cultivates land of others on rent under the following two arrangements: 1) yearly cash payment (Kalang); and 2) share-cropping of agriculture produce with the owner on the basis of mutually agreed ratio.
Transparent	Availability of product/documents to be reviewed to the public on demand.
Tribe	A group of people defined in terms of common caste, sub-caste, descent, territory and culture .A tribe is often divided into sub-tribe bond on territory of leadership.
Union Council	Lowest tier in a sub-district of elected local bodies and responsible for planning / managing affairs at a group of village and hamlets level.
Vulnerable groups	Vulnerable groups include the very poor, marginalized, informal settlers, <i>Gujars</i> , <i>Soniwals</i> , elderly and female-headed households.

COSTS AND BUDGETARY PLAN

TABLE OF CONTENTS

EXECUTIVE SUMMARY	x
1 INTRODUCTION	1-1
1.1 PURPOSE OF THE DOCUMENT	1-1
1.2 BACKGROUND AND DESCRIPTION OF PROJECT COMPONENTS	1-1
1.2.1 Key Project Components	1-1
1.2.2 Component A: Construction of Dam and Appurtenant Structures	1-2
1.2.3 Component B: Power Generation Facilities	1-2
1.2.4 Component C: Preparatory and Permanent Works	1-2
1.2.5 Component D: Social and Environmental Management Plan	1-3
1.2.6 Component E: Construction Supervision, Monitoring and Evaluation of the Project Impacts and Social and Environmental Management Plans	1-3
1.2.7 Component F: Project Management Support, Capacity Building of WAPDA, Technical Assistance and Training	1-3
1.2.8 TRANSMISSION LINE	1-4
2 PHASED DEVELOPMENT AND PROJECT COSTS	2-5
2.1 PHASED APPROACH TO CONSTRUCTION	2-5
2.2 STAGE ONE	ERROR! BOOKMARK NOT DEFINED.
2.3 STAGE TWO	ERROR! BOOKMARK NOT DEFINED.
2.4 PROJECT COSTS	2-5
2.5 COSTS BY PHASES	ERROR! BOOKMARK NOT DEFINED.
2.5.1 Project Costs by Stages and Phases	2-5
2.5.2 Social and Resettlement Management Plan Cost	2-5
2.6 IMPLEMENTATION SCHEDULE	2-6
3 SAFEGUARDS PLANNING COST	3-1
3.1 SAFEGUARD PLANNING	3-1
3.2 SRMP COSTS	3-1
4 YEARWISE BUDGETARY PLAN FOR FINANCING	4-1
4.1 INTRODUCTION	4-1
4.2 PRE-CONSTRUCTION COSTS	4-1
4.2.1 Social and Resettlement Management	4-1
4.3 CONSTRUCTION COSTS	4-1
4.3.1 Social and Resettlement Management	4-1
4.4 POST-CONSTRUCTION COSTS	4-1
4.4.1 Social and Resettlement Management	4-1
4.5 SOCIAL AND ENVIRONMENTAL MANAGEMENT FUND	4-2
4.6 ROLE OF THE PROJECT DIRECTOR	4-2
4.7 ADAPTIVE MANAGEMENT APPROACH	4-2
5 COST TYPES AND BASIS	5-1
5.1 LAND	5-1
5.2 STRUCTURES	5-1

5.3	TREES	5-1
5.4	CROPS	5-1
5.5	RELOCATION COST.....	5-1
5.6	REHABILITATION ASSISTANCE	5-2
5.7	INFRASTRUCTURE REHABILITATION	5-2
5.8	LIVELIHOOD DEVELOPMENT SUPPORT	5-2
5.9	INSTITUTION AND MANAGEMENT	5-2
5.10	PLANNING AND DESIGNING	5-2
5.11	ADMINISTRATIVE OVERHEADS FOR LAND ACQUISITION BY DISTRICT COLLECTOR.....	5-2
5.12	MONITORING AND EVALUATION	5-3

LIST OF TABLES

Table 2.1:	Stage Wise Project Implementation Schedule	2-5
Table 2.2:	Cost Breakdown	Error! Bookmark not defined.
Table 2.3:	Project Cost in Stages and Phases (USD Million)	2-5
Table 3.1:	SRMP Costs	3-1

LIST OF FIGURES

Figure 1.1:	Project General Layout Plan	1-2
Figure 2:	Implementation Schedule of Safeguard Activities	2-7
Figure 3:	Phase Wise and Year Wise Costs of Social and Resettlement Management Plan (PKR Million)	Error! Bookmark not defined.

LIST OF APPENDICES

Appendix A:	Detailed Costs Table for Land Acquisition and Resettlement
Appendix B:	Eligibility and Entitlement Matrix

EXECUTIVE SUMMARY

PURPOSE OF THE REPORT

The proposed Dasu Hydropower Project (the Project) is a large and complex development project undertaken by the Pakistan Water and Power Development Authority (WAPDA). In addition to the construction of the dam and its associate facilities, the Project has many other social and environmental management components. Preliminary costs and budgeting are already underway as part of the project preparation and implementation arrangements. This Costs and Budgetary Plan (CBP) particularly deals with social and resettlement management costs within the context of overall project costs.

The primary purpose of this document is to lay out the resettlement-related costs involved during pre-construction, construction and post-construction periods so that WAPDA and the Project Management Unit can take decisions for mobilization and allocation of funds for timely implementation and management of all social and resettlement safeguard plans.

PROJECT COMPONENTS

In all, there are six major components of the Project (Table 1). The first three components (1, 2 and 3) relate to the physical construction of the Project. Component D, particularly D1 and D2, are about Social/Resettlement and Environmental Management. The rest relate to construction supervision, management, training and capacity building.

Table 1 – Major Project Components

Component	Description
A – Construction of Dam and Appurtenant Structures	RCC Dam with maximum height of 242 m above the foundation level and length of 570m at crest level
B – Power Generation Facilities and Appurtenant Structures	Underground powerhouses to be developed in two Stages and four Phases
C – Preparatory and Permanent Works	Relocation of KKH, construction of access roads to dam site, staff colonies and residence
D – Social and Environmental Management Plan	D1 – Social and Resettlement Management D2 – Environment Management Plan D3 – Early Flood Warning and Climate Change Monitoring
E- CSC and M&E Consultants for project and Social Environment Plans	E1- CSC Implementation Support E2-M&E Consultants for & Social/Environment Management Plans
F-Project Management Support and Capacity Building	WAPDA Capacity Building, Technical Assistance and Training

PHASED APPROACH IN PROJECT IMPLEMENTATION

WAPDA has proposed the development of the Dasu Hydropower Project in Two Stages (Four Phases) to benefit from early generation, starting from 1,080 MW installed capacity initially (expected to be operational in 5-6 years) to over 4,320 MW at final stage of development. The Phased approach is illustrated in Table 2.

Table 2 – Phased Approach to Project Development

Stage/ Phase	Major Civil Engineering Activities
Phase I	Preparation of access road, Relocation of KKH, Construction of dam and 1 st part of underground complex and power generation facilities
Phase II	2 nd part of underground complex and power generation facilities
Phase III	3 rd part of underground complex and power generation facilities
Phase IV	4 th part of underground complex and power generation facilities

PROJECT COSTS

Costs of all project components are included in the Dasu Hydropower costs budgeted under each phase. Thus the total cost of Social and Environmental Management is incorporated in the project financial cost under Stage 1 as most of safeguard activities will be implemented prior to and/or during Phases I&II construction.

Table 3 – Project Cost Estimates (Billion USD)

Financial cost in each phase	Stage 1		Stage 2	
	Phase I	Phase II	Phase III	Phase IV
	4.654	0.761	1.560	1.014

Presently, the budgets prepared are focused on Stage 1 (i.e., Phases I&II), the social and environmental costs of the first two phases are presented in Table 4. The Transmission Line is a separate project independent of the Dasu Project. So the costs for transmission are not shown here.

YEAR/PHASE WISE COSTS FOR SOCIAL AND RESETTLEMENT

Table 4– Phase wise Year wise Cost Estimates for Social and Resettlement Safegaurds

Years	2014	2015	2016	2017	2018	2019	2020
	83.4	111.3	111.6	111.6	3.3	3.2	3.2
Cost (MUS\$)	2021	2022	2023	2024	2025	Total (M\$)	
	3.2	1.0	1.0	1.0	1.0	434.80	

The budgetary plan for funding SRMP is presented in Appendix A as a matrix for fund disbursement during preconstruction, construction and operational periods of Stage 1 over 12-year period. The matrix has been prepared on the assumption that project would be approved and civil works would commence during the 2nd quarter of 2014.

