United States Agency For International Development

Initial Environmental Examination

of the

Sar-e-Haus Dam Rehabilitation Project

A part of the Rehabilitation of Economic Facilities and Services (REFS) Program

Contract 306-C-00-02-00500-00

Prepared By:

The Louis Berger Group, Inc.

2300 N Street NW

Washington, DC 20037

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ACRONYMS/GLOSSARY

LIST OF ACRONYMS/GLOSSARY

A

ACCA	Afghan Assistance Coordination Authority
ACIA	Afghanistan Civil Infrastructure Assessment
ADB	Asian Development Bank
AIA	Afghanistan Interim Administration

B

BOD	Biological Oxygen Demand

C

CFR	Code of Federal Regulations
COPA	Conditions of Particular Application
CSC	Construction Supervision Consultant

D

dB	Decibel
DO	Dissolved Oxygen

E

EA	Environmental Assessment
EIA	Environmental Impacts Assessment

F

FIDIC	*Federation International Des Ingenieurs Conseils* (International Federation of Consulting Engineers)

G

GC	General Contractor
GCOC	General Conditions of Contract
Gozar	Neighborhood
GoA	Government of Afghanistan
GPD	Gross Domestic Product
GPS	Global Positioning System

H

Ha	Hectare

I

ICB	International Competitive Bidding
IDA	International Development Association
IEE	Initial Environmental Examination
ISAF	International Security Assistance Forces
ICUN	International Union for the Conservation of Nature

J

K

KM	Kilometer

L

LCB	Local Competitive Bidding

M

MHBTP	Ministry of Housing, Building and Town Planning
MIWRE	Ministry of Irrigation Water Resources and Environment
MMI	Ministry of Mines and Industry
MOC	Ministry of Communications
MOI	Ministry of Interior
MOIC	Ministry of Information and Culture
MOP	Ministry of Power
MPW	Ministry of Public Works
MSL	Mean Sea Level

N

NGO	Non-Governmental Organization
NMT	Non-Motorized Traffic
NO	Nitrogen Oxide

P

Pb	Lead
PCF	Post Conflict Fund

R

REFS	Rehabilitation of Economic Facilities and Services

S

SE	Supervising Engineer
Shura	District (typically 15-20 *gozars*)
SPM	Suspended Particulate Matter
SS	Suspended Solids

STD Sexually Transmitted Disease

T

TOR Terms of Reference
TSP Total Suspended Particulate

U

UN United Nations
UNDP United Nations Development Fund
UNEP United Nations Environment Program
UNMAC United Nations Mine Action Center
USAID United States Agency for International Development
USAID/GC USAID General Contractor
UXO Unexploded Ordnance

V

W

X

Y

Z

SUMMARY OF FINDINGS

INITIAL ENVIRONMENTAL EXAMINATION
Of The:
SAR-E-HAUS DAM REHABILITATION PROJECT
Proposed As Part Of The
REHABILITATION OF ECONOMIC FACILITIES AND SERVICES (REFS) PROGRAM
With Funding Provided By
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
Contract 306-C-00-02-00500-00
AUGUST 2004

Summary of Findings

Proposed Action. The United States Agency for International Development (USAID) proposes to fund the Sar-e-Haus Dam Rehabilitation Project as a part of its Afghanistan Rehabilitation of Economic Facilities (REFS) Program. The dam is located in the Southern part of Faryab Province, Pashtun Kot District, approximately 40 kilometers south of Maimana City at the foot of the Terban-I-Tukestan Mountains.

Examination Methodology. Pursuant to Environmental Procedures established by Title 22 of the U.S. Code of Federal Regulations, Part 216 (22 CFR 216), USAID made a *Positive Determination* for REFS Component 1 (the Component of with the proposed Project is a part), i.e., a determination that environmental documentation will be required on a project-by-project basis. The Determination noted that "*Not all infrastructure activities financed under Component 1 will require (a full) Environmental Assessment. The Contractor shall conduct environmental screening to identify and document those infrastructure activities that are smaller in scale and lower in risk. For these activities, the Contractor shall prepare environmental guidelines that will be used to minimize and mitigate potential environmental impacts. Included in the guidelines will be an environmental mitigation checklist to be completed as a part of final design for each project…. The guidelines will also describe procedures for monitoring construction activities to assure that identified mitigation measures have been implemented as planned" (*USAID Environmental Threshold Decision, REFS Program, 24 October 2002). The Initial Environmental Examination (IEE) has been structured to provide the required guidelines and to provide the procedural documentation to support a project-level Threshold Decision (i.e., a determination whether a full project-level EA is or is not warranted) based on environmental screening criteria pursuant to the requirements of 22 CFR 216 and other environmental considerations.

Findings and Recommendations. The IEE recommends a determination that an EA is not warranted, provided that the recommended environmental guidelines (incorporating a checklist for use as a part of final Project design and a recommended monitoring program) are adopted. To facilitate the adoption the IEE provides:

- Recommended Environmental Contract Provisions (**Appendix A**); and
- Guidelines for the compensation of project-affected persons (PAPs) for use in the event that unexpected impacts are encountered (**Appendix B**).

The IEE also recommends actions beyond the scope of the Project, but within the scope of the REFS Program, specifically:

- Identification of specific institutional strengthening activities to ensure that the rehabilitated intake is adequately maintained (as part of REFS Component 2) ; and
- Development of a coordinated water resources program as the context for additional water-related projects in the REFS Program.

- Coordinate with other Financing Organizations

1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 PURPOSE OF THE IEE

This document presents an Initial Environmental Examination (IEE) of the Sar-e-Haus[1] Dam Rehabilitation Project (the Project) proposed for funding by the United States Agency for International Development (USAID) as part of its Afghanistan Rehabilitation of Economic Facilities and Services (REFS) Program. The purpose of the IEE is to ensure that environmental issues have been foreseen in its development and implementation plans. The administrative and strategic context provided by the REFS Program is explained in **Item 1.2** below. Details of the proposed Project are provided by **Section 2.0**, Project Description.

To ensure that environmental issues associated with projects such as the Sar-e-Haus Dam Rehabilitation are adequately foreseen, all projects identified for funding by USAID are subject to the Environmental Procedures established by Title 22 of the U.S. Code of Federal Regulations, Part 216 (22 CFR 216). Unless they are categorically excluded as a meeting established criteria (including a criterion which states that the project "*does not have an effect on the natural or physical environment*"), all projects require the preparation of an IEE and/or an Environmental Assessment (EA).[2] The intent of the IEE is to allow a "Threshold Decision" defined by the regulations as a "*formal Agency decision which determines….whether a proposed Agency action is a major action significantly affecting the environment*" and, therefore, does require preparation of an EA (referred to as a "Positive Determination"); or, conversely, finds the data and safeguard commitments provided by the IEE are sufficient to conclude the contrary i.e., a finding that there is sufficient analysis to conclude that the Project will not have an adverse effect on the environment (referred to as a "Negative Determination"). A Negative Determination allows the project to proceed without further environmental investigation except as may be noted in the conditions of the determination. The IEE step is not always necessary. Certain categories of projects are generally deemed to have a significant effect on the environment <u>may</u> proceed directly to the preparation of an EA. For all other projects, however, and for projects <u>generally</u> deemed to have a significant effect but for which the originator of the project "*believes that the project will <u>not</u> have a significant effect on the environment*", preparation of an IEE is an essential step in the project approval process.

The Sar-e-Haus Dam Project, like any rehabilitation project, will have some effect on the physical and natural environment and does not qualify for a categorical exclusion. The IEE as documented herein, however, indicates that:

- These effects will be beneficial;
- The Project will not be undertaken in a highly sensitive environment that would raise concerns to a level requiring the preparation of an EA (as documented by **Section 3.0**, Environmental Screening);
- The potential less-than-significant adverse impacts generally associated with rehabilitation projects can be avoided through the provisions stipulated herein (**Section**

1 Sar-e-Haus is also labeled on various maps as Sar-e-Howz (by Afghanistan Information Management System, AIMS) and as Sary Khauz (International Travel Maps). It is referred to as Sar-e-Haus for consistency with previous LBG reports.

2 Projects having as potential for impact on the global environment or outside the jurisdiction of any country may require the preparation of an Environmental Impact Statement as defined by the National Environmental Policy Act. None of the actions discussed herein fall within this definition.

4.0, Environmental Guidelines); and

- A Negative Determination is recommended (**Section 5.0**).

Details are as follows.

1.2 ADMINISTRATIVE & STRATEGIC CONTEXT

The REFS Program of which the Sar-e-Haus Dam Rehabilitation Project is a part was developed on the basis of an Afghanistan Civil Infrastructure Assessment (ACIA) for which field investigations were undertaken in the period from 13 June to 18 July 2002 and documented by a Final Report to USAID/Afghanistan on 20 August 2002. The purpose of the ACIA was to identify and prioritize Afghanistan's civil infrastructure and its reconstruction, repair and rehabilitation needs and the need for agricultural market centers. The ACIA recommended a prioritized program for:

- Labor-intensive inter-provincial road rehabilitation projects;
- Development of rural market centers ;
- Major roads and bridge projects;
- A National Secondary Roads Program; and
- A National Primary Roads Program.

The REFS Program was developed on the basis of the ACIA specifically "*to promote economic recovery and political stability in Afghanistan by repairing selected infrastructure needed to lower transportation cost, improve the provision of water and sanitation services, increase access to education, health and local government facilities, restore electrical transmission and distribution systems, and repair/reconstruct irrigation systems, dams/diversions and canals critical to the reactivation of the agricultural sector, the dominant means of livelihood in the country.*"[3]

To achieve these goals, the REFS Program consists of three components:

- Rehabilitation and Construction Projects (Component 1);
- Institutional strengthening of selected public services (Component 2); and
- Purchase, importation and distribution of construction materials and supplies not otherwise available in Afghanistan (Component 3).

In accordance with its internal procedures and in accordance with the regulations as outlined above, USAID made a Positive Determination for REFS Component 1, i.e., a determination that environmental documentation will be required on a project-by-project basis for projects involving civil works. Component 2 was determined to warrant a Categorical Exclusion, i.e., a determination that the component meets the pre-established criteria rendering an EA unnecessary. A Negative Determination was made in regard to Component 3, i.e., a determination that, after due consideration, an EA is unnecessary for this component.

In regard to the Component 1 activities the Determination specifically noted that "*Not all infrastructure activities financed under Component 1 will require an Environmental Assessment. The Contractor shall conduct environmental screening to identify and document those infrastructure activities that are smaller in scale and lower in risk. For these activities, the Contractor shall prepare environmental guidelines that will be used to minimize and mitigate potential environmental impacts. Included in the guidelines will be an environmental mitigation checklist to be completed as a part of final design for each project.*

3 REFS Contract, page C-2.

Where the analysis indicates that negative environmental effects could occur, the project will be designed to avoid or mitigate those effects. The guidelines will also describe procedures for monitoring construction activities to assure that identified mitigation measures have been implemented as planned".[4]

The IEE provides the required screening in regard to the Sar-e-Haus Dam Rehabilitation Project in **Section 3.0**. The recommended environmental guidelines are presented in **Section 4.0**. Based on these findings and application of the guidelines, it has been concluded that the IEE leads to a Negative Determination i.e., that the preparation of an EA is not required provided that the recommendations presented herein are incorporated in the Project. The conclusion and its rationale are presented in **Section 5.0**.

1.3 ORGANIZATION OF THE IEE

The IEE is organized as follows:

- **Section 1.0: Introduction.** The section in hand provides introductory information.

- **Section 2.0: Project Description**. Section 2.0 presents details of the proposed Project and a description of the existing environmental policies and procedures in Afghanistan.

- **Section 3.0: Environmental Screening**. Section 3.0 presents the relevant environmental criteria as identified based on USAID regulations, and additional environmental considerations and issues associated with rehabilitation projects and the specifics of the Sar-e-Haus Dam Project. The discussions of the criteria present statements of:

  - Existing Conditions;
  - Potential Impacts and Anticipated Design Avoidance/Mitigation Actions; and
  - Additional Recommendations.

- **Section 4.0: Environmental Guidelines**. The Environmental Guidelines presented in Section 4.0 present:

  - A Recommended Checklist - Completion of the Checklist is recommended as a part of final Project design; and
  - Recommended Monitoring.

- **Section 5.0: Recommended Threshold Decision**. Section 5.0 recommends a determination that the preparation of an EA is not warranted based on the data and rationale presented therein.

4 USAID Environmental Threshold Decision, REFS Program, dated 4 September 2002, signed 24 October 2002.

2.0 PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

2.1 OVERVIEW

The Sar-e-Haus Dam is located in Pashtun Kot District 40 kilometers south of Maimana City (N35º 46' 36.22" E64º 48' 23.65"). The dam is the largest dam in northwestern Afghanistan and sits at the foot of the Terban-I-Tukestan Mountains, which form the headwaters of the Maimana River.

The dam is situated at 1676 meters above mean sea level (msl) and provides water for irrigation and domestic use for the people of 60 villages and Maimana City. The water irrigates over 37,000 hectares of farmland that produces most of the food requirements for the people of Faryab.

Exhibit 2-1 illustrates the location of the Project within the context of the REFS Irrigation Program, **Exhibit 2-2** indicates the Projects location within Faryab Province. Details of the existing conditions in the potentially affected area are provided item-by-item under the headings of the relevant environmental criteria in **Section 3.0**.

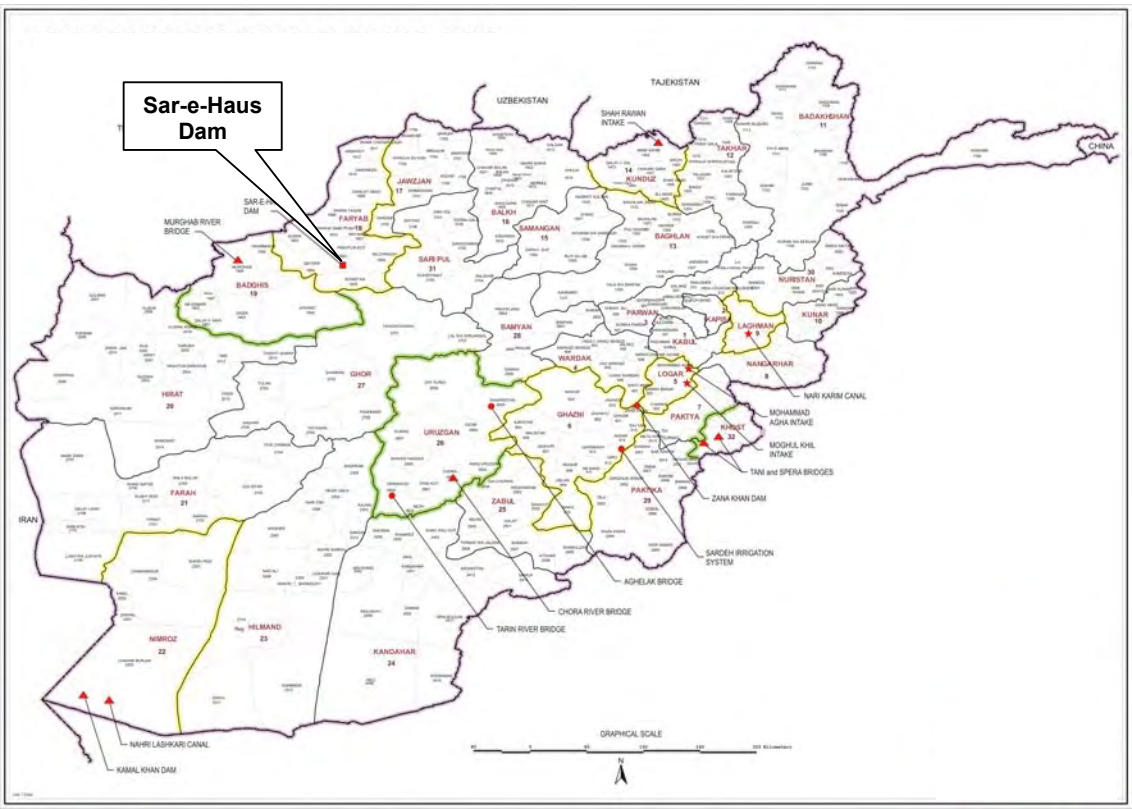


EXHIBIT 2-1. REFS IRRIGATION PROGRAM

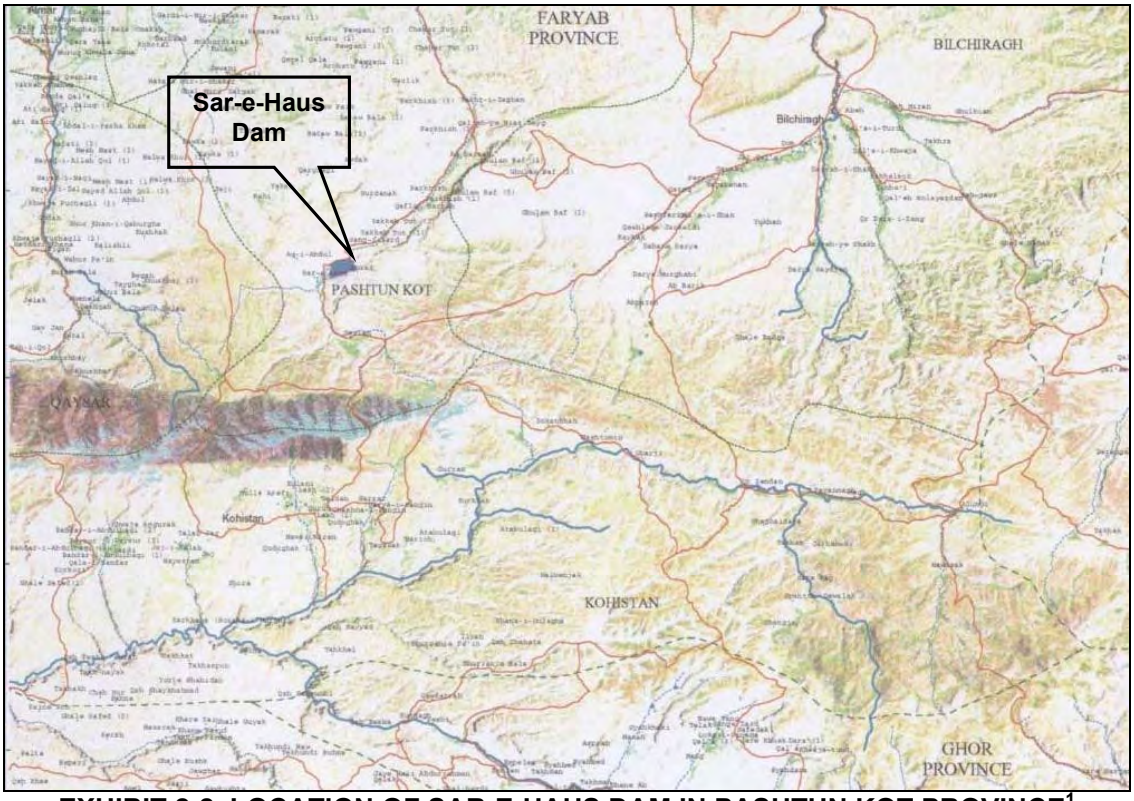


EXHIBIT 2-2. LOCATION OF SAR-E-HAUS DAM IN PASHTUN KOT PROVINCE[1]

2.2 DETAILS OF THE PROPOSED ACTION

The works to be undertaken on the Project include the following:

- Construction of a new spillway
- Construction of a new diversion channel
- Construction of a siphon to convey water flowing in an existing canal across the diversion channel
- Erosion protection works, especially at the terminal end of the structures
- Removal of sediment from the reservoir, thus increasing storage capacity.

Other works may be considered in the future, they include increasing the crest of the dam by 1.5m to increase the capacity of the dam by approximately 8 million cubic meters. However, such works do not fall within the current remit of this project and accordingly are not discussed herewith.

All repairs shall be made so that the irrigators and other water users are not inconvenienced, especially during the time when water demand is at its peak (April).

The estimated cost for the Project is approximately $350,000. It has been determined that the Sar-e-Haus Dam rehabilitation will be conducted under the supervision of a USAID Prime Contractor and one or more sub-contractors who will undertake the Project's civil works.

1. Pahstun Kot is also labeled as Pashtun Kol (by Afghanistan Information Management System, AIMS). It is referred to as Pashtun Kot for consistency with previous LBG reports.

EXHIBIT 2-4. SAR-E-HAUS DAM

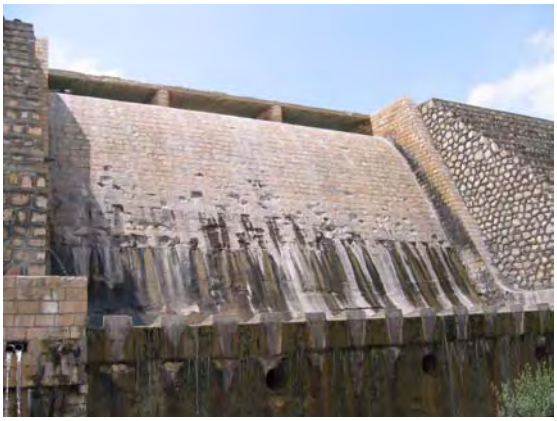


EXHIBIT 2-5. SAR-E-HAUS DAM EXISTING SPILLWAY

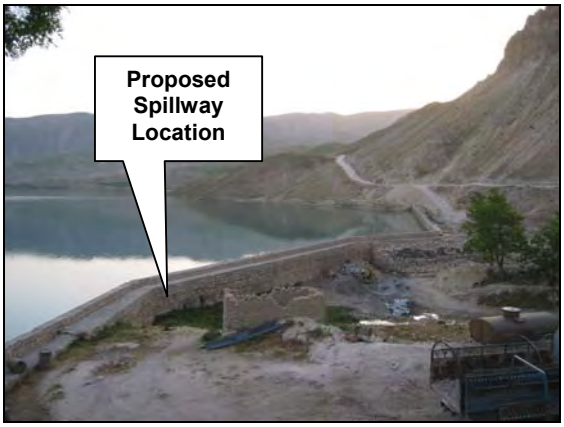


EXHIBIT 2-6. SAR-E-HAUS DAM INDICATING LOCATION OF PROPOSED SPILLWAY

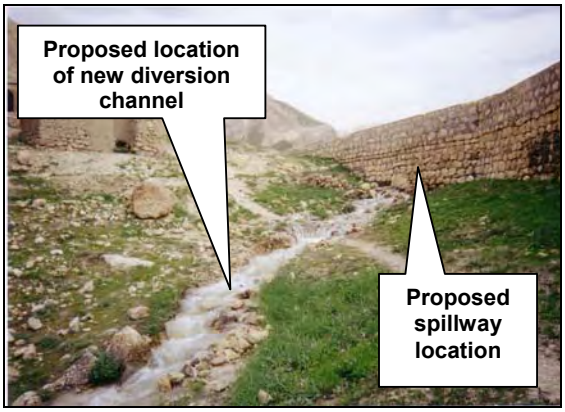


EXHIBIT 2-7. EXISTING SEEPAGE AT LOCATION OF PROPOSED SPILLWAY

2.3 AFGHAN ENVIRONMENTAL POLICIES AND PROCEDURES

2.3.1 General

In June 2002, for the first time in the history of Afghanistan, an authority for environmental management was mandated in the newly formed government – The Ministry of Irrigation, Water Resources and Environment (MIWRE). A Department of Environment has been created within MIWRE but it does not, at present, have any dedicated staff working specifically on environmental issues and comprises exclusively the Minister, the Deputy Minister for environmental affairs and the Director of Planning. The United Nations Environment Program (UNEP) is currently undertaking a capacity-building program to develop the Department and environmental policies.

2.3.2 Legislative Framework

In the current transition period, it has been determined (Bonn Agreement, 2001) that the 1964 constitution enacted under the monarchy shall continue to govern Afghanistan's legal system. Based on this legal framework, the following laws containing important and valid environmental provisions have been identified:

Environmental Law	Date
Water Law	1981
The Forestry Law	2000
Law for Land Ownership	2000
Nature Protection Law	1986/2000
Hunting and Wildlife Protection Law	2000
Range Management Law	2000
Agriculture Cooperative Development Law	2000
Charter for the Development of Fertilizer and Agro-chemicals	2000

None of the current laws accurately reflect the new institutional arrangements, or contain modern provisions for environmental management. MIWRE has begun to draft a new set of environmental legislation. In the absence of adequate environmental legislation, the Transitional Authority has issued various decrees of sorts banning certain activities, such as hunting. However, it has proven difficult to enforce these measures for reasons such as lack of human resources, funding and, as identified above, lack of capacity.