PROJECT MANAGEMENT UNIT (PMU)

A Project Management Unit (PMU) to implement the project will be established in the project area. The PMU will be headed by General Manager/Chief Executive/Project Director (PD) underwhich, all the project relevant sections and offices will be established. For social and resettlement management, Project Resettlement office (PRO) will be established in the PMU which will be headed by Deputy Project Director (DPD). Under the DPD, Directors, Deputy Directors will be taken from WAPDA while, the Assistant Directors and local field teams may or may not be hired from the market and locally. All the officials will have designatory positions for handling certain safeguard issues and their handling.

ROLE OF THE PROJECT DIRECTOR

The Project Director (PD) is responsible for necessary policy, administrative, management and financial decisions for effective and timely implementation of the safeguard plans as per the approved policy and implementation arrangements. The Deputy Project Director – Safeguards will prepare, (based on the approved budget), annual financial plans for various safeguard plans as per the approved schedule. The PD will ensure timely release of necessary funds to DPD – Safeguards for achieving implementation targets of safeguard plans annually.

ADAPTIVE MANAGEMENT APPROACH

During implementation stage, changes in the budgetary allocation may be necessary to address and implement the impact management and monitoring processes. WAPDA will therefore, take an adaptive management approach for social and resettlement management components. This will generally involve a “Rolling Plan” based on implementation experience of a particular plan or program under implementation that would identify the need for appropriate changes to improve and/or enhance implementation performance. In other words, “lessons learned” from early implementation experience will be evaluated carefully – for example, community-based relocation site development experience; vocational training in livelihood restoration, training for improved variety of livestock through the livestock development centre, impacts of health and hygiene program under GAP, and compensation and rehabilitation approach laid out the RAP – so that the desired outcomes are achieved. Adaptive management will be applied to all safeguard plans for social and environmental management.

1 INTRODUCTION

1.1 PURPOSE OF THE DOCUMENT

The proposed Dasu Hydropower Project (the Project) is a large and complex development undertaking by the Pakistan Water and Power Development Authority (WAPDA). In addition to the construction of the dam and its associate facilities, the Project has many other social and environmental management components. Preliminary costs and budgeting are already underway as part of the project preparation and implementation arrangements. This Cost and Budgetary Plan (CBP) deals with social and resettlement management cost within the context of overall project costs. The primary purpose of this document is to lay out the costs involved during preconstruction, construction and post construction periods so that WAPDA and the Project Management Unit (PMU) to be led by the Project Director can take decisions for mobilization and allocation of funds for timely implementation and management of all social and resettlement safeguard plans.

1.2 BACKGROUND AND DESCRIPTION OF PROJECT COMPONENTS

The Dasu Hydropower Project is an important element of the Government strategy in the energy sector of supporting strategic investment projects in generation and transmission infrastructure that contribute to the structural shift to a low cost, low carbon fuel mix. The proposed project is an integral part of WAPDA's Vision 2025 program and the Power Policy of 2013. . The Project makes a strong contribution to the energy sector agenda by: (a) contributing to long term change in the structure of the sector away from high cost heavy fuel oil to low cost cleaner hydropower; (b) reducing the cost of electricity generation for the whole country, reducing the sector deficit by injecting positive cash flow and saving foreign exchange for the Government by displacing imported fuel; and building the broader institutional capacity of WAPDA to harness the hydropower of the country in a sustainable manner.

The Project will not create any water diversion from the main river body; thus there will be no consumptive use of water. Therefore, sharing of water as per the 1991 Water Accord between the four provinces of Pakistan will not be affected adversely, in any context, by the Project. DHP will be a run of the river project located on main Indus river channel.

1.2.1 Key Project Components

DHP will constitute a 242 m high RCC concrete gravity dam with the reservoir behind the dam having a length of 74 km and average width of 365 m with storage capacity of 1.39×10^9 MCM of water at FSL El 950m. The reservoir area at FSL 950 m will be 23.85 km². The Project will include an underground powerhouse having 12 generating equipment; each of which will produce 360 MW power.

The major engineering components of the Project can be separated into (a) The dam and reservoir with associated structures such as tunnels, spillway, underground powerhouse and offices and residential colony, and temporary facilities such as coffer dams and construction camp, and (b) roads which includes Karakoram Highway (KKH) relocation above El 970 to 980 m and bypass to link existing KKH to relocated part, and access road to Dam site and camps. The project layout plan is shown in Figure 1.1 below.

In addition to the engineering components above, the Project has many other construction –related components and that tied to various construction phases. In this section, all key project components are described briefly.

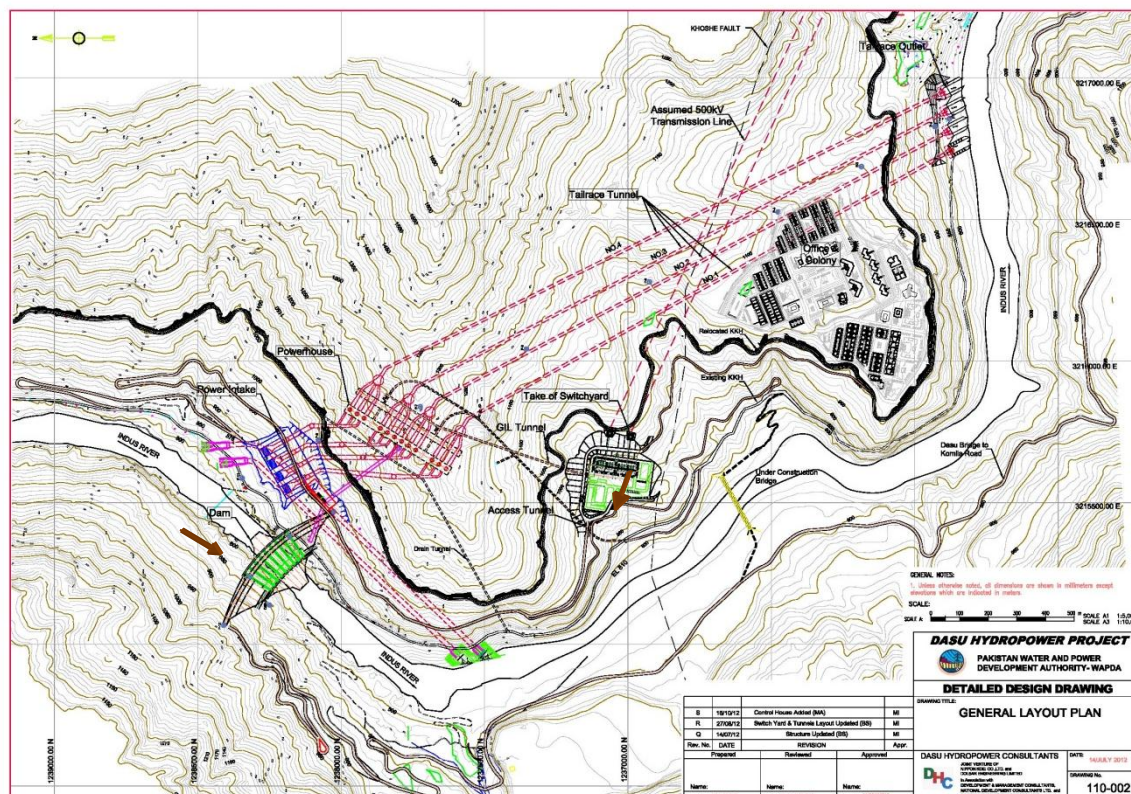


Figure 1.1: Project General Layout Plan

1.2.2 Component A: Construction of Dam and Appurtenant Structures

This component would primarily consist of civil works required for construction of dam on the Indus River to raise the water level and thus create energy for running the power generating turbines and generators; and diversion tunnels. The dam would be constructed with roller concrete. Maximum height of the structure would be 242 m above foundation and length at crest level 570 m. This would allow full reservoir supply level of 950m above sea level with operational storage capacity of 0.82 BCM between elevation of 900m to 950 above sea level and dead storage of 0.59 BCM. Diversion tunnel, installation of Spillway and low level outlets gates, etc.

1.2.3 Component B: Power Generation Facilities and Appurtenant Structures

Power generation facilities, would be developed in two stages and four Phases. Four tunnels would divert water from the reservoir for power generation to 12 generating units in an underground power house, with each tunnel connected to three turbines. Capacity of each turbine is 360 MW. One tunnel connecting to three turbines will be constructed in each phase to produce 1080 MW. Thus Stage 1 will produces a capacity of 2,160 MW and Stage 2 will produces a capacity of 2,160 MW. Four hearace and tailrace tunnel, underground transformer cavern, surge tanks, etc.