2.3.3 Local Governance

Throughout its history governance in Afghanistan has been largely based on the provincial, municipal and local levels, and accordingly natural resources are also often managed at these levels rather than centrally in Kabul. For example, water resources were frequently managed by a Mirab (water master) elected by farmers to make key decisions on water distribution, operations and maintenance, as well as to be a link with the government water personnel.

Years of conflict have damaged this local decision-making structure resulting in disparate and fragmented systems. However, given that nearly 80 percent of the population is located in rural areas, the Government has identified a strong future for the re-establishment of local level, community based environmental management.

2.3.4 Afghan Environmental Assessment Procedures

No formal EIA process has been, or is in place, in Afghanistan. As a result many projects, such as deep-well drilling or large-scale irrigation projects, are being conducted without considering the environmental consequences of such activities. Additionally, there is no consistent application of EIA amongst donor agencies and international organizations currently working in the country. Currently UNEP are attempting to establish EIA policy.

3.0 ENVIRONMENTAL SCREENING

3.0 ENVIRONMENTAL SCREENING

As noted in Section 1.2, USAID has determined that REFS Component 1 activities require an environmental screening to identify the appropriate level of documentation for infrastructure activities. This section of the IEE provides the necessary screening for the Sar-e-Haus Dam Rehabilitation Project.

3.1 SCREENING METHODOLOGY

Introduction. To establish the context for the environmental screening, the following:

- Reviews the definition of environmental criteria as established by the applicable USAID regulations and other considerations;
- Defines the Project Area for the purpose of the screening;
- Explains the screening process used to identify:
  - Potential impacts based on the proposed actions and the sensitivity of the environment in which they will occur;
  - Provisions to avoid or otherwise mitigate actions incorporated in the Project; and
  - Additional recommendations.

A summary table of the screening process is presented by **Exhibit 3-1**. Application of the screening process is documented in **Items 3.2** through **Item 3.5**.

Potential Impact Identification Methodology. Potential impacts have been identified on the basis of experience on similar projects and in similar circumstances; and, insofar as possible, a "scoping process" incorporating consultations with local stakeholders with intimate knowledge of the Project Area. Persons beyond the immediate Project Area having expertise relevant to the environmental aspects of the proposed action have consulted in the process, including representatives of the Afghan and local host governments, public and private institutions, the USAID Mission staff and the staff of other concerned agencies such as the UNEP. A list of organizations and individuals contacted is provided by **Appendix B**.

Environmental Criteria. The environmental criteria applied in the screening process have been determined on the basis of applicable USAID regulations and other considerations as follows:

- **Applicable USAID Regulations**. Paragraph 216.1 (c) (10) of the Agency Environmental Procedures states that the "*term environment, as used in these procedures with respect to effects occurring outside the United States, means the natural and physical environment".* Accordingly, the screening addresses:

  Item 3.2 (Physical Resources). Physical resources are generally defined to include topographic, soil, geological and related attributes. Sub-headings in this section are:

  - Topography (Item 3.2.1)
  - Soils (Item 3.2.2)

EXHIBIT 3-1
POTENTIAL IMPACTS AND MITIGATION

ENVIRONMENTAL CRITERIA	POTENTIAL IMPACTS	Avoidance / Mitigation Action
1.0 PHYSICAL RESOURCES		
1.1 Topography & Land Forms	Embankments	Provisions for the treatment of slops to ensure stabilization are incorporated in the contract provisions. No borrow pits will be excavated.
	Quarry Operations	Only licensed quarrying operations are to be used; if licensed quarries are not available the Sub-Contractor will be responsible for setting up their dedicated crusher plants at approved quarry sites.
	Erosion/Scour	Rehabilitation of an existing spill ways and other drainage facilities is planned. Accordingly, no significant adverse erosion/scour impacts area anticipated. No mitigation actions required.
1.2 Soils	Erosion/Scour	See **1.1** above.
	Contamination Due to Spills	Fuel and chemical storage will be sited on an impervious base within a bund and secured by fencing. The storage area shall be located away from any watercourse or wetlands. The base and bund walls shall be impermeable and of sufficient capacity to contain 110 percent of the volume of tanks. Filling and refueling shall be strictly controlled and subject to formal procedures. All valves and trigger guns shall be resistant to unauthorized interference and vandalism and be turned off and securely locked when not in use. The contents of any tank or drum shall be clearly marked. Measures shall be taken to ensure that no contaminated discharges enter any drain or watercourses. The contract specifications also require the preparation of an Emergency Response Plan to deal with accidents and emergencies, including environmental/public health emergencies associated with hazardous material spills and similar events.
1.3 Seismic & Geological Characteristics	Demand for Quarried Materials	Only licensed quarrying operations are to be used; if licensed quarries are not available the Sub-Contractor will be responsible for setting up their dedicated crusher plants at approved quarry sites.
	Seismic Vulnerability	Earthquake Loading Design is specified for the Project.
1.4 Hydrology	Surface Hydrology	No significant interruptions or diversions or flow are anticipated. No significant increase in water usage is anticipated. Potential impacts during the rehabilitation process will be mitigated through coordination with local land use planning authorities and local residents. Construction camps and other potential sources of secondary impacts must be properly sited and provided with drainage and wastewater facilities. During rehabilitation all projects works should impact as little as possible on the supply of water to the downstream irrigation system and subsequent agricultural lands. There will be no disruption to water supply during canal rehabilitation works, all waters shall be diverted to ensure constant supply. Rehabilitation activities should be timed so minimal disruption to agricultural areas is achieved. On embankment areas less than three meters in height and where surface runoff is low, ditches shall be placed adjacent to the toe. For higher fills (if any), the ditch shall be separated from the fill by a three-meter wide bench. Construction-related interference with the supply to, of abstraction from, of the pollution of, water resources is prohibited. The Sub-Contractor shall not discharge or deposit any matter arising from the execution of the Work into any waters except with the permission of the regulatory authorities concerned. Existing stream courses and drains must be kept safe and free from any debris and any materials.
	Area Wetland	No wetlands of significant biological importance are within the potentially affected area. No mitigation actions, other than those incorporated in the Project, are warranted.
	Subsurface Hydrology	No impacts to subsurface hydrology are anticipated. The Sub-Contractor is required to prevent interference with the supply to, of abstraction from, or pollution of, water resources including underground percolating water…"
	Flood characteristics	No impacts resulting from flood conditions are anticipated. Improvements to the crest of the dam wall are anticipated to reduce the potential for flooding of land downstream of the dam. No mitigation actions required.
1.5 Air Quality &	Rehabilitation	- The Sub-Contractor will be required to spray road surfaces, excavation

Climate	Impacts	and construction sites. - Trucks carrying earth, sand or stone will be covered with tarps. - Contract provisions allow suspension of work in unfavorable condition. - Machinery and equipment will be fitted with pollution control devices and checked at regular intervals. - Open burning will be prohibited in populated areas.
1.6 Mines and Unexploded Ordnance	Uncontrolled Detonation	The Project has received a Certificate from the United Nations Mine Action Center that there are no mines/UXO at or near the site.
2.0 NATURAL/BIOLOGICAL RESOURCES		
2.1 Flora	Destruction of Habitat	The project is not anticipated to have significant negative impacts to flora within the vicinity of the Dam. Rehabilitation of the dam is expected to have positive impacts on local flora and vegetation habitat.
2.3 Fauna	Destruction of Habitat	The project is not anticipated to have significant negative impacts to fauna within the vicinity of the Dam.
2.3 Aquatic Habitat	Destruction of Habitat	The project is not anticipated to have significant negative impacts on natural habitats within the vicinity of the Dam.
2.4 Protected Areas	Rehabilitation Impacts	There are no protected areas within 100 kilometers of the Project site.
3.0 OTHER ENVIRONMENTAL CONCERNS NOTED BY 22 CFR 216		
3.1 Land Use and Development Policies and Controls	Potential PAPs Impacts	Potential impacts to project-affected persons (PAPs) as that term is generally defined by the international assistance community (i.e., persons whose livelihood is directly or indirectly affected by a project) have been identified and a mitigation program has been devised as described herein.
	Rehabilitation Impacts	Coordination with local land use planning authorities is required. Construction camps and other potential sources of secondary impacts must be properly sited and provided with drainage and wastewater facilities.
	Operational Impacts	Impacts are expected to be minimal. No mitigation actions warranted.
3.2 Energy & Conservation	Exploitation of Energy Resources	Impacts are expected to be minimal. No mitigation actions warranted.
	Demand for Petroleum Products	Impacts are expected to be minimal. No mitigation actions warranted.
3.3 Use of Natural / Depletable Resources	Exploitation of Natural Resources	Impacts are expected to be minimal. No mitigation actions warranted.
	Demand for Construction Materials	Impacts are expected to be minimal. No mitigation actions warranted.
3.4 Urban Quality / Design of the Built Environment	Impacts to Roadside Structures and Activities	Impacts are expected to be minimal. No mitigation actions warranted.
3.5 Historic & Cultural Resources	Demolition or Damage Due to Rehabilitation	No sites of historical or cultural significance have been observed within vicinity of the Project that maybe affected by Project activities. However, contractors are required to consult with provincial-level representatives of the Archaeological Committee under the Ministry of Information and Culture, obtain any necessary clearances in regard to historic and cultural resources prior, and provide written documentation of these consultations to the Contractor prior to the initiation of work. In the event of unanticipated discoveries of cultural or historic artifacts, the Sub-Contractor is obligated to shall take all necessary measures to protect the findings and shall notify the Contractor and provincial-level representatives of the Archaeological Committee and the Ministry of Information and Culture. If continuation of the work would endanger the finding, project work shall be suspended until a solution for preservation of the artifacts is agreed upon.

4.0 ADDITIONAL ENVIRONMENTAL CONCERNS RAISED BY SIMILAR PROJECTS		
4.1 Socio-Economic Considerations	Impacts are Deemed Beneficial	No mitigation actions warranted.
4.2 Public Health & Safety	Disease Transmission	The Sub-Contractor is required to provide basic emergency heath facilities for worker; and encourage programs aimed at the prevention of sexually transmitted diseases as a part of all construction employee orientation programs.
	Access to Heath Facilities	Access to health facilities will not be affected by Project activities. No mitigation actions required.
	Contamination Due to Spills	See **1.4** above.
	Air and Noise Impacts	See **1.5** above.
4.3 Noise	Noise impacts to Sensitive Receptors	Impacts are expected to be minimal. No mitigation actions required other than those specified on contract provisions.
4.4 Other Infrastructure Networks	Water Supply & WW Collection Networks	Impacts are expected to be minimal. No mitigation actions warranted.
	Irrigation Systems	Impacts will be beneficial.

- Seismic & Geological Conditions (Item 3.2.3)
- Hydrology (Item 3.2.4)
- Climate and Air Quality (Item 3.2.5)
- Mines and Unexploded Ordnance (Item 3.2.6).

Item 3.3 (Natural/Biological Resources) - the natural/biological aspects of the potentially affected environment. These are discussed under the sub-headings of:

- Flora (Plant Species) (Item 3.3.1)
- Fauna (Wildlife) (Item 3.3.2);
- Aquatic Habitat (Item 3.3.3); and
- Protected Areas (Item 3.3.4).

In addition to these requirements, Paragraph 216.6 of the Procedures states that "… *Environmental Assessment(s) should include discussions of ….. possible conflicts between the proposed action and land use plans policies and controls for the areas concerned; energy requirements and conservation potential of various alternatives and mitigation measures; natural or depletable resource requirements and conservation potential of various requirements and mitigation measures; urban quality; historic and cultural resources; design of the built environment; reuse and conservation potential of various alternatives and mitigation measures; and means to mitigate adverse environmental impacts*". Accordingly, these issues are addressed under the following heading and subheadings:

Item 3.4 (Other Environmental Concerns Noted by 22 CFR 216) describes these aspects of the environment under the following sub-headings:

- Land Use and Development Policies & Controls (3.4.1)
- Energy & Conservation (3.4.2)
- Use of Natural/Depletable Resources (3.4.3)
- Urban Quality/Design of the Built Environment (3.4.4)
- Historic and Cultural Resources (3.4.5)

- **Additional Considerations Generally Associated with Rehabilitation Projects.** Additional environmental issues are generally associated with rehabilitation projects and are addressed as:

  Item 3.5 (Additional Environmental Concerns Noted for Consideration). These are discussed under the sub-headings of:

  - Socio-Economic Considerations (Item 3.5.1);
  - Public Health and Safety (Item 3.5.2),
  - Noise (Item 3.5.3) and
  - Other Infrastructure Networks (Item 3.5.4).

Definition of the Project Area. The potentially impacted area of a given project (generally referred to as the Project Area) is defined by the nature of the proposed action and the sensitivity and circumstances of the environment in which it will occur.

Potential direct impacts of a project such as the Sar-e-Haus Dam will be largely confined to the Project's construction limits and immediately adjacent environs. The conceptual limits of the Project Area must be expanded, however, to include the potential impacts of network improvements and other indirect and cumulative impacts in accordance with the circumstances of the particular environmental characteristic under discussion.

The scope of the examination must be expanded to ensure that environmental impacts of potential down-stream hydraulic impacts, for example, are taken into account. Generally, however, given the limited nature of the action included in the Project limit the potential for direct impact to the immediate environs of the dam. Indirect impacts may also occur downstream of the dam.

Types of Impacts Considered. Environmental consequences resulting from the impacts of rehabilitation projects include:

- Direct Impacts - i.e., those directly due to the Project itself such as the conversion of land previously used for agricultural. Direct impacts also include the impact of rehabilitation expenditures in the local economy.

- Indirect Impacts - i.e., those resulting from activities prompted by the Project, but not directly attributable to it. The use of rock or crushed brick for project works, for example, has an indirect impact of increasing the demand for these materials.

- Cumulative Impacts - i.e., impacts in conjunction with other activities.

Impacts in all three categories may be either:

- Short-term – i.e., impacts which occur during rehabilitation and affect land use, air quality and other factors. Many of these impacts, however, will be short-lived and without long-lasting effects. Even the effects of some relatively significant impacts may be eventually erased if appropriate mitigation actions are taken. Many potential short-term negative impacts can be avoided or otherwise mitigated through proper engineering designs and by requiring Sub-Contractors to apply environmentally appropriate construction methods. Or;

- Long-term – Long-term negative impacts can result from the loss of agricultural land to other land uses; air and water pollution and haphazard growth.

Both short-term and long-term impacts may be either beneficial or adverse. Short-term positive impacts will include, for example, the generation of employment opportunities during the rehabilitation period. Long-term benefits will include enhanced development opportunities, improved agricultural output and economic growth.

Determination of the Scope & Significance of Issues. To determine the scope and significance of issues to be analyzed, including direct and indirect effects of the Project on the environment, the following examines each environmental criterion identified above and presents:

- Existing Conditions. The current statement of existing conditions is drawn primarily from site observations in June 2003 and April 2004.

- Potential Impacts and Avoidance/Mitigation Measures. Potential impacts and measures incorporated in the Project to avoid or otherwise mitigate the potential impacts are identified. These include measures incorporated in contracting procedures and the Project design. Cognizance of the Project's design and contracting provisions is deemed to be an important means of "*narrowing the discussion of these issues to a brief presentation of why they will not have a significant impact on the environment"* in accordance with the 22 CFR 216 Procedures.

- Additional Recommendations. The examination also identifies the issues for which mitigation beyond that already incorporated in the Project design and standard contracting procedures are considered warranted, including recommendations beyond the scope of the Sar-e-Haus Project, but within the scope of REFS.

3.2 PHYSICAL RESOURCES

3.2.1 Topography

Existing Conditions. Approximately 65 percent of Afghanistan's land area is mountainous, with more than a quarter above 2,500 meters above mean sea level (msl). The site of the Sar-e-Haus Dam is located in the Pashtun Kot District within Faryab Province at the foot of the Terban-I-Tukestan Mountains. The dam is situated at an elevation of 1676 meters above msl. No unusual topographic conditions in the area have been identified. **Exhibits 3-2 & 3-3** illustrate the topography within the vicinity of the dam.

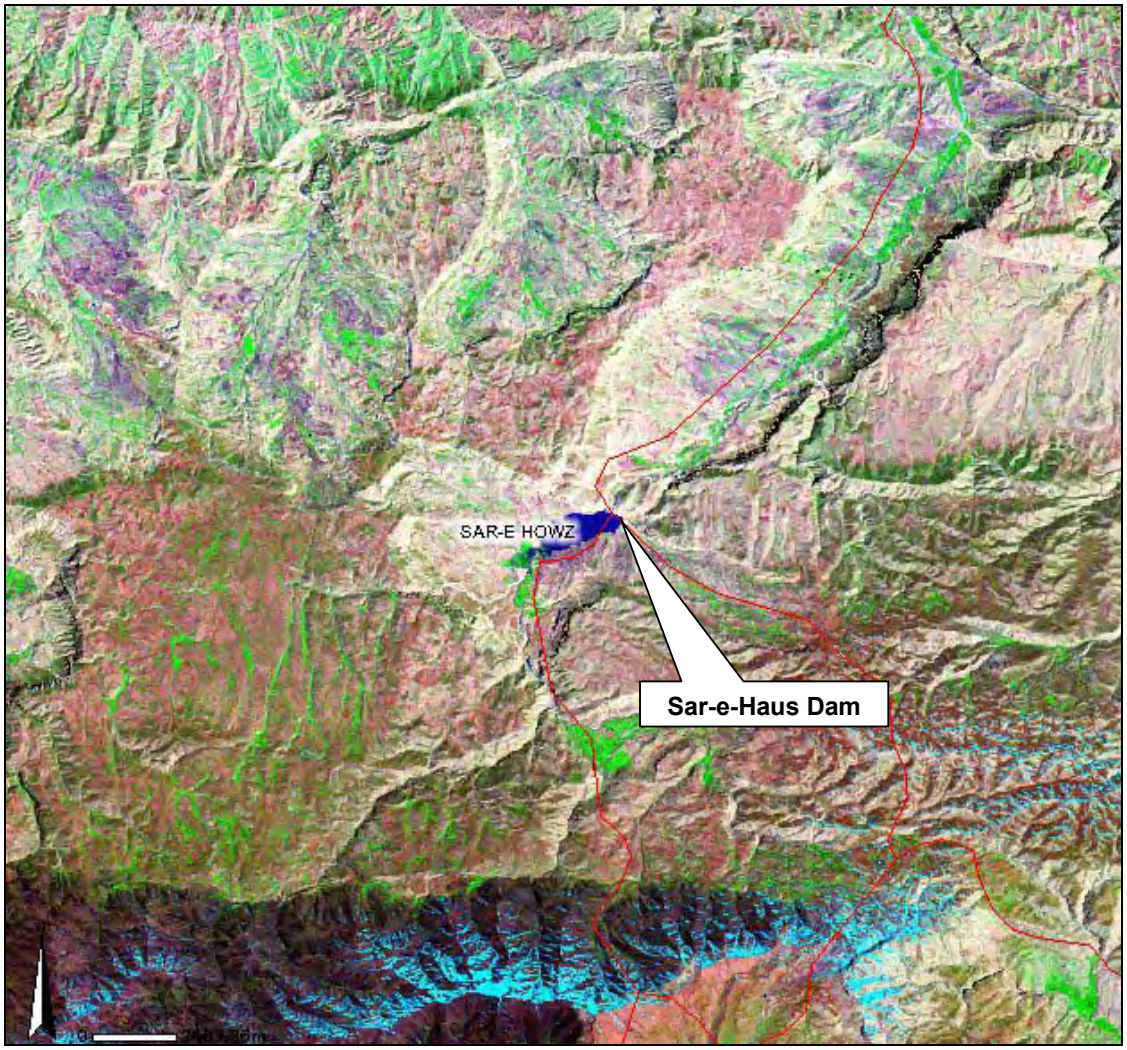


EXHIBIT 3-2. SAR-E-HAUS DAM SATELLITE IMAGE

Potential Impacts and Planned Avoidance/Mitigation Actions. Potential impacts to topographic conditions of dam projects are generally associated with:

- Cut and Fill. Some minor cut activity may be necessary associated with construction of the spillway. To avoid adverse impacts due to these activities the Conditions of Particular Application (COPA) portion of the Conditions of Contract include provisions to ensure:

  - Selection of less erodable material, placement of gabions and riprap and good

compaction, particularly around bridges and culverts.

- Stabilization of embankment slopes as warranted.
- Completion of discharge zones from drainage structures with riprap to reduce erosion when required.
- Down drains/chutes lined with rip-rap/masonry or concrete to prevent erosion.
- Side slopes adjusted in the range based on soil and other conditions as specified by the Project Specifications to reduce erosion potential.

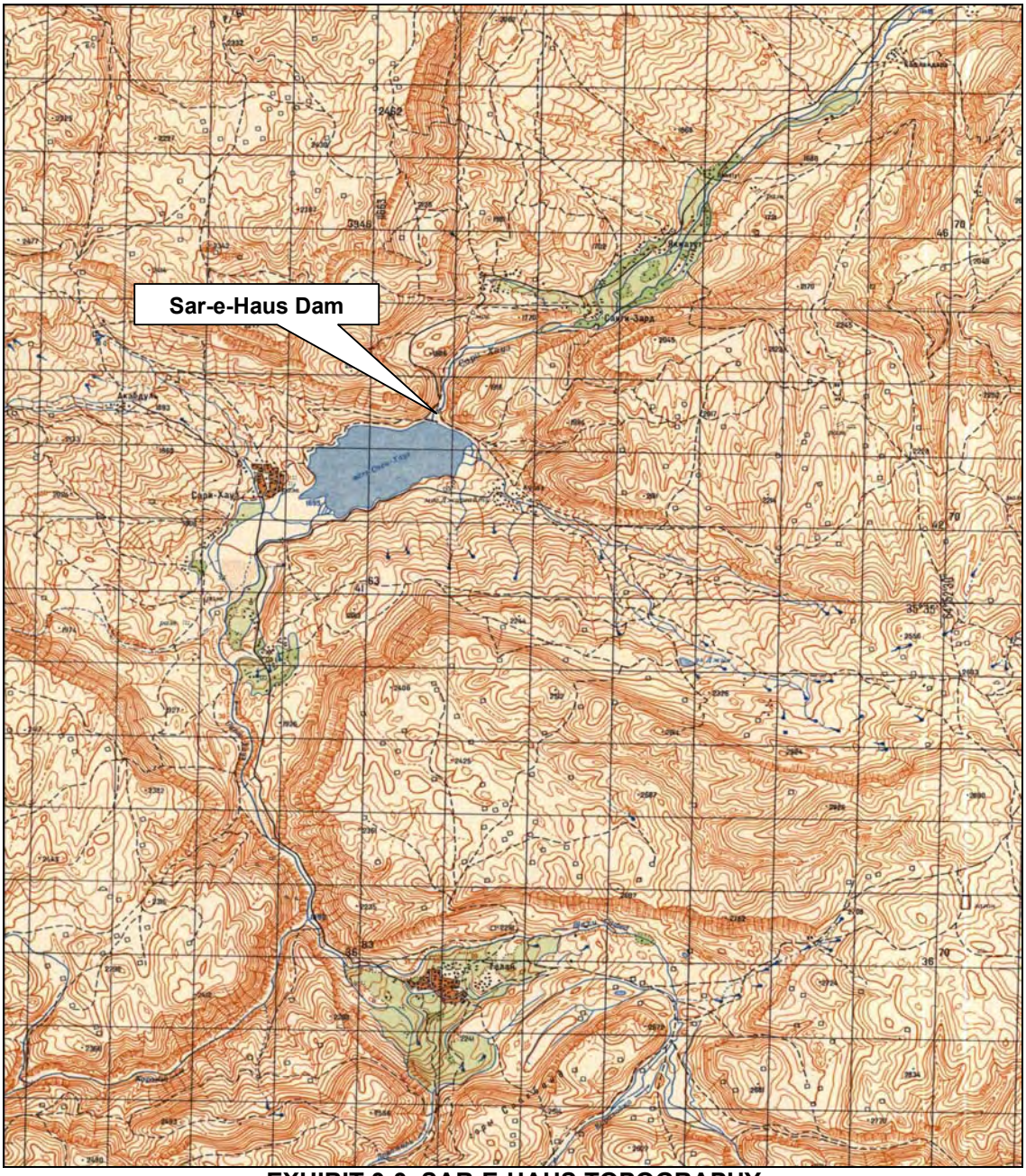


EXHIBIT 3-3. SAR-E-HAUS TOPOGRAPHY

- Quarry Operations. To ensure adequate mitigation of potential adverse impacts, contract documents will specify only licensed quarrying operations are to be used for material sources.