1.2.4 Component C: Preparatory and Permanent Works

Relocation of Karakoram Highway (KKH), and construction of access roads to dam site, and colony with offices, residences for staff, will be facilitated under this component.

Existing KKH will be submerged under water at 950 m.a.sl Relocation of the submerged KKH at elevated level will be required to enable the project work to go ahead. The first 15.7 km will be relocated before work starts on dam and its components. The rest of KKH raising work will continue in parallel with other works and has to be completed before the start of first reservoir fill. A total of 68km {46.3km (realigned portion of the KKH) +15.7km (Bypass Road) +6 Km Road (2 Link roads) =68km} of KKH will be

realigned to bypass the road area that will be inundated and to link the bypass to the existing KKH.

The access road to dam site and to contractor's facilities on right bank will follow the current route from KKH at Komila along Seo road. The access road will pass through the urban residential area at Komila and will be merged into the existing Seo road and pass through the Sigloo village to the Damsite.

1.2.5 Component D: Social and Environmental Management Plan

This component is sub-divided into three subcomponents, namely, Social and Resettlement Management, Environmental Management and Early Flood Warning & Climate Change Monitoring.

- Sub Component D1: Social and Resettlement Management

The main elements in the Social and Resettlement Management Plan would be compensating the affected people for loss of assets, assistance in relocation and livelihood restoration. Appropriate sites for relocation of the affected people will also be provided under the project. The planning for managing other aspects of relocation as public health, construction worker management, gender impacts and public consultation and participation, grievance redress, are also addressed under this component. All planning in this sub component are grouped under the Social and Resettlement Management Plan comprising 14 volumes.

- Sub Component D2: Environmental Impact Management

Construction related environmental impacts will be addressed by the contractor as per the Contractor's Environmental Management Plan. All other environmental protection and enhancement measures recommended in the EIA/EMAP and other plans as Terrestrial Ecology and Aquatic Ecology conservation plans will be addressed under this component. All planning in this sub component are grouped under the Environmental Management Action Plan comprising 8 volumes.

1.2.6 Component E: Construction Supervision, Monitoring and Evaluation of the Project Impacts and Social and Environmental Management Plans

This consists of two components as described below:

- Sub Component E1: Construction Supervision and Implementation Support

This sub-component will cover the cost of consulting and other services for project implementation, including construction supervision and Project Management Support.

- Sub Component E2: Cost of Independent Consultants hired for Monitoring and Evaluation of Project activities and Impacts of social and Environmental management Plans.

The monitoring and evaluation (M&E) would provide continuous feed back to the Government of Pakistan and WAPDA on the project performance and impact of its various components, particularly social impact management through SRMP, in order that corrective action could be undertaken in a timely manner.

1.2.7 Component F: Project Management Support, Capacity Building of WAPDA, Technical Assistance and Training

This component consists of three sub-components:

- Project Management Support and Audits which would support WAPDA in implementing project related activities;

- Strengthening of WAPDA, Independent Panel of Experts and Technical Assistance which would enhance WAPDA capacity in planning and programming, engineering and O & M of Dams ETC.,

1.2.8 TRANSMISSION LINE

A Double Circuit 500 KV transmission line from Dasu to Islamabad via Mansehra is to be constructed in Stage-1. This component will be implemented by a separate organization, namely, the National Transmission and Dispatch Company (NTDC). So, the costing is not considered in this SRMP and EMP Plan.

2 PHASED DEVELOPMENT AND PROJECT COSTS

2.1 PHASED APPROACH TO CONSTRUCTION

WAPDA has proposed the development of the Dasu Hydropower Project in phased manner starting from 2,160 MW installed capacity initially (expected to be operational in 6-7 years) to over 4,320 MW at final stage of development. This is a very smart and pragmatic approach to add power generation to the system while the remainder of the project construction continues.

The Project is proposed to be developed in 2 stages and four phases each with an installed capacity of 1,080 MW. Stage I would be developed as soon as possible with installed capacity of about 2,160 MW. The stage II would be developed after construction of Diamer-Basha Dam Project.

Table 2.1: Stage Wise Project Implementation

Stage/ Phase	Major Civil Engineering Activities
Phase I	Preparation of access road, Relocation of KKH, Construction of Project Dam and auxiliary power generation structures
Phase II	Main civil works-underground complex structure and tunnels; Hydraulic steel structure water way
Phase III	Main civil works-underground complex structure and tunnels; Hydraulic steel structure water way
Phase IV	Main civil works-underground complex structure and tunnels; Hydraulic steel structure water way

2.2 PROJECT COSTS

The estimated cost of the project is USD7.992 Billion (PKR 759.221Billion) in sequence development of 4 phases.

As described earlier WAPDA has proposed the development of the Project in two stages and four phases and the project cost for each phase has been allocated as described below.

2.2.1 Project Costs by Stages and Phases

Table 2.2 provides costs under each stage/phase for the project and sub-project. The first stage 1 is critical with higher cost (USD 5,415) million as much of the infrastructure (e.g. site preparation) and social and environmental safeguards have to be developed under this stage. The sources of funding at present are WAPDA and the World Bank.

Table 2.2: Project Cost in Stages and Phases (USD Million)

Cost Category	Stage I		Stage II	
	Phase-I	Phase-II	Phase-III	Phase-IV
Financial Cost	4.654	0.761	1.56	1.014

2.2.2 Social and Resettlement Management Plan Cost

Costs of all project components are included in the Dasu Hydropower Project (DHP) costs budgeted under each phase. Thus the total cost of SRMP is US\$ 434 Million, which is incorporated in the above costs.

2.3 IMPLEMENTATION SCHEDULE

The tentative schedule for implementation of construction activities is provided in Figure 1. Major activities include: (i) land acquisition; (ii) social preparation; (iii) payment of compensation; (iv) relocation/resettlement site development with social and civic infrastructures; (v) grievances redress; (vi) livelihood restoration programs; and (vii) monitoring and evaluation.