- Erosion and Scour. Provisions for the control of erosion are discussed as a part of the discussions for soils and hydrology below.

Additional Recommendations. None warranted. Provisions incorporated in the design, contracting process and provisions for contract supervision are such that the potential for adverse impacts to topography is obviated.

3.2.2 Soils

Existing Conditions. Little data exists regarding the soils of Afghanistan. However, field surveys revealed that the soils in this area of Afghanistan comprise a mix of sand and gravel in the river valleys and within the vicinity of the Sar-e-Haus Dam.

Potential Impacts & Planned Avoidance/Mitigation Actions. Impacts to soils generally associated with rehabilitation projects such as the Sar-e-Haus Dam include:

- Loss of Soil for Agricultural Production. No loss of agricultural land is anticipated to result from Project activities. Project works are expected to enhance agricultural productivity in the area by improving the efficiency of the Sar-e-Haus Dam.

- Erosion & Scour. Project works are not expected to induce any erosion or scour impacts in the Project Area.

- Conversion of Agricultural Soils Due to Indirect/Induced Impacts. Project works are expected to enhance agricultural productivity in the area. No mitigation is warranted.

- Contamination Due to Spills or Hazardous Materials. Provisions for the control of hazardous materials and actions to be taken in the event of accidental spills are incorporated in contract to avoid adverse impacts due to improper fuel and chemical storage as follows:

  - All fuel and chemical storage (if any) shall be sited on an impervious base within a bund and secured by fencing. The storage area shall be located away from any watercourse or wetlands. The base and bund walls shall be impermeable and of sufficient capacity to contain 110 percent of the volume of tanks.

  - Filling and refueling shall be strictly controlled and subject to formal procedures.

  - All valves and trigger guns shall be resistant to unauthorized interference and vandalism and be turned off and securely locked when not in use.

  - The contents of any tank or drum shall be clearly marked. Measures shall be taken to ensure that no contaminated discharges enter any drain or watercourses.

The contract specifications also require the preparation of an Emergency Response Plan to deal with accidents and emergencies, including environmental/public health emergencies associated with hazardous material spills and similar events.

Additional Recommendations. None warranted.

3.2.3 Seismic & Geological Characteristics

Existing Conditions.[1] Afghanistan's geological circumstances are complex and generally described in terms of plate tectonics, i.e., the premise that the earth's crust is made up of continent-sized slabs of rocks or plates which float on a more fluid layer of material known as the mantle. The plates move, collide, break up and reform as a result of currents and upwellings in the mantle. The mountain chains comprised of the Hindu Kush, Pamir, Karakoram and Himalayan Ranges are believed to have been the result of a collision of the Indian Plate and Asia Plate which began approximately 50 million years ago and continues to the present day. Much of the country is known to be seismically active.

There is a history of damaging earthquakes that are most frequent in the northeast of Afghanistan. The Sar-e-Haus is potentially prone to earthquakes varying from 6.5 to 7.3 on the Richter scale. The underlying geology in this area is limestone.

Potential Impacts & Planned Avoidance/Mitigation Actions. The Project may present a limited demand for quarried materials, but is unlikely to have an impact on the area's geological resources. The Project will not add appreciably to the human risk due to seismic events.

Additional Recommendations. None warranted.

3.2.4 Hydrology

Existing Conditions. The sources of most of Afghanistan's rivers are in the mountains. Water levels in the rivers vary greatly with the highest levels in spring and early summer. In the remaining seasons the rivers may change into small streams or entirely disappear. Three watershed systems can be differentiated in Afghanistan:

- The Eastern Basin (Indus). The Eastern Basin includes the Kabul and Logar Rivers and their tributaries which drain the eastern part of the country. The rivers within the eastern basin flow generally to the east and eventually join the Indus River and the Arabian Sea.

- The Southern Basin (Sistan-Hilmand). The rivers of the Southern Basin flow generally to the southwest to the Lake of Sistan on the Afghanistan-Iran border and include the Helmand, the country's longest river, the Farahrod and the Khashrod.

- The Northern Basin (Amu Darya). The rivers in the northern part of the country flow northward to the Amu Darya River on the country's northern boundary (and eventually to the Aral Sea) or disappear in the desert sands. The Sar-e-Haus Dam is located within the Northern Basin (See **Exhibit 3-4**).

Sar-e-Haus dam is fed by snow melt, rain water and some small natural springs. Downstream of the dam the reservoirs output forms the Maimana River. The river is one of many tributaries of the Amu Darya River which forms the border between Afghanistan and Turkmenistan. The Sar-e-Haus reservoir is of irregular shape with a maximum width of approximately 1.2km and a length of 2km. The reservoir is surrounded by mountains as illustrated by **Exhibit 3-6**. A sketch map of the Sar-e-Haus Dam and the irrigated land downstream can be found in **Appendix C**.

1 Geological resources such as coal and gem stones are discussed as part of **Item 3.3.3**, Use of Natural and Depletable Resources.

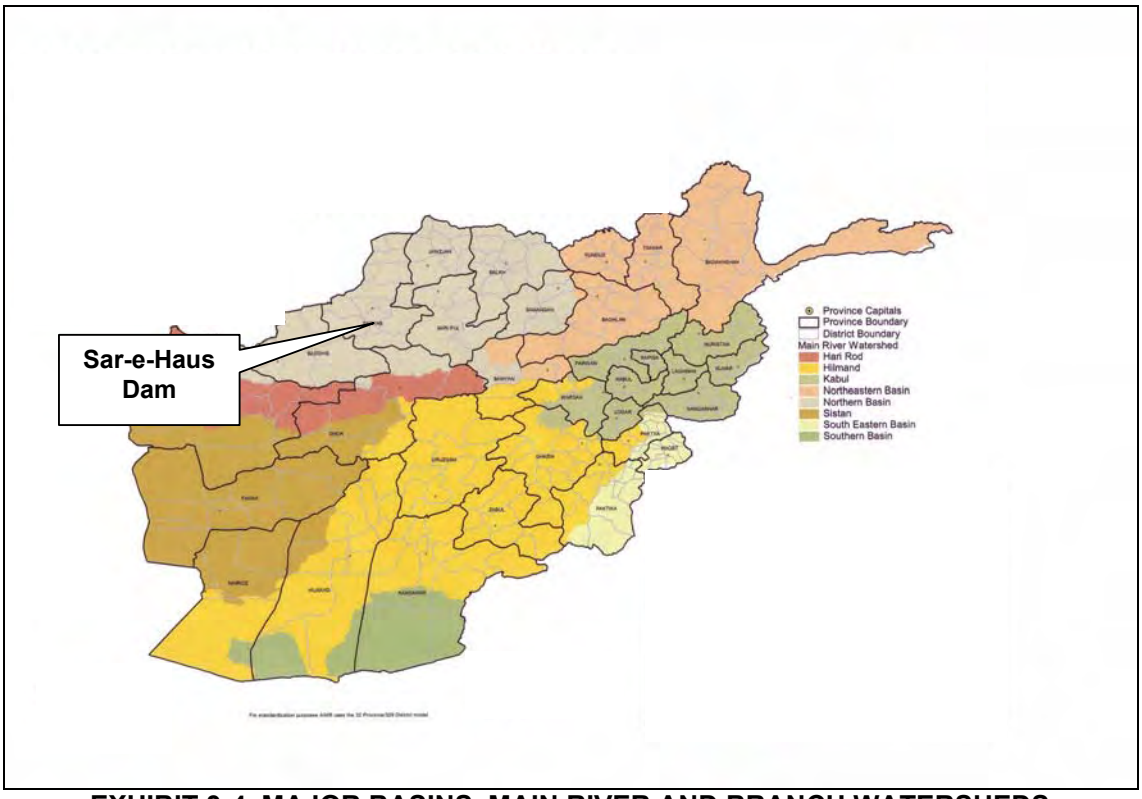


EXHIBIT 3-4. MAJOR BASINS, MAIN RIVER AND BRANCH WATERSHEDS

Potential Impacts and Planned Avoidance/Mitigation Actions. Potential impacts due to rehabilitation could include impacts to:

- Surface Hydrology. Potential adverse impacts to surface hydrology in the rehabilitation phase of the Project will be avoided through the enforcement of contract provisions and oversight by the USAID/GC. Drainage provisions and other aspects of the Project are not expected to alter the current status of natural water bodies and irrigation structures. In addition to adherence to good engineering and construction practices and the enforcement of contract provisions related to drainage during both the rehabilitation and operational stages of the Project Sub-Contractors will be obligated to coordinate with local land use planning authorities. Contract provisions will ensure that construction camps and other potential sources of secondary impacts are properly sited and provided with drainage and wastewater facilities. On embankment areas less than three meters in height and where surface runoff is low, ditches shall be placed adjacent to the toe. For higher fills (if any), the ditch shall be separated from the fill by a three-meter wide bench. (Note: wetland issues are separately discussed below.)

  The COPA portion of the Conditions of Contract state that "*The Sub-Contractor shall prevent interference with the supply to, of abstraction from, of the pollution of, water resources …. as a result of the execution of the Works. Areas where water is repeatedly used for dust suppression purposes (if any) shall be laid to fall to especially constructed settlement tanks to permit sedimentation of particulate matter. After settlement, the water may be re-used for dust suppression and rinsing. All water and other liquid waste products arising on the Site shall be collected and disposed of at a location on or off the Site and in a manner that shall not cause either nuisance or pollution. The Sub-Contractor shall not discharge or deposit any matter arising from the execution of the Work into any waters except with the permission of the regulatory authorities concerned. The Sub-Contractor shall at all times ensure that all existing stream courses and drains within and*

adjacent to the Site are kept safe and free from any debris and any materials arising from the Works. The Sub-Contractor shall protect all watercourses, waterways, ditches, canals, drains, lakes and the like from pollution, silting, flooding or erosion as a result of the execution of the Works."

- Wetlands. The Sar-e-Haus Dam is located in the Northern Basin. Outflow from the dam flows to the Amu Darya River. No significant biologically important wetlands or Tugai forests have been identified within 100km that may be impacted by project works. No significant interruption of flow due to the rehabilitation is anticipated. No mitigation actions are considered warranted due to wetland considerations.

- Subsurface Hydrology. No significant impacts to subsurface hydrology are anticipated. As a contingency, however, the COPA portion of the Conditions of Contract specifically provide that "*The Sub-Contractor shall prevent interference with the supply to, of abstraction from, or the pollution of, water resources ….including underground percolating water…"*

- Flood and Inundation Characteristics. Project actions are not expected to have significant negative affects on flood and inundation characteristics within the Project Area.

Additional Recommendations. None warranted.

3.2.5 Air Quality and Climate

Existing Conditions. The climate of Afghanistan is continental in nature, with cold winters and hot summers. Most of the country is arid or semi arid, with low amounts of precipitation and high variability between years.

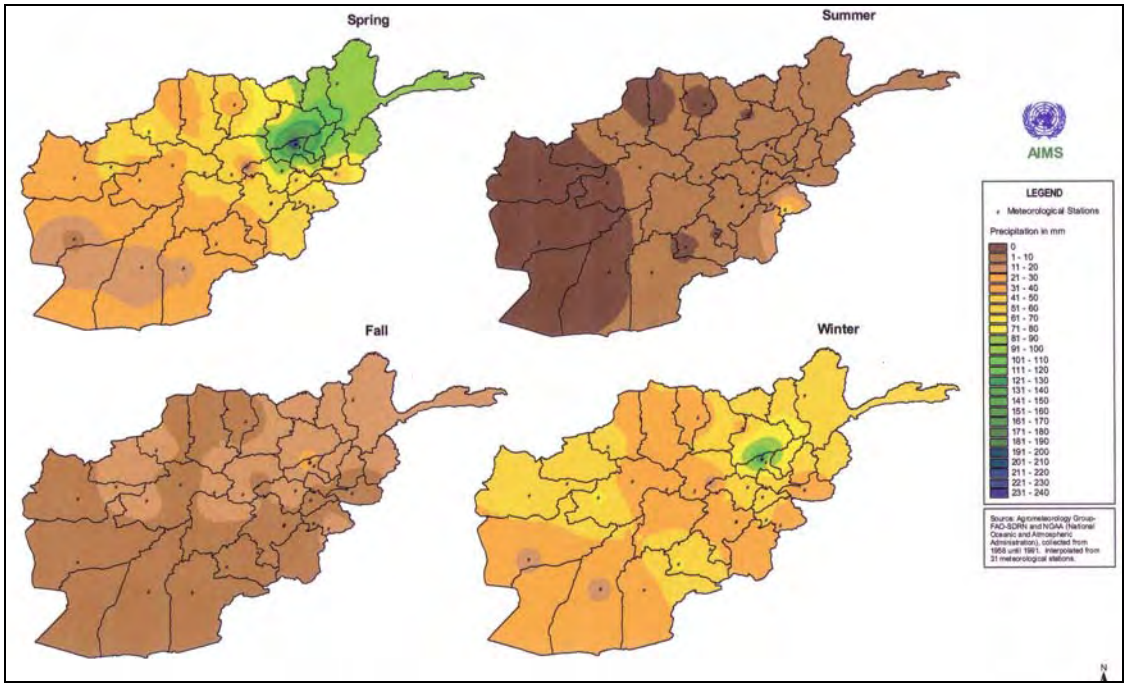


EXHIBIT 3-5. AVERAGE MONTHLY PRECIPITATION BY SEASON

The mean daily temperatures at Maimana station range from 2°C in January to 28°C in July. The mean monthly precipitation varies from just traces in August and September to 82

millimeters in March. Average annual precipitation is 356mm. Snowfall is common from November to March. **Exhibit 3-5** illustrates average monthly precipitation by season in Afghanistan. No unusual air quality or micro-climate conditions in the Project Area have come to light.