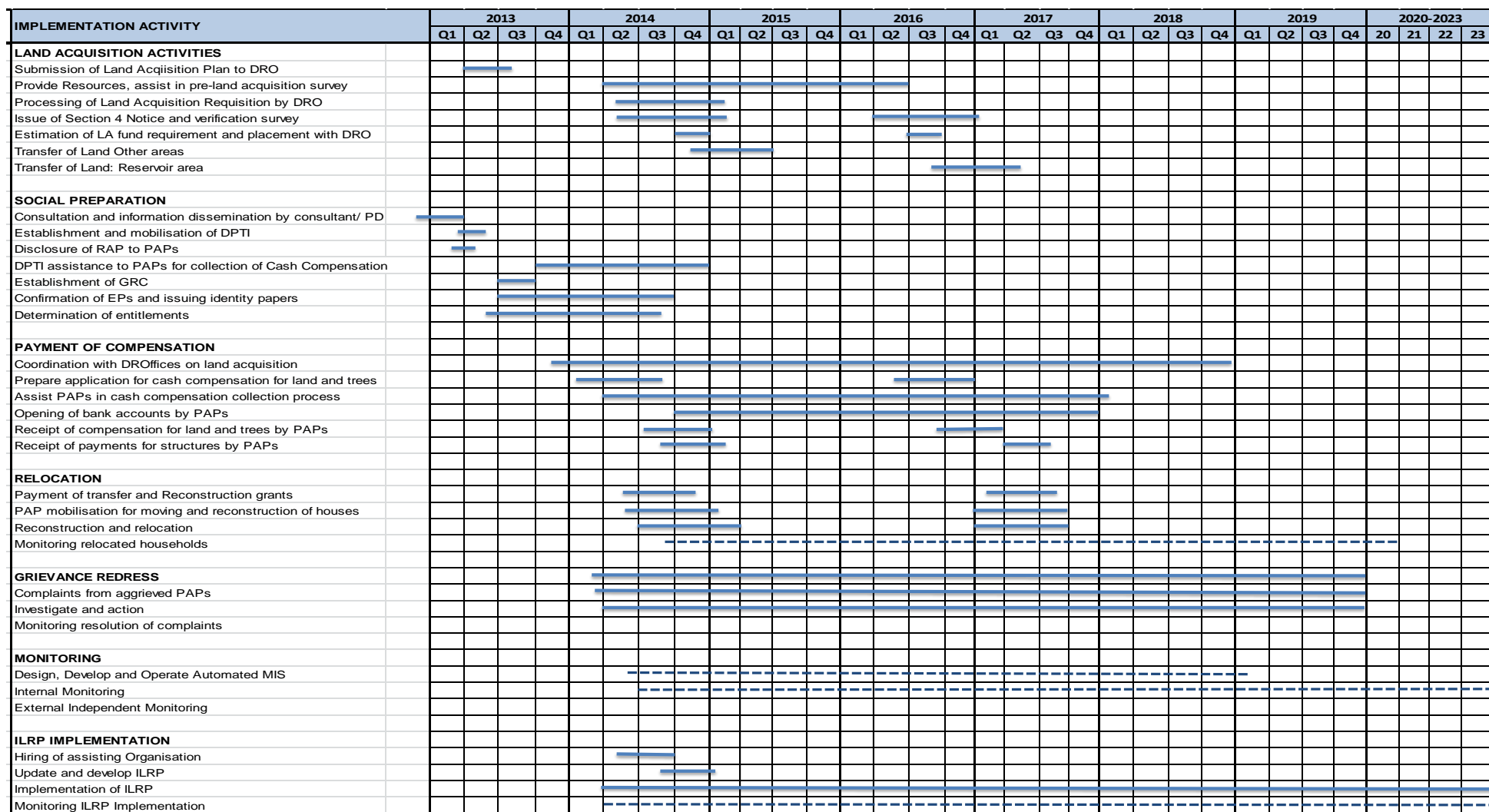


Figure 1: Implementation Schedule of Safeguard Activities

3 SAFEGUARDS PLANNING COST

3.1 SAFEGUARD PLANNING

The Dasu Project is a large scale hydropower generation project with some adverse social and environmental impacts. The Social and Resettlement Teams carried out impact assessments of all project components carefully and prepared a series of social and resettlement management plans in compliance with the national legislation as well as World Bank operational policies, guidelines and requirements. The costs and budgets are already included in the overall project costs (Social and Environmental Management – Component D, Chapter 1) as integral component of the project.

3.2 SRMP COSTS

All social safeguard documents have been packaged under the Social and Resettlement Management Plan (SRMP). This section presents a summary of reports, with brief objectives and costs against each plan (Table 3.1). These cost include base cost, physical contingencies (25%) and cost contingencies. The details are available in individual plans.

Table 3.1: SRMP Costs (US\$ Million)

No.	Reference	Objectives	Cost
1	Vol. 3 Public Consultation and Participation Plan	Provides a framework and processes for meaningful and effective participation of the affected persons/communities with a view to enhance community capacity building for development project	0.71
2	Vol. 5 Resettlement Action Plan	Identify impacts and measures to mitigate adverse social impacts resulting from loss of assets and displacement and relocation, and to bring social and economic benefits in post-project period.	398.73
6	Vol. 7 Public Health Action Plan	To contribute to the social developmental impact expected from the construction of and operating the DHP through minimizing risks and possible harmful effects on public health and inclusion of public health actions in safeguard plan.	15.0
7	Vol. 9 Grievance Redress Plan	The GR Plan establishes procedures for filing any grievances and dispute over social and environmental safeguards and other entitlement issues arising out of the implementation of the Project	2.68
8	Vol. 10 Communications Plan	Provides a broad framework to guide communication strategies in Dasu Hydropower in order to build better understanding and promote and enhance community participation in decision-making.	0.54
9	Vol. 11 Downstream Fishing Communities: Baseline and Impact Assessments	It provides the socio economic baseline conditions of downstream fishing communities and initial impact assessment. The volume also provides mitigation/development measures and its cost.	6.70
10	Vol. 14 Implementation and Monitoring Plan	Provides planning for implementation and monitoring of the social safeguards in effective manner.	5.29
Total Cost			434.75

4 YEARWISE BUDGETARY PLAN FOR FINANCING THE SAFEGUARD PLANS

4.1 INTRODUCTION

Implementation of the social and environmental safeguard plans would largely commence *prior* to the commencement of civil works and, therefore, there would be pre-construction costs. During the construction period the safeguard plan implementation will be continued and implementation of some of these would be carried through to the post-construction phase. The separation of the project implementation into construction and operation phases becomes hazy after Stage I as at the end of the first stage 1 operation of the project with generation or 2160 MW of power.

The year wise allocation of fund is to facilitate the cognizance of the need for phased disbursement for social and environmental activities in order to implement the plans in a timely manner.

4.2 PRE-CONSTRUCTION COSTS

4.2.1 Social and Resettlement Management

Costs associated with social and resettlement management prior to commencement of construction could be classified under two headings:

- Social preparation and mobilization;
- Relocation and resettlement;

Social preparation has been allocated a budget of US\$ 0.71 million and will be carried out by a small team of specialists consisting of:

- Lead Specialist/Team Leader
- Consultation/Communication Specialist
- Relocation Site Development Specialist
- Livelihood Specialist
- Gender and Health Specialist

The team will be located at the project site and will disseminate all information regarding the project, assist DRO in the LA processes, explain the current situation and planned activities as implementation of RAP, commencement of compensation, start of construction activities, employment of PAPs by Project etc. to avoid conflicting situations. This will be done through continuous dialogue and regular meetings with PAPs and village leaders and Village Committees. The mobilization of the PAPs will be carried out by the field level Resettlement office to be established under the Project Management Unit.

Relocation and resettlement activities which are the major activities of the SRMP has been allocated a budget of US\$ 398.73 million will be implemented by Resettlement Office.

4.3 CONSTRUCTION COSTS

4.3.1 Social and Resettlement Management

Implementation of the RAP, implementation of ILRP and both internal and external monitoring will be continued during the construction period. ILRP implementation and monitoring will continue even after the operation of Stage I.

4.4 POST-CONSTRUCTION COSTS

4.4.1 Social and Resettlement Management

Post-construction social and resettlement management costs are primarily costs related to monitoring, including independent expert monitoring and evaluations, and local area development costs.

4.5 SOCIAL AND ENVIRONMENTAL MANAGEMENT FUND

The budgetary plan for funding both SRMP and EMAP is presented in Appendix A as a matrix for fund disbursement during pre-construction, construction and operational periods of Stage I (12 years). The matrix has been prepared on the assumption that project would be approved and civil works would commence during the 2nd quarter of 2014.

4.6 ROLE OF THE PROJECT DIRECTOR

The Project Director is responsible for necessary policy, administrative, management and financial decisions for effective and timely implementation of the safeguard plans as per the approved policy and implementation arrangements. The Deputy Project Director (PRO) will prepare, based on the approved budget, annual financial plans for various safeguard plans as per the approved schedule (Appendix A). The PD will ensure timely release of necessary funds to PRO for achieving implementation targets of safeguard plans annually.

4.7 ADAPTIVE MANAGEMENT APPROACH

WAPDA recognizes that changes may be necessary at implementation stage to address and implement the impact management and monitoring processes. An adaptive management approach will therefore be adopted for social and environment management components. This will generally involve a “rolling plan” based on implementation experience of a particular plan or program under implementation that would identify the need for appropriate changes to improve and/or enhance implementation performance. In other words, “lessons learned” from early implementation experience will be evaluated carefully – for example, community-based relocation site development experience; vocational training in livelihood restoration, training for improved variety of livestock through the livestock development centre, impacts of health and hygiene program under GAP, and compensation and rehabilitation approach laid out the RAP – so that the desired outcomes are achieved. Adaptive management will be applied to all safeguard plans for social and environmental management.

5 COST TYPES AND BASIS

This part of Costs and Budgetary Plan explains the costs, types of costs and their basis for proposing. These costs include both the fixed as well as running costs during the implementation of SRMP. These costs mainly relate to land acquisition and resettlement and thereby, rehabilitation and livelihood restoration. The proposal of unit rates have been taken from the current market, recent projects like Basha Dam and Keyal Khwar Hydropower projects. Major costs and their basis include:

5.1 LAND

Kohistan district and the project area are mountainous in nature and the land is scarce for living, cultivation and other purposes like business etc. The project's main impact is on land and; the land being affected by the Project is of residential, commercial, agriculture, graze and barren types. The unit for measurement of land in the project area is *kanal* (5,445 square feet). The costing of land is practiced on the basis of location, type, ownership as well as height/elevation. The rates are taken by escalation of the latest land awards of the Keyal Khwar and Basha Dam projects. The rates awarded in Keyal Khwar Hydropower and Basha Dam projects with price contingency at the rate of 6 percent per year has been taken into consideration.

5.2 STRUCTURES

Kohistan is a backward and poor district of KPK province. Mostly, the people live in villages above KKH. The structures include all katcha, pucca, semi-pucca and Wood or Bamboo. The structures in the project area have different ownerships like personal and communal while, public structures are also present there owned by different public sector departments. The costs of these different types of structures vary depending on their materials and location.