Potential Impacts and Planned Avoidance/Mitigation Actions. Potential air quality impacts are can be hypothesized in both the rehabilitation and operational stages of the Project are as follows:

- Rehabilitation Stage. Minor impacts to local air quality during rehabilitation can be anticipated due to fugitive dust generation in and around rehabilitation activities and related activities. The generation of dust due to rehabilitation activities will be mitigated through avoidance strategies and monitoring. Contract documents will specify that:

  - Sub-Contractors will be required to spray excavation and rehabilitation sites to keep them moist for dust control.

  - Trucks carrying earth, sand or stone will be covered with tarps to avoid spilling.

  - Potential significant adverse impacts to adjacent residents or site employees during project works will be mitigated by either discontinuing until favorable conditions are restored, or, if warranted, sites may be watered to prevent dust generation.

  - Machinery and equipment will be fitted with pollution control devices, which will be checked at regular intervals to ensure that they are in working order. Best practical pollution control technologies will be required.

  - Open burning will be prohibited in populated areas and requirements for spraying and related dust control measures and the proper use of solvents and volatile materials will be in incorporated in the contract provisions.

  - Pre-construction monitoring of existing ambient air quality may be undertaken to provide a baseline for the measurement of air quality impacts during the rehabilitation period if considered warranted by the USAID/GC.

  - Routine air quality monitoring may also be required in areas of high potential impact (construction camps, etc) during the life of the Project if considered warranted by the USAID/GC.

  Operational Stage. No operation impacts affecting climate or air quality are anticipated during the operational phase of the Project.

Additional Recommendations. Other than verification of provisions noted within the contract documents, none warranted.

3.2.6 Mines and Unexploded Ordnance

Existing Conditions. Special provisions have been made by USAID for the clearance of mines and UXO by the United Nations Mine Action Center (UNMAC).[2] A certificate has been received from UNMAC that there are no mines or UXO in the Project Area.

Potential Impacts and Planned Avoidance/Mitigation Actions. None.

2 REFS Contract, page C-8.

Additional Recommendations. None warranted.

3.3 NATURAL/BIOLOGICAL RESOURCES

3.3.1 Flora

Existing Conditions. Located at the confluence of two biogeographic realms – the Palaeoarctic and Indo-Malayan – Afghanistan has the unique distinction of being the original home of a very large number of plant and animal species, a majority of which are endemic. Afghanistan was renowned for its rich wildlife and with its diversity of habitats and still retains a wide variety of fauna. However, most of the country is subject to some degree of land degradation, notably that resulting from some 20 years of war, deforestation and desertification.

Exhibits 3-6 & 3-7 illustrate the fertile nature of the land within the valleys of Pashtun Kot and on the slopes adjacent to the Sar-e-Haus reservoir. No protected species have been identified in the Project Area.

EXHIBIT 3-6. SAR-E-HAUS DAM

Potential Impacts and Planned Avoidance/Mitigation Actions. No potentially significant impacts to flora have been identified. Impacts to plant life and agricultural crops during project works will be mitigated through the appropriate construction supervision activities to ensure that ancillary features are properly sited.

Additional Recommendations. None warranted.

EXHIBIT 3-7. LAND USE ADJACENT TO SAR-E-HAUS RESERVOIR

3.3.2 Fauna

Existing Conditions. Afghanistan is home to 119 species of mammals, 460 species of birds, four species of reptiles, and hundreds of species of insects and fish[3]. Thirty five species of animals have been listed as either vulnerable or endangered on the ICUN Red List, however, the number of threatened species may be higher as essentially no wildlife research has been undertaken in Afghanistan for many years.

Consultation with local residents revealed that the most prominent animal species in this area were fox, wolf, and rabbit. The factors that make the Project and the adjacent areas an unlikely venue for threatened and endangered plant species also make it an unlikely site for special status terrestrial wildlife species.

Potential Impacts and Planned Avoidance/Mitigation Actions. Consideration has been given to potential direct impact to wildlife under the following headings:

- Habitat Loss. No significant terrestrial habitat loss is anticipated due to direct or indirect impacts.

- Wildlife Migrations. No evidence has come to light indicating that the proposed Project interrupts wildlife migration corridors. The Project will not interrupt any migratory patterns of wildlife species.

Additional Recommendations. None warranted.

3 www.icimod.org.np/focus/biodiversity/afgbio.htm

3.3.3 Aquatic Environment

Existing Conditions. The fresh-water fish of Afghanistan have been little studied, but many are believed to be endemic. Reportedly, the Sar-e-Haus reservoir contains several species of fish none of which are biologically significant.

Potential Impacts and Planned Avoidance/Mitigation Actions. Given the limited nature of the rehabilitation works, impacts to the Maimana River and the Sar-e-Haus Reservoir will be minimal, however, contract provisions regarding the siting of construction camps and the proper disposal of solid and liquid wastes should apply.

Additional Recommendations. None warranted.

3.3.4 Protected Areas

Existing Conditions. Six protected areas have been identified in the country. They are described below and indicated by **Exhibit 3-8**. None are within 100 kilometers of the Project Area.

- **Ab-I-Estada Waterfowl Sanctuary**. Established in 1977, Ab-I-Estada Waterfowl Sanctuary (27,000 hectares) is located in conjunction with *Istadeh-ye Mogor*, a large lake north of the town of Nawah. The sanctuary is more than 500 kilometers from the Project Area in a separate watershed.

- **Ajar Valley Wildlife Reserve**. Established in 1978, the Ajar Valley Wildlife Reserve (40,000 hectares) is a former royal hunting ground located in Bamian Province in the central part of the country. The Reserve is more than 150 kilometers from the Project Area and will not be affected by project works.

- **Bande Amir National Park**. Established in 1973, the Bande Amir National Park (41,000 hectares) is also located in Bamian Province near the Ajar Valley Wildlife Reserve in the central part of the country. The Park is located more than 150 kilometers from the Project Area and will not be affected by project works.

- **Dashte-Nawar Waterfowl Sanctuary**. Established in 1977, the Dashte-Nawar Waterfowl Sanctuary (7,500 hectares) is located in Ghazni Province. The sanctuary is located more than 300 kilometers from the Project Area in a separate watershed.

- **Pamir Buzurg Wildlife Sanctuary**. Established in 1978, the Pamir Buzurg Wildlife Sanctuary (67,938 hectares) is located in the extreme northeastern part of the country in a separate watershed.

- **Kote Hashmat Khan Waterfowl Sanctuary (established 1973)**. Established in 1973, the Kote Hashmat Khan Waterfowl Sanctuary (191 hectares) is a former royal hunting ground located south of Kabul more than 500 kilometers from the Project Area in a separate watershed

Potential Impacts and Planned Avoidance/Mitigation Actions. No potential impacts identified with Project Activities

Additional Recommendations. None warranted.

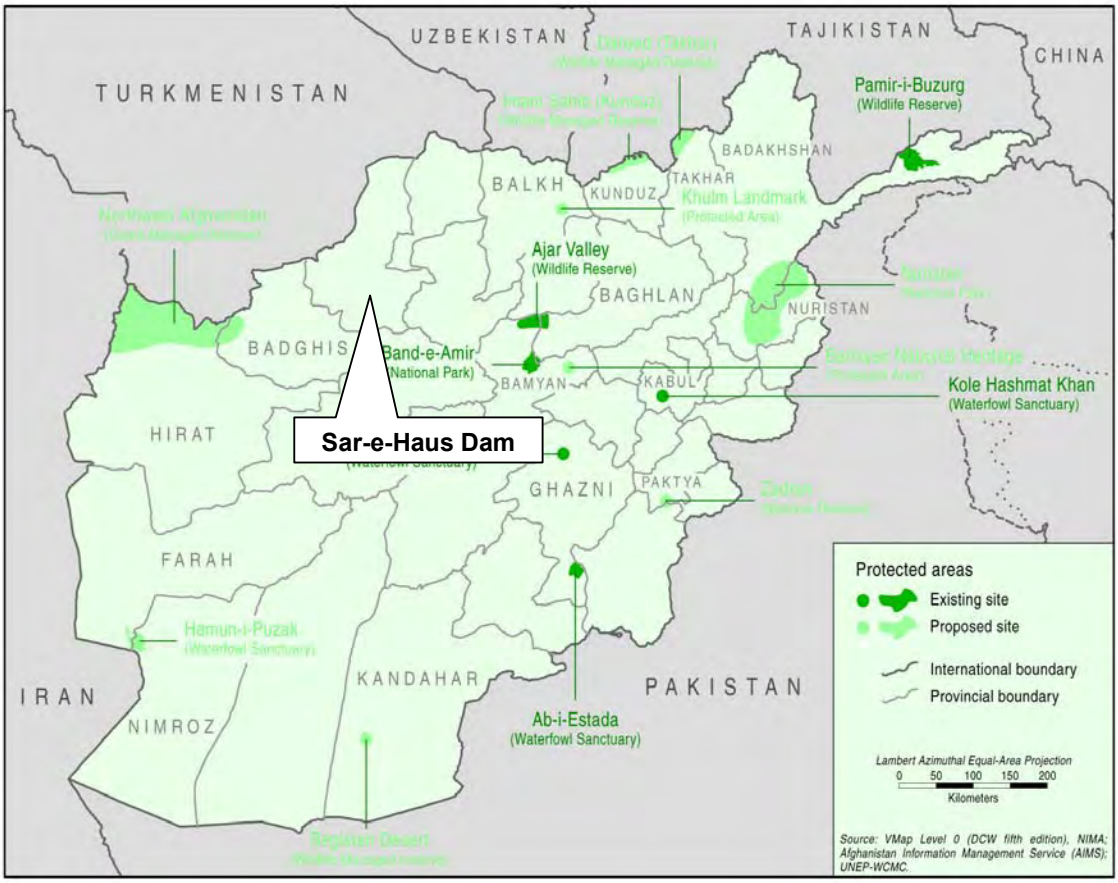


EXHIBIT 3-8. PROTECTED AREAS OF AFGHANISTAN

3.4 OTHER ENVIRONMENTAL CONCERNS NOTED BY 22 CFR 216

As noted in the introductory remarks, issues addressed in this section are discussed under the following headings:

- Land Use and Development Policies & Controls (3.4.1)
- Use of Natural/Depletable Resources (3.4.2)
- Urban Quality/Design of the Built Environment (3.4.3)
- Historic and Cultural Resources (3.4.4)
- Energy & Conservation (3.4.5)

3.4.1 Land Use and Development Policies & Controls

Existing Conditions. As of 1988, approximately 12 percent of Afghanistan's land was estimated to be arable, but that none was devoted to permanent crops.[4] Land uses within the vicinity of the Project Area can be characterized as follows:

- Rangeland. Due to the rugged nature of the mountainous countryside the predominant land use in the vicinity of the Project is rangeland.

- Agricultural Land. Land use for agricultural purposes is limited to the valley floors where

4 CIA Profile

the fertile soils of the river floodplains can be found.

- Urban. Very few urban areas can be found within proximity to the Project Site. The most significant in terms of size of population is the town of Maimana which is approximately 35km north (downstream) from the Dam. Other smaller villages, such as Sha-Nadir, Tatzaghan etc also benefit directly from the waters of Sar-e-Haus.