5.3 TREES

The project development will affect a large number of trees. The trees are of different types and species. These trees are very important to the affecting community as being serving them in different modes like fruit, fuel wood, timber and; rearing of goats and sheep. Even, the non-bearing fruit tree like "Wild Olive" is of the same importance as of nuts, pine and other fruit. The categorization of these affecting trees is mainly divided into two categories i.e fuel wood and the fruit trees. The tree rate is calculated on the basis of age, girth of stem, fruiting or non-fruiting and seasonal production. There in the project area, wild olive is considered to be more precious due to grazing of sheep and goat. The rates of trees are calculated by local Forest Department.

5.4 CROPS

The project area is poor in land especially the agriculture land which only is found in terraces which are not so wide and long. The community generally grow maize and wheat as major crops while, vegetables are also grown in the area. This type of land is measured in kanals and usually not sold as being due to scarcity. But, the rates considered for such land in costing is on the basis of close by as well as recent hydropower projects in the DHP area or adjacent district. Further, market competitiveness has also been taken into consideration. Usually, the yield produce of a unit land like kanal is considered in a year. The local market rate of the produce is considered and the local Agriculture Department sets and verify the unit rate of each crop.

5.5 RELOCATION COST

This is assistance to the resettling community and; it is on the basis of Entitlement Matrix attached as Annexure for reference. This is a type of assistance to the affecting community for relocation either in the project area on high elevation at resettlement sites or to the area outside the project area as per their choice. This is a onetime allowance proposed to be paid to the affecting community for smooth relocation for resettlement. The charges have been

standard on the basis of consultation with the community as well as the market or labour rates.

5.6 REHABILITATION ASSISTANCE

This type of cost is also for one time to the affecting community households which are engaged in commercial activities, *soniwals* extracting gold from the river and vulnerable households. Different standards have been set in the Entitlement Matrix for rehabilitation assistance. For wage earners in commercial setup like shops and hotels, a standard amount for limited time span has been fixed so far, the affected may come to their previous situation and the project might not have a bar on them. Likewise, shift or transfer of business structure will also be transferred to cover under this allocation. This type of cost has been considered on the basis of socio-economic conditions and the monthly income. Also consultation with the affecting community and the district administration including the tribal heads guided in this context.

5.7 INFRASTRUCTURE REHABILITATION

The project development will have impact on existing infrastructure in the project area like access and link roads to the villages, water supply tanks and schemes, graveyards and other public and community structures like schools, dispensaries and market places etc. Standard measurement and rates have been considered in this regard. Local construction rates and the market of raw material have been considered in such regard.

5.8 LIVELIHOOD DEVELOPMENT SUPPORT

The development of the Project will directly affect the livelihood of the affecting community. With the resettlement and rehabilitation, livelihood restoration and its sustainability has been taken into consideration in project planning for sustainable development. From the project end, a fixed amount as Social Development Fund (SDF) is proposed which will be spent for affected community development in the project area to restore and sustain the livelihood and income. This cost/amount is proposed by the Project and will cover activities and programme for social development, consultation and motivation for livelihood development in the project area.

5.9 INSTITUTION AND MANAGEMENT

The resettlement and rehabilitation need a strong institutional setup and the management, thereafter. Project Resettlement Office (PRO) will be established having experienced both technical and non-technical staff, building, equipment, fixtures and furnishing along with the implementation of resettlement and rehabilitation for a set span of time. The staff will be for certain period on the basis of man months (MM) while the operational cost will be considered for the whole implementation period. Prevailing market rates have been considered in the setting of such rates.

5.10 PLANNING AND DESIGNING

For the implementation of relocation and resettlement, proper planning and designing for all the required development activities will be needed. This basically will be related to resettlement sites development, livelihood restoration development planning, community awareness and importantly, capacity building of both resettlement and rehabilitation office and field staff for smooth functioning of the activities.

5.11 ADMINISTRATIVE OVERHEADS FOR LAND ACQUISITION BY DISTRICT COLLECTOR

The Project will support the local revenue department in land acquisition survey and record preparation on ownership/title. In this regard, a lump sum amount has been proposed and will be paid to the District Revenue Office for the strengthening of its technical human resource and others for timely and efficiently conduct of surveys and record preparation. The financial cooperation with the district revenue office has already started in terms of financial and human

resource assistance. Some lump sum amount for survey tools, travelling and salaries for additional staff has already been spent for land acquisition survey.

5.12 MONITORING AND EVALUATION

For effective working by the officials and producing the required results, regular monitoring, both internal and external will be done during entire implementation of resettlement and rehabilitation. Parallel to this, regular visits by the International Panel of Experts (IPOE) will also done on yearly basis. This will be equipped with the establishment of Management Information System (MIS) so for, the check and balance may well be done periodically. The costs have been taken from the market rates of air fare and boarding & lodging.

5.13 Capacity Building for R&R Staff

Dasu Hydropower Project is an innovative project having immense and innovative dimensions of working. For timely and true implementation activities and assignments, training and capacity building of the staff at local and international level is being proposed in the planning of the Project. Likewise, certain number of research and study tours is also kept during implementation of the project. The costs has been considered in view of general training and research costs currently prevailing in neighbouring countries like China and India where such developments are at the maximum in region.

APPENDICES

Appendix A: Detailed Costs Table for Land Acquisition and Resettlement

Sr. No.	COST ITEMS	Unit	Unit Rate (PKR)	Quantity	Total Cost (MPKR)	Total Cost (MUS\$)
1 - COMPENSATION & ALLOWANCES						
1.1	LAND					
COMPENSATION						
1.1.1	Grazing/ Rakh	Kanal*	262,000	6,253	1,638.30	17.25
1.1.2	Barren (Ghair Mumkin Stone)	Kanal	100,000	47,582	4,758.16	50.09
	Barren (Ghair Mumkin)	Kanal	190,000	21,652	4,113.96	43.30
1.1.3	Agriculture	Kanal	760,000	3,138	2,385.11	25.11
1.1.4	Residential	Kanal	325,000	603.834	196.25	2.07
1.1.5	Commercial	Kanal	325,000	112.2	36.47	0.38
Sub-total (Basic Compensation)					13,128.23	138.19
	Escalation of 2 Years at 6.5% for 2013 Rates				1,762.14	18.55
	Tax (@2%)				262.56	2.76
	Service Charges (@15%)				1,969.24	20.73
Sub-total (1.1)					17,122.17	180.23
1.2	STRUCTURES					
1.2.1	Katcha	Sq. ft.	1,500	740,526	1,110.79	11.69
1.2.2	Pacca	Sq. ft.	2,500	87,659	219.15	2.31
1.2.3	Semi Pacca	Sq. ft.	2,000	481,413	962.83	10.14
1.2.4	Wood	Sq. ft.	1,500	11,326	16.99	0.18
Sub-total (1.2)					2,309.75	24.31
1.3	TREES					
1.3.1	Non Fruit Tree	No.	20,000	18,317	366.34	3.86
1.3.2	Fruit Tree	No.	57,000	2,982	169.97	1.79
Sub-total (1.3)					536.31	5.65
1.4	CROPS					
1.4.1	Maize	Per 40 kg	1,500	22,724	34.09	0.36
1.4.2	Wheat	Per 40 kg	1,600	18,592	29.75	0.31
Sub-total (1.4)					63.83	0.67
1.5	Relocation Cost (Based on Entitlement Matrix)					
1.5.1	Dislocation Allowance against loss of agri. Land	Kanal	20,000	2,827	56.54	0.60
1.5.2	Reconstruction Grant for Residential Structure	m ²	250	127,906	31.98	0.34
Sub-total (1.5)					88.52	0.93
1.6	Rehabilitation Assistance					
1.6.1	Special Assistance For Vulnerable HHs					
	Soniwals	No.	200,000	13	2.60	0.03
	Others	No.	150,000	42	6.30	0.07
1.6.2	Assistance against income loss by owners operated commercial setups for three months.	Person	30,000	76	2.28	0.02
1.6.3	Assistance for Affected wage earners	APs for 3 months	27,000	137	3.70	0.04
1.6.4	Transfer Grant for relocation of business structures	m ²	100	7113.8	0.71	0.01
Sub-total (1.6)					15.59	0.16
Sum of Sub-totals of 1					20,136.18	211.96
2 - RESETTLEMENT SITES DEVELOPMENT						
2.1	Land					
2.1.1	Land Leveling	Kanal	350,000	2070	724.50	7.63

Sr. No.	COST ITEMS	Unit	Unit Rate (PKR)	Quantity	Total Cost (MPKR)	Total Cost (MUS\$)
Sub-total (2.1)					724.50	7.63
2.2	Resettlement sites Infrastructure development					
2.2.1	Access Roads construction and land compensation	Km	10,000,000	51	510.00	5.37
2.2.2	Mosque	No.	7,360,000	4	29.44	0.31
2.2.3	Water supply Tank(30 Village)	Cu. ft.	2,850	57,120	162.79	1.71
2.2.4	Water Supply Channel(30 Village)	per km	695,000	100	69.50	0.73
2.2.5	School (Middle)	No.	12,720,000	2	25.44	0.27
	School(Primary)	No.	6,360,000	4	25.44	0.27
2.2.6	Boundary wall for Graveyard	per G. Yard	1,170,000	30	35.10	0.37
2.2.7	Dispensary(3 Structures)	per structure	920,000	3	2.76	0.03
Sub-total (2.2)					860.47	9.06
Sum of Sub-totals of 2					1,210.47	12.74
3 - LIVELIHOOD SUPPORT						
3.1	Skill Development for Affected Communities	per year	100,000,000	15	1,500.00	15.79
Sub-total of 3					1,500.00	15.79
4 - LOCAL AREA DEVELOPMENT						
4.1	Infrastructure				1,235.00	13.00
4.2	Entrepreneur Support 10 Years				475.00	5.00
4.3	Capacity Building of Local Government				237.50	2.50
4.4	Training & extension support 10 Years (Services and facilities)	Years	47,500,000	10	475.00	5.00
4.5	Education Fund 10 Years (Literacy Promotion, Scholarship, etc.)				427.50	4.50
Sub-total of 4					2,850.00	30.00
5 - INSTITUTION & MANAGEMENT						
5.1	Building	Sq. ft.	2,000	8,160	16.32	0.17
5.2	Fixtures and Furnishing	Lump sum			20.00	0.21
5.3	(a) PMU Staff Salaries	Years	36,100,000	10	361.00	3.80
	(b) PMU Costs during O&M	Years	45,600,000	5	228.00	2.40
5.4	Vehicles	No	4,200,000	10	42.00	0.44
5.5	R&M of vehicles	Years	10,000,000	15	150.00	1.58
5.6	Office Equipment	Lump Sum			10.00	0.11
5.7	Operation & Maintenance Cost	Years	250,000	15	3.75	0.04
Sub-total of 5					831.07	8.75
6 - PLANNING AND DESIGNING						
6.1	Resettlement Implementation Design	Lump Sum			28.50	0.30
6.2	Resettlement Site Development Design	Lump Sum			28.50	0.30
6.3	Livelihood Support Design and Implementation	Year	28,500,000	15	427.50	4.50
Sub-total of 6					484.50	5.10
7 - ADMINISTRATIVE OVERHEADS						
7.1	Administrative Overhead: Land Acquisition By DRO	Lump Sum			10.00	0.11
Sub-total of 7					10.00	0.11
8 - MONITORING & EVALUATION						
8.1	Independent Monitor (2 times a year)	Year	30,000,000	8	240.00	2.53
8.2	Internal Monitoring	month	250,000	84	21.00	0.22
8.3	IPOE	Per visit	3,000,000	14	42.00	0.44

APPENDIX-A [3/3]

Sr. No.	COST ITEMS	Unit	Unit Rate (PKR)	Quantity	Total Cost (MPKR)	Total Cost (MUS\$)
8.4	MIS Development	Lump Sum		One time cost	2.65	0.03
8.5	MIS Staff	Lump sum			24.78	0.26
Sub-total of 8					330.43	3.48
9 - TRAINING & CAPACITY BUILDING						
9.1	Consulting Service Cost (Sub Projects) / Outsourcing, (If any)	Lump sum			25.00	0.26
9.2	Research	Year	15,000,000	10	150.00	1.58
9.2.1	National	Year	2,500,000	7	17.50	0.18
9.2.2	International	Year	7,000,000	7	49.00	0.52
9.3	Trainings	Year	30,000,000	10	300.00	3.16
Sub-total of 9					541.50	5.70
Total (1+2+3+4+5+6+7+8+9)					28,268.65	297.56
10 - CONTINGENCY						
10.1	Physical Contingency (@25%)				7,067.16	74.39
10.2	Price Contingency (@9 %)				2,544.18	26.78
Sub-total of 10					9,611.53	101.17
GRAND TOTAL (Total of 1+2+3+4+5+6+7+8+9+10)					37,880.74	398.74

* 1 Kanal = 506m² or o.125 Acre or 0.05ha, 1\$=95 PKR as per 2012 rates

Appendix B: Eligibility and Entitlement Matrix

Loss Item 1: Loss of Agricultural Land Used in Terrace Cultivation			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Owner(s) of land identified by District Collector through Land Acquisition Survey	<ol style="list-style-type: none"> 1. Negotiated Value (NV) of agricultural land agreed between PAPs and the District Collector 2. Cultivable Plot (1/2 kanal) of land (if available and technically feasible for development) near resettlement site in the case of the families without residual land. 3. Dislocation Allowance of PKR 500/-(Five hundred) per kanal but the total amount will not exceed PKR 20,000./-(Twenty thousand) 	<ol style="list-style-type: none"> 1. NV will be computed by the District Collector based on the Unit Rates agreed upon at a Jirga comprising Village Committee (VC) and District Collector. The Project through District Collector will pay cash compensation through crossed cheque with assistance from PRO to confirm identity of owner. 	Identified owners will be assisted by the Director-SRU to prepare legal documents in support of their ownership.
Implementation Issues:			
<ol style="list-style-type: none"> 1. Landowners will be informed of the details of the land acquisition and compensation process, resettlement package and payment procedure. 1. The VCs were established by the Additional Assistant Commissioner (AAC) with recommendations of the village Malik in every affected village 2. The Unit Rates to be used in computing Negotiated Value (NV) for agricultural land will be determined at a Jirga including the Village Committee (VC), District Collector or representative, (called the Price Evaluation Committee, duly formed and notified by District Collector). The valuation process will take into consideration the rates adopted by a recent hydropower project in Kohistan as the basis for negotiation. 3. The community in the project has derived the right to use homestead, agricultural and other land, by virtue of traditional land tenure under their traditional laws and customs. Therefore, formal land ownership documents as title deeds and cadastral maps have not been prepared for land in this area. Therefore, the Land acquisition survey is conducted by the District Collector to establish land ownership and boundaries as these details are required to issue notice under Section 4 of LAA 1894. 			
Loss Item 2: Loss of Homestead and Commercial Land			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Owner(s) identified by District Collector through Land Acquisition Survey	<ol style="list-style-type: none"> 1. Negotiated Value (NV) of land. 2. Dislocation Allowance @ PKR 750/-(Seven hundred and fifty) per kanal but the total amount will not exceed PKR 5,000/- (Five thousand). 3. Affected owners will be entitled to a plot either small (5 Marlas) or large (10 Marlas) based on their homestead plot size in the "original" village only in case of sites developed through land acquisition. 	<ol style="list-style-type: none"> 1. NV will be computed by the District Collector based on the Unit Rates agreed upon at a Jirga comprising VC, and District Collector; 2. Project through District Collector will pay for the land. 3. Project is liable to provide basic infrastructures at new resettlement area such as access road, drinking water and sanitation system. Agriculture water supply will be provided if land 	Identified owners will be assisted by the Project to prepare legal documents in support of their ownership.

	<p>4. Provision of basic infrastructures at new resettlement area such as access road, drinking water supply and sanitation, schools, electricity (if available at homestead), mosque, health facility and commercial area free of cost.</p>	<p>for agriculture is available near resettlement site. Current electricity systems will be shifted to the resettlement villages;</p> <p>4. Affected owners will be entitled to a plot in new resettlement site developed by project either small (5 <i>Marlas</i>) or large (10 <i>Marlas</i>) based on their homestead plot size in the “original” village. These plots will be given free of cost if land for resettlement is provided by the resettling community free of cost and on subsidize rate in case land for resettlement site has to be acquired by the Project</p> <p>5. The affected households moving and settling outside the project resettled developed site will be eligible of getting a special allowance for relocation @ Rs. 50,000/- in addition to their actual compensation. This effectee would not be eligible to have a developed plot in resettled.</p> <p>6. Owners will be allowed to take away all salvageable materials free of cost.</p>	
--	--	---	--

Implementation Issues:

1. Consultations with Project Affected Persons (PAPs) revealed that most of them did not want to move away from the valley where their present abodes are located and preferred to relocate at a higher elevation within the same valley. This is mainly due to their seasonal migration to different elevations of the valley where they have houses at these different elevations as described in the RAP.
2. PAPs will be informed of the details of the compensation policy, resettlement package and payment