Land use and development policies and controls are largely within the purview of the Ministry of the Interior (MOI) as the agency responsible for municipal governance and oversight. No policies or controls have been identified which will impact upon the rehabilitation works.

Potential Impacts and Planned Avoidance/Mitigation Actions. Potential land use impacts vary between the rehabilitation and operational phases of the Project as follows:

- Potential PAPs / Compensation Issues. The Project does not require the acquisition or use of lands, dislocation or other impacts of current land uses (e.g., significant interruptions of water availability) possibly creating "project-affected persons" or PAPs (as that term is generally defined by the international assistance community, i.e., persons whose livelihood is directly or indirectly affected by a project). Contingency provisions are recommended as indicated below, however, in the event that such impacts do occur due to circumstances currently unforeseen.

- Potential Impacts Due to Rehabilitation Activities. The Sub-Contractor will be required to coordinate all rehabilitation activities with neighboring land uses. Contracts for the Project activities will also require construction operators to attend to the health and safety of their workers, maintain and cleanup campsites, and respect the rights of local landowners.

- Operational Phase. Once the project works are completed no changes of neighboring land uses are expected. The viability and productivity of existing agricultural uses will be enhanced.

Additional Recommendations. To provide for the possibility of unforeseen impacts to PAPs, it is recommended that the bid and contract documents specify that lands required for the improvements are free of any squatters, encroachers or other claims and that such documentation will be required from the Government of Afghanistan. To mitigate the potential PAPs impacts it is recommended that the documentation certify that any claims have been settled in conformance with international practice as indicated by the Guidelines for Land and Asset Acquisition, Entitlement and Compensation (the Guidelines) attached hereto as **Appendix B.**

It is recommended that the certifying agency be required to ensure that all occupants of land and owners of land and other assets in the Project Area have been consulted in the compensation process. Gender-separate meetings are recommended consistent with the Guidelines to inform local populations about their rights to compensation and available options. Requirements for minutes of community meetings are recommended to reflect discussions, agreements reached and verifiable documentation of details of the agreement. It is also recommended that the certifying agency be required to provide a copy of the Minutes to the PAPs and to maintain all necessary documentation indicating adherence to the Guidelines.

3.4.2 Energy & Conservation

Existing Conditions. Within the Project Area as with the vast majority of Afghanistan, the population relies on traditional household fuels (wood, bushes, crop residues and animal waste) for its energy needs. There are reports of over-exploitation of forestry resources and non-sustainable production and use of fuel wood leading to deforestation and severe environmental degradation in many areas[5]. No coalmines or gas pipelines have been identified in the Project Area.

Potential Impacts and Planned Avoidance/Mitigation Actions. Given the limited nature of the rehabilitation works to the Sar-e-Haus Dam no significant energy demands will be made during the course of the rehabilitation phase of the Project.

Additional Recommendations. No additional analysis is considered warranted.

3.4.3 Use of Natural/Depletable Resources

Existing Conditions. Rehabilitation of the Sar-e-Haus Dam will require the use of certain natural resources. The most economically significant of the available resources in Afghanistan are identified as natural gas, petroleum, coal, copper, chromite, talc, barites, sulfur, lead, zinc, iron ore, salt, precious and semiprecious stones.[6] The country is also well supplied with rock, sand and other quarried construction materials as required for the proposed rehabilitation activities. No active mining is known to exist within the Project Area

Potential Impacts and Planned Avoidance/Mitigation Actions. Resource requirements for the rehabilitation works are minimal and will not induce significant impacts to natural/depletable resources. Contract conditions specify controls of quarry usage.

Additional Recommendations. None warranted.

3.4.4 Urban Quality/Design of the Built Environment

Existing Conditions. The Project Area is located in a rural agricultural/rangeland region. Small villages are located as indicated in **Item 3.4.1**.

Potential Impacts and Planned Avoidance/Mitigation Actions. No impacts to urban quality or design of the built environment are anticipated due to project works.

Additional Recommendations. None warranted.

3.4.5 Historic and Cultural Resources

Existing Conditions. Historic and cultural resources include monuments, structures, works of art, the sites of outstanding universal value from historical, aesthetic, scientific ethnological and/or anthropological points of view, including unrecorded graveyards and burial sites. Afghanistan is rich in historic and cultural resources. The responsibility for preservation, maintenance and assessment of historical and cultural monuments in Afghanistan rests with the Archaeological Committee under the Ministry of Information and Culture (MOIC).

Generally speaking, the most significant aboveground cultural resources in Afghanistan are

5 World Bank, Technical Annex for a Proposed Grant… to Afghanistan for an Emergency Infrastructure Reconstruction Project, May 2002, paragraph 8, page 2.

6 CIA Profile

located within the urban areas. None of the villages within the Project Area are known to be susceptible to impacts as a result of the proposed project rehabilitation works.

The Sar-e-Haus Dam is over 100 years old and could be considered part of the cultural heritage of the local area. However, rehabilitation works are minimal and will not significantly change the present structure of the dam.

Potential Impacts & Planned Avoidance/Mitigation Actions. To avoid potential adverse impacts to historic and cultural resources, the Project specifications will state that the Sub-Contractor shall:

- Consult with provincial-level representatives of the Archaeological Committee under the Ministry of Information and Culture, obtain any necessary clearances in regard to historic and cultural resources prior, and provide written documentation of these consultations to the Contractor prior to the initiation of the Work.

- Protect sites of known antiquities, historic and cultural resources by the placement of suitable fencing and barriers;

- Adhere to accepted international practice and all applicable historic and cultural preservation requirements of the Government of Afghanistan, including all appropriate local government entities.

- In the event of unanticipated discoveries of cultural or historic artifacts (movable or immovable) in the course of the work, the Sub-Contractor shall take all necessary measures to protect the findings and shall notify the Contractor and provincial-level representatives of the Archaeological Committee and the Ministry of Information and Culture. If continuation of the work would endanger the finding, project work shall be suspended until a solution for preservation of the artifacts is agreed upon.

Additional Recommendations. None warranted.

3.5 ADDITIONAL ENVIRONMENTAL CONCERNS

3.5.1 Socio-Economic Considerations

Existing Conditions. The economy of the Sar-e-Haus Dam Project Area is relatively poor compared with the rest of Afghanistan. Within the Project Area, as with most of Afghanistan, economic considerations have been overshadowed by political and military upheavals during two decades of war. Gross domestic product fell substantially because of the loss of labor and capital and the disruption of trade and transport; severe drought added to the nation's difficulties in 1998-2001. The majority of the population continues to suffer from insufficient food, clothing, housing, and medical care, problems exacerbated by military operations and political uncertainties. Inflation remains a serious problem.

Following the US-led coalition war that led to the defeat of the Taliban in November 2001 and the formulation of the Afghan Interim Authority (AIA) resulting from the December 2001 Bonn Agreement, International efforts to rebuild Afghanistan were addressed at the Tokyo Donors Conference for Afghan Reconstruction in January 2002 resulting in the creation of a trust fund to be administered by the World Bank. Priority areas for reconstruction include the construction of education, health, and sanitation facilities, enhancement of administrative capacity, the development of the agricultural sector, and the rebuilding of road, energy, and telecommunication links.

As of 1990, approximately 80 percent of Afghanistan's ten million person labor force was employed in agriculture, ten percent in the service sector and ten percent in industry. Industries are generally small-scale production of textiles, soap, furniture, shoes, fertilizer, and cement; hand-woven carpets; natural gas, coal, and copper.[7]

No economic data is known to be available for Faryab Province in which the Project is located. However, field observations indicate that agricultural practices are the primary economic activity in the Project Area. Given the nature of the Project, no resettlement and relocation actions are anticipated.

Potential Impacts and Planned Avoidance/Mitigation Actions. The Project is expected to have a beneficial impact on the economy of the affected area by increasing agricultural output.

Additional Recommendations. None.

3.5.2 Public Health & Safety

Existing Conditions. Public health facilities and services in Afghanistan suffered due to civil unrest and severe economic problems. Sar-e-Haus Dam is located in the district of Pashtun Kot where the population per health facility is greater than 50,000 (See **Exhibit 3-9**).

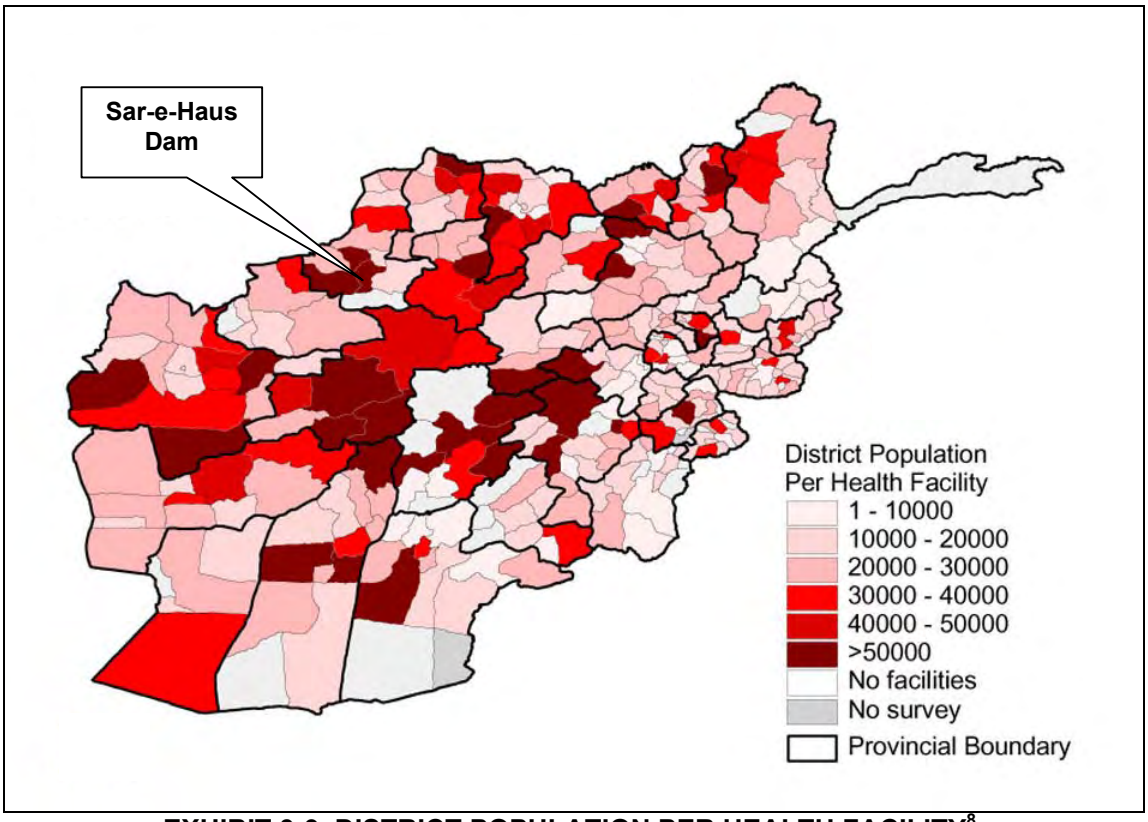


EXHIBIT 3-9. DISTRICT POPULATION PER HEALTH FACILITY[8]

Health facilities within Pashtun Kot are limited, according to the UNHCR there is currently only one functioning health clinic in the district. There is only one doctor and five nurses to

7 CIA Profile

8 National Health Resources Assessment, September 2002, USAID.

manage a variety of diseases including malaria and diarrhea.[9]

Within the country as a whole, access to adequate and safe water and sanitation facilities is limited. It is estimated that 23 percent of the population has access to safe water. Many provincial and secondary towns have no networked services. Water borne diseases are a major cause of the prevailing high infant and mortality rates. Approximately 85,000 children under the age of five die annually from diarrheal diseases. Within Pashtun Kot only 35% of the population have direct access to potable water.

Few residential or public buildings in Afghan cities have sewerage facilities and those that do discharge their wastewater directly into rivers without treatment. The World Bank reports that in 1997, sanitation coverage was estimated to be 23 percent of the urban population (versus eight percent of the rural population).[10]

In addition to the above problems the issue of drought has been affecting northern Afghanistan for the third consecutive year. Save the Children recently surveyed Faryab's remote mountainous regions and found that over four months (2003/2004) at least 108 children died in the 378 families surveyed. Malnutrition and infectious disease are reportedly responsible for the high number of deaths. Afghanistan is reportedly suffering from its worst drought in 30 years, affecting nearly half of its 21 million people. The drought has reportedly destroyed most fields and orchards, killing up to 70% of cattle in many parts of the country.

Potential Impacts and Planned Avoidance/Mitigation Actions. Provision of improved water supply will have beneficial health impacts with the enhancement of agricultural output. Potential negative impacts of the Project can be identified as:

- Contamination of local water supplies during rehabilitation. Potential impacts to local water supplies include the possibility of temporary labor camps and the water supply and wastewater disposal associated with them during the rehabilitation period. Contract provisions to ensure that ancillary facilities are properly sited will be incorporated in all contract documents.

- Air pollution. As noted in **Item 3.2.5**, potential air quality impacts during the rehabilitation stage of the Project. Potential air quality impacts during rehabilitation include those related to fugitive dust generation in and around rehabilitation activities and related activities such as plants for crushing rocks, hot-mix and asphalt plants.

- Noise levels with health consequences. Potential noise issues are discussed in **Item 3.5.5** below.

- Disease transmission. Increases in sexually transmitted diseases (STDs) are often associated with rehabilitation projects. Contract documents will require Sub-Contractors to provide basic emergency heath facilities for workers; and encourage programs aimed at the prevention of sexually transmitted diseases as a part of all construction employee orientation programs.

Additional Recommendations. Although mitigation of such impacts is beyond the scope of the proposed Project, the establishment of STD awareness programs is recommended.

3.5.3 Gender & Disabled Persons Issues

9 UNHCR. 2002

10 World Bank, Technical Annex for a Proposed Grant… to Afghanistan for an Emergency Infrastructure Reconstruction Project, May 2002, paragraph 7, page 2.

Existing Conditions. The terms of reference for REFS specifically note that "*all projects will take into consideration gender issues and accessibility for disabled persons*".[11]

It has been noted that the last twenty years of social upheaval have greatly affected the overall gender situation in Afghanistan, resulting in very restrictive policies vis-à-vis women's participation in public life, access to education, other services and employment opportunities. Women and girls were effectively excluded from any participation in public life during the Taliban regime. With the replacement of the Taliban regime, women have regained the right to education, employment opportunities and services, but the prevailing social norms are still very conservative and restrictive regarding women's participation in the national development effort. There are huge differences between Kabul and the much smaller secondary cities and the rural areas. There are also considerable regional differences with the more restrictive and conservative south and southeastern parts of the country, and the western and northern areas. There are also reported to be great differences between returning refugees and those who remained in the country.[12] No legislation in regard to discrimination against, or incentives for, the employment of the disabled is known to be in place in Afghanistan.

Potential Impacts and Planned Avoidance/Mitigation Actions. Women and disabled persons are not specifically targeted as a part of the Project. Recruitment of local labor has been identified as an objective of the Project and in other circumstances (e.g., Bangladesh, India, China and elsewhere) similar projects have included specific provisions for gender equity employment opportunities. The types of rehabilitation activities are not expected to generate labor opportunities for women in the Afghanistan context, however, due to the prevailing social norms or the disabled due to the nature of the work.

Additional Recommendations. None warranted.

3.5.4 Noise

Existing Conditions. Ambient noise levels in the Project Area are very low. Field investigations did not reveal the presence of "sensitive receptors", i.e., recipients of sound for whom exposures to excessive sound levels are detrimental - hospitals, for example. However, machinery noise may have some small scale impacts on the local population living within the vicinity of the dam.

Potential Impacts and Planned Avoidance/Mitigation Actions. Mitigation of noise impacts in the rehabilitation and operational phases of the Project will include:

- Rehabilitation Stage. Contracts will contain provisions to mitigate potential noise and vibration impacts during rehabilitation is recommended through the use of:

  - *Source Controls*, i.e., requirements that all exhaust systems will be maintained in good working order; properly designed engine enclosures and intake silencers will be employed; and regular equipment maintenance will be undertaken.

  - *Site Controls,* i.e., requirements that stationary equipment will be placed as far from sensitive land uses as practical; selected to minimize objectionable noise impacts; and provided with shielding mechanisms where possible.

  - *Time and Activity Constraints*, i.e., operations will be scheduled to coincide with

11 REFS Contract, Section C, Item B, page C-2.

12 World Bank, Technical Annex for a Proposed Grant… to Afghanistan for an Emergency Infrastructure Reconstruction Project, May 2002, paragraph 79, page 15.

periods when people would least likely be affected; work hours and work days will be limited to less noise-sensitive times. Hours-of-work will be approved by the site engineer having due regard for possible noise disturbance to the local residents or other activities. Rehabilitation activities will be strictly prohibited between 10 PM and 6 AM in the residential areas. When operating close to sensitive areas such as residential, nursery, or medical facilities, the Sub-Contractor's hours of working shall be limited to 8 AM to 6 PM.

- *Community Awareness*, i.e., public notification of project works will incorporate noise considerations; methods to handle complaints will be specified. Sensitive receptors will be avoided as possible (i.e., aggregate crushers, operators, etc.). Disposal sites and haul routes will be coordinated with local officials.

- *Baseline and Routine Noise Monitoring as Part of Construction Supervision*. Pre-construction monitor of existing noise and vibration may be undertaken to provide a baseline for the measurement of impacts during the rehabilitation period if determined to be warranted by the USAID/GC. Routine monitoring may also be required in areas of high potential impact (e.g., pile-driving sites and areas of intensive noise-generating activities) if considered warranted by the USAID/GC.

- Operational Stage. No significant sources of noise are anticipated to result during the operational phase of the Project. Accordingly no mitigation of operational noise is considered warranted.

Additional Recommendations. None warranted.

3.5.5 Other Infrastructure Systems

Existing Conditions. It is anticipated that piped water supply and wastewater collection systems exist only in the urban areas. Irrigation systems and other infrastructure may exist in the rural areas in the form of electrical power lines and pipelines. The formal infrastructure sector in Afghanistan is largely owned and operated through centralized ministries with some operational and production functions delegated to government enterprises. The reach of formal services, however, is very limited. In the urban water supply and sanitation sectors there is reported to be substantial private participation in service deliveries mainly through communities, NGOs and UN agencies. In rural areas NGOs and communities have been and are likely to remain the core providers of infrastructure services. Details of the known situation are as follows.

- Water Supply Systems. Piped water supply systems exist only in urban areas and are in need of urgent repair. Coverage is poor. Less than 20 percent of Kabul's population has access to piped water and many provincial and secondary towns have no networked services.[13] No piped water supply systems are known to be within the vicinity of the Project.

- Wastewater Collection Systems. Virtually no rural areas and few residential or public buildings in Afghan cities have networked wastewater collection sewerage facilities and those that do discharge their wastewater directly into rivers without treatment. The World Bank reports that in 1997, sanitation coverage was estimated to be 23 percent of the urban population (versus eight percent of the rural population).[14] No piped wastewater

13 World Bank, Technical Annex for a Proposed Grant… to Afghanistan for an Emergency Infrastructure Reconstruction Project, May 2002, paragraph 7, page 2.

14 World Bank, Technical Annex for a Proposed Grant… to Afghanistan for an Emergency Infrastructure Reconstruction Project, May 2002, paragraph 7, page 2.

collection systems are known to be within the vicinity of the Project.

- Electrical Systems. No above ground electrical connections are evident within settlement areas. No underground systems are known to exist within the vicinity of the Project.

Potential Impacts and Planned Avoidance/Mitigation Actions. No potentially significant impacts associated with the project are anticipated.

Additional Recommendations. None warranted.

3.6 OTHER IMPACT STATEMENTS REQUIRED BY 22 CFR 216

3.6.1 Adverse Impacts That Cannot Be Avoided

Less-than-significant adverse impacts may occur during the rehabilitation activities such as temporary impacts to air quality, noise levels due to rehabilitation. These impacts will be mitigated by the contract provisions as specified herein, including actions such as water spraying to control dust and the restriction of noise-generating activities to daylight hours and the avoidance of such activities in sensitive areas such as the vicinity of hospitals, etc.

3.6.2 Short-Term Use Versus Long-Term Productivity

The Proposed Action will enhance long-term productivity of economic activities in the Project Area by improving agricultural output in the Project Area.

3.6.3 Irreversible Commitments of Resources

Certain natural and human resources will be irreversibly devoted to the Project, including the necessary construction materials and labor. Commitment of these resources will be offset by the Project benefits.

4.0 ENVIRONMENTAL GUIDELINES

4.0 ENVIRONMENTAL GUIDELINES

For projects such as the Sar-e-Haus Dam Rehabilitation Project the REFS TOR states that *"the Contractor shall prepare **environmental guidelines** that will be used to minimize and mitigate potential environmental impacts. Included in the guidelines will be an **environmental mitigation checklist** to be completed as a part of final design for each project. Where the analysis indicates that negative environmental effects could occur, the project will be designed to avoid or mitigate those effects. The guidelines will also describe procedures for **monitoring rehabilitation activities** to assure that identified mitigation measures have been implemented as planned"* (Emphasis added). Accordingly, the following presents the examination's findings in regard to the environmental mitigation final design checklist (**Item 4.1**) and monitoring (**Item 4.2**). Additional recommendations for environmental actions beyond the scope of the Project, but within the scope of REFS, are presented in **Item 4.3**.

4.1 Environmental Mitigation Final Design Checklist

The preferred form of mitigation is avoidance of impacts through the adoption of enforceable measures and precautions rather than amelioration after the fact. This preferred form of mitigation has been incorporated in the recommended contract provisions attached hereto as **Appendix A.**

An environmental and final design checklist is provided by **Exhibit 4-1**.

4.2 Monitoring

Monitoring of projects such as the Sar-e-Haus Dam Rehabilitation Project generally includes observational monitoring to enforce contract provisions to avoid adverse impacts and may include instrumented monitoring of environmental parameters such as air quality, when warranted.

Monitoring of environmental impacts during the rehabilitation process will be the responsibility of the USAID General Contractor (USAID/GC) as a part of contract supervision procedures. A Supervising Engineer (SE) will be assigned to the Project. Compliance procedures will include routine site visits, including the ancillary facilities associated with that package (labor camps, asphalt plants, etc.).

Major issues to be addressed in the monitoring and compliance reports will include:

- **Air Quality Impacts.** The SE will be responsible for compliance with contract provisions that specify:
  - Controlled locations of sources of air pollution, use of quarries, etc.
  - Proper use of water sprays and other techniques to lessen dust impacts.
  - Prohibitions against open burning in populated areas.
  - Proper use of solvents and volatile materials.
  - Blasting (if any) to be carried out using small charges.

EXHIBIT 4-1
ENVIRONMENTAL MITIGATION FINAL DESIGN CHECKLIST

For Air Quality, Water, Soil, Noise and Social Impacts

AIR QUALITY

Potential Impact Source	Mitigation Objective	Mitigation Checklist Do designs and bid documents include the following provisions?	Implementation Mechanism & Responsibility
Material Transport	Minimization of dust during transport of construction material	Rock, sand and other dust producing material will be sprayed prior to transport. Trucks must be covered with tarps. Only approved transport routes will be used.	Required by Project Contracts. Enforced by the Supervising Engineer (SE).
Material Storage	Minimization of dust during storage of construction material.	Stockpiles of materials shall be sited in sheltered areas away from sensitive areas and covered with tarps if required.	Required by Project Contracts. Enforced by SE.
Emissions from Construction Equipment & Solvents	Avoidance of excessive emissions due to poorly maintained equipment.	Contract stipulations require all construction equipment to meet acceptable standards and to be properly maintained and located at least 500 meters from the nearest sensitive receptor. Solvents and volatile materials must be used and stored properly to the satisfaction of the SE.	Required by Project Contracts. Enforced by SE.
On-Site Burning	Avoidance of smoke and gases which may constitute a nuisance.	On-site burning to be banned in populated areas	Required by Project Contracts. Enforced by SE.
Dust Generating Operations	Avoidance of dust generating operations during periods of high wind	In periods of high winds, dust generating options shall not be permitted within 200 meters of sensitive sites given the direction of the prevailing wind.	Required by Project Contracts. Enforced by SE.

WATER QUALITY

Potential Impact Source	Mitigation Objective	Mitigation Checklist Do designs and bid documents include the following provisions?	Implementation Mechanism & Responsibility
Uncontrolled Runoff During Project Works	