<p>procedure.</p> <p>3. NV will be determined and approved for the project following the procedure as stated under Loss Item 1 above.</p> <p>4. Land titling will be completed through the land acquisition survey conducted by the District Collector before issuance of notice under section 4.</p>			
Loss Item 3: Loss of Communal Property and Resources			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
<p>1. VC for communal property;</p> <p>2. All villagers losing access to common land areas for pasture and fuel wood</p>	<p>1. Negotiated Value (NV) of land will be paid to the VC</p> <p>2. A plot in community-based resettlement site for each communal property as schools, mosque, burial ground, health center, community center etc.</p> <p>3. The project will construct the structures for common properties in the project-managed resettlement sites selected by the PAPs and the sitting of the common properties will be decided by the VC.</p>	<p>1. NV will be computed by the District Collector based on the Unit Rates agreed upon at a Jirga comprising VC, and District Collector,</p> <p>2. Project/District Collector will pay for the land of common properties.</p> <p>3. The VC will construct the common properties at each resettlement site with planning inputs and monitoring by Project of each resettlement site.</p>	<p>VC will be assisted by the Director-SRU to organize legal documents in support of the compensation payments for the common properties. Social and Resettlement Unit will assist and guide the community in utilizing the common land area sustainably.</p>
Implementation Issues:			
<p>1. NV will be determined and approved for the project following the procedure as stated under Loss Item 1.</p> <p>2. The VC will be responsible for the relocation of community property sites.</p>			
Loss Item 4: Loss of Residential Structures			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
<p>Owner(s) of the structures identified by District Collector through Land Acquisition Survey</p>	<p>1. Replacement Value (RV) of residential structure.</p> <p>2. Transfer/relocation Grant @ PKR 100/- (One hundred) per square meter of affected structure.</p> <p>3. Reconstruction Grant @ PKR 250/- (Two hundred and fifty) per square meter of affected structure.</p> <p>4. Special Assistance of one-time payment of PKR 5000/- (Five thousand) for each female, disabled, elderly headed and very poor households.</p> <p>5. Owner will be allowed to take away all salvageable materials free of cost.</p>	<p>1. Applicable to all structures located within the acquisition areas.</p> <p>2. District Collector with expertise from Communication and Works Department will determine the RV based on the Unit Rate agreed at the Jirga will compute the RV. When necessary, PRO will be employed to verify structures eligible for RV and other assistance.</p> <p>3. Project/PMU will pay for structures through District Collector;</p> <p>4. The Project will provide other resettlement benefits directly with assistance from Social</p>	<p>Assistance in relocation and reconstruction is provided by the Project Resettlement Unit.</p>

APPENDIX-B [4/10]

	6. The households moving and settling outside the project district will be eligible of getting a special allowance for relocation @ Rs. 50,000/- in addition to their actual compensation and other allowances.	and Resettlement Unit; 5. Owner will be allowed to take away all salvageable materials free of cost 6. The affected households moving and settling outside the project resettled developed site will be eligible of getting a special allowance for relocation @ Rs. 50,000/- in addition to their actual compensation. These effectee would not be eligible to have a developed plot in resettled.	
--	---	---	--

Implementation Issues:

1. Land Acquisition Survey conducted by District Collector and Detailed Measurement Survey by Communication and Works Department (C&W) will assess and record details such as floor area and category of structure of to be demolished.
2. The Unit Rate for different types of residential structures will be computed by the Executive Engineer, C&W and approved at a Jirga comprising representatives from all affected villages and District Collector or representative;
3. Compensation must be paid before PAPs dismantles and removes the structures as per civil works requirement at new site of resettlement.
4. The date of service of notice under section 4 and/or Inventory Census will be the cut-off date for all structures to be removed.

Loss Item 5: Loss of Commercial Structures

Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Owners of commercial structures identified by District Collector through Land Acquisition Survey	<ol style="list-style-type: none"> 1. RV of commercial structures. 2. Transfer Grant @ PKR 100/-(One hundred) per square meter of affected structure. 3. Reconstruction Grant @ PKR 500/-(Five hundred) per square meter of affected structure. 4. Owner will be allowed to take all salvageable materials back free of cost. 	<ol style="list-style-type: none"> 1. Applicable to all structures located within the project affected area at cut-off date. 2. Jirga of affected villagers and District Collector with expertise from C&W will determine the RV. 3. When necessary, Director-SRU will verify and record structures eligible for RV and other assistance. 4. District Collector will pay for structure. 5. The Project will provide other resettlement benefits with assistance from SRU. 	Assistance in relocation and re-construction is provided by the project.

Implementation Issues:

1. Land Acquisition Survey conducted by District Collector and Detailed Measurement Survey by

APPENDIX-B [5/10]

<p>Communication and Works Department (C&W) will assess and record details such as floor area and category of structure of to be demolished.</p> <p>2. Replacement value (RV) of structure will be determined and approved in the process as stated in Loss Item 4.</p> <p>3. Compensation must be paid before dismantling and removing the structures as per civil works requirement and new site of resettlement.</p> <p>4. The cut-off date for titled owners and socially recognized owners as stated in Loss Item 4.</p>			
Loss Item 6: Loss of Physical Cultural Resources			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Department of Archaeology and Museum (DOAM) of KPK, the Legal Custodian of the archaeological resources of the project affected area.	<ol style="list-style-type: none"> 1. Cost of dismantling, moving and reconstruction of the 400 year Mosque at Seer Gayal. 2. Cost of land to relocate the Seer Gayal Mosque 3. Cost of protecting the submerged graves with mud plaster. 4. No rock carving would be affected by the project. 	<ol style="list-style-type: none"> 1. Applicable to the structures identified in the PCR Plan 2. Cost of land will be paid to VC if Seer Gayal would be resettled in community land, otherwise cost of communal land will not be paid. 3. The Project will support local community in performing religious ceremonies before covering the graveyards with mud plaster as agreed by local community well before filling of reservoir. 	The Project will support the DOAM in procurement and protection of rock carvings (if any) at Shatial.
Implementation Issues			
<ol style="list-style-type: none"> 1. The project consultant team has identified and assessed the cost of PCR to be conserved /relocated. 2. Cost of conservation and/or relocation will be paid to the Department of Archaeology and Museum (DOAM) of KPK before dam construction and the DOAM is responsible for implementation before inundation. 			
Loss Item 7: Loss of Timber and Fruit Bearing Trees			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
<ol style="list-style-type: none"> 1. Owner(s) identified by District Collector through Land Acquisition Survey 2. Socially recognized (by Malik/Mullah and VC) owners of trees grown on public or other land, as identified by Census and verified by Land Acquisition Survey. 	<ol style="list-style-type: none"> 1. RV of Timber trees. 2. Fruit-bearing trees: if the tree is at or near fruit-bearing stage, the estimated current market values of the fruit produce for 3 seasons. 3. Owners will be allowed to fell trees and take the timber, free of cost. 	<ol style="list-style-type: none"> 1. Applicable to all trees and plants located in acquisition area at cut-off dates. 2. District Collector/Project will pay applicable compensation for trees/plants. 3. District Collector with assistance from Department of Forestry and Department of Agriculture will recommend RV of trees and fruits. 4. Development of new nurseries facilities for fruit and non-fruit trees in new resettlement 	SRU to explain RAP policies regarding compensation for the trees of different categories and size and make the Entitled Persons (EPs) aware that they could take the timber and fruits free of cost.

		sites 5. Re-plantation of 5 trees per affected tree in the project area (covered under EMP)	
Implementation Issues:			
<p>1. Replacement value (RV) of timber and fruit bearing trees determined on rate basis negotiated by District Collector and with the affected Community/Jiga will be paid. In addition if the tree is at or near fruit-bearing stage, the estimated current market values of the fruit produce for 3 seasons; and</p> <p>2. The SRU will provide guidance in re-plantation and post-plantation care programs under Environmental Management Action Plan (EMAP).</p>			
Loss Item 8: Loss of Standing Crops			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Cultivators identified by District Collector through Land Acquisition Survey	<p>1. RV of standing crops.</p> <p>2. Owners will be allowed to harvest of standing crops prior to inundation.</p>	<p>1. Applicable for all crops standing on land within the acquisition area at the time of dispossession.</p> <p>2. District Collector with assistance from Director-SRU will pay for crops.</p> <p>3. District Collector with assistance from Department of Agriculture will recommend RV of crops at harvest.</p> <p>4. Crops grown after dispossession will not be paid any compensation</p>	SRU will assist EPs in the process of claiming compensation from District Collector office for preparing necessary documents.
Implementation Issues:			
RV of crops will be recommended by District Collector/Department of Agriculture (based on data obtained from District Agriculture Extension Office, Dasu) for those identified through Land Acquisition Survey conducted by District Collector.			
Loss Item 9: Loss of Leased/Mortgaged Land			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
1. Identified recognized lessee or sharecropper, with informal tenancy arrangements, including socially recognized verbal agreements.	<p>1. RV of crops.</p> <p>2. Outstanding lease money back to the lessee by the owner as per agreement.</p> <p>3. Dislocation allowance @ PKR 1500/-per kanal for actual cultivator to cover the income loss from the land</p>	<p>1. With customary tenancy agreements, including socially-recognized verbal agreements (certified and approved by the District Collector) , owner will receive compensation payment from District Collector. The owner will pay the outstanding liabilities to the lessee/mortgagee under the conditions that: (i) all contractual liabilities are already paid up; (ii) if not, the legal owner will get the residual payment after</p>	<p>1. SRU will assist in ensuring that the lessee receives all eligible payments.</p> <p>2. SRU will facilitate the refund of outstanding lease money by the owner to the lessees.</p>

APPENDIX-B [7/10]

		<p>all liabilities are paid up.</p> <p>2. District Collector will ensure the payment of RV of crops to the cultivator.</p> <p>3. Dislocation Allowance will be paid to the actual cultivator of the acquired land by District Collector/Project with assistance from SRU.</p>	
--	--	---	--

Implementation Issues:

1. Land Acquisition Survey conducted by District Collector will identify each land owner and any persons who presently have interest in the acquired land from formal/informal agreement.
2. Any disputes over status of present interest in the land will be resolved through grievance redress procedure. Once resolved, SRU will assist in processing payments of all outstanding liabilities on the land to the appropriate persons.
3. RV of crops will be determined by District Collector/Department of Agriculture (based on data obtained from District Agriculture Office, Dasu).
4. Dislocation Allowance to cover loss of income will be paid to the tenant as per project-specific policy provisions.

Loss Item 10: Loss of Income from Displaced Commercial Premises

Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Any proprietor or businessman or artisan operating in premises, at the time of issuance of Notice under section 4.	<ol style="list-style-type: none"> 1. Grant for Loss of Business @ 10% of District Collector's payment for the structure. 2. One time Moving Assistance of PKR 5000/-(Five thousand) for tenants. 3. Affected businesses to be relocated to the new market area to be established in nearby resettlement site or along KKH. 	<ol style="list-style-type: none"> 1. Business owners will be paid the entitlements after award of compensation by District Collector to the owner of premises. 2. The Project will directly pay the entitlement to the eligible affected persons with assistance from SRU. 	EPs will be brought under income generation program.

Implementation Issues:

1. Primary eligibility to be based on businessmen identified by DHC Census and verified by Land Tenure Survey conducted by District Collector.
2. All the business operators will be entitled for grant against loss of business and relocation to the new market area. The income-generating program will be implemented by the SRU with assistance from an organization experienced in rehabilitation and livelihood generation activities of resettled persons in similar hydropower projects in the area.

Loss Item 11: Temporary loss of income (wage earners in commerce & small business and industry)

Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Regular wage earners employed in businesses, commerce & industry in the affected area.	<ol style="list-style-type: none"> 1. Grant to cover temporary loss of regular wage income @ PKR 200/-(Two hundred) per day for only 90 days PKR 18000/-(Eighteen 	<ol style="list-style-type: none"> 1. EP must have been an employee of landowner or business located in the acquired lands for at least twelve months, as identified by the Census conducted by the Consultants (DHC 	<ol style="list-style-type: none"> 1. EPs will be brought under income and livelihood restoration programs to be implemented under RAP, and

APPENDIX-B [8/10]

	<p>thousand only) for farm labor; PKR 200/- (Two hundred) per day for only 90 days PKR 18000/-(Eighteen thousand only) for <i>Gujars</i> employed to look after livestock; PKR 250/- (Two hundred and fifty) per day for only 90 days PKR 22500/-(Twenty two thousand five hundred only); for wage worker at hotel/shops and restaurant Rs.300 (Three hundred) per day for 90 days PKR 27000/-(Two thousand only);</p> <p>2. A one-time grant of PKR 150,000/= (one hundred and fifty thousand) for <i>Soniwals</i> (identified during survey) <i>per</i> households engaged in gold extraction in the project affected area;</p>	<p>Census).</p> <p>2. The resettlement benefits will be paid by Project with assistance from SRU.</p>	<p>training programs, including the current technical and vocational training programs sponsored by the Project.</p> <p>2. Involvement of trained EPs in construction work.</p> <p>3. Involvement of trained EPs in tree plantation and social forestation programs under EMAP.</p>
Implementation Issues:			
Primary eligibility to be based on wage earners identified by the DHC Census and further verified by Director-SRU. Further claims and grievances, if any, will be settled by the grievance redress committee and Director-SRU.			
Loss Item 12: Loss of Income from Rented-out and Access to rented-in residential/ commercial premises			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
<p>1. Owner of the rented-out premises as identified by Census prepared by DHC and verified by District Collector/Director-SRU.</p> <p>2. Household/person rented-in any such structure as identified by Census prepared by DHC and</p>	<p>One time allowance of loss of income from rent in and rent-out be paid as PKR 10,000./-(Ten thousand) to owner and renter</p>	<p>1. Each renter of affected premises will be entitled for the dislocation allowance. The owners of rented out premises will be entitled for dislocation allowance for each unit of premises rented out to separate families or persons.</p> <p>2. Dislocation Allowance will be paid by Project with assistance from PRO/SRU.</p>	<p>1. EPs will be brought under income and livelihood restoration program to be implemented under RAP.</p>

APPENDIX-B [9/10]

verified by District Collector/Director-SRU.			
Implementation Issues:			
DHC Census and verification by District Collector/Director-SRU will establish the owner and renter of the residential and commercial premises.			
Loss Item 13: Households losing more than 10% of their income (from agriculture or business) due to the project			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Persons losing more than 10% of their income from all sources as identified by Census prepared by DHC and verified by District Collector /Director-SRU .	1. One time Dislocation Allowance @ PKR 10,000/- (Ten thousand) per household.	1.The one time Dislocation Allowance will be paid by Project with assistance from Director-SRU	1. EPs will be brought under income and livelihood restoration program. 2. EPs will also be included in the current project sponsored vocational training program training EPs for employment in project construction activities. 3. Involvement of trained EPs in Project construction work. 4. Involvement of trained EPs in tree plantation and social forestations programs. 5.
Implementation Issues:			
1. Loss of income had been assessed as per actual loss of productive resources (land and businesses) by the project and the total income of the affected households from all sources through Census of all affected households. 2. PRO will verify the percentage of loss comparing the actual loss and the total income from all sources of the affected households.			
Loss Item 14: Loss of Livelihood (Non-cash Entitlement)			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Households/persons affected by loss of livelihood	1. Free Vocational Training will be provided to the people of affected area. 2. Free horticulture training will be provided to the people of affected area. 3. Training in fish hatchery operations and sustainable fishery will be	1. A pro-active program to this end has already been started by WAPDA: local youths are receiving a six-month vocational training program in various lines of work to prepare them for guaranteed jobs in the project construction work or elsewhere.	1.PAPs will also be included in the current project sponsored vocational training program 2.training PAPs for employment in project construction activities.

APPENDIX-B [10/10]

	<p>provided to the people of affected area.</p> <p>4. 4.Jobs in the project will be provided to the people of affected area</p> <p>5. 5. Inclusion in area development programs implemented with ADF</p>	<p>2. Priority will be given to affected households for working in project construction activities.</p> <p>3. List target groups, needs assessment, and selection during implementation,</p>	
Implementation Issues: Area development programs including sustainable income generation activities and training, micro credit and entrepreneurial training etc. will be planned and implemented by Assistant Director, Training and Livelihood, in the long term, with funding from Area Development Fund.			
Loss Item 15: Public Structures such as Hospital/Dispensaries, School, etc			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Concerned Department	Replacement of affected structures	WAPDA and concerned department with the help of District Collector will be responsible for the replacement of the affected public structures at appropriate site with the financial assistance of the project.	After the construction of the affected public structure, the said structure will be handed over to the concerned department who will be responsible for the further maintenance and operation.
Implementation Issues:			
Loss Item 16: Unforeseen Adverse Impacts			
Unit of Entitlement	Entitlements	Application Guidelines	Additional Services
Households/persons affected by any unforeseen impact identified during RAP implementation	Entitlements will be determined as per the resettlement policy framework	The unforeseen impacts will be identified through special survey by the SRU. The entitlements will be approved by PMU/WAPDA and concurred by the World Bank	APs affected by unforeseen impacts as additional relocation due to blasting and dust, construction associated activities will be accommodated by this compensation by SRU with facilitation by CE/Dy. Project director-Safeguards
Implementation Issues:			
The unforeseen impacts and affected persons will be identified with due care as per policy framework and proposed to WAPDA and World Bank for approval including details as quantity of losses, their owners and the entitlements.			

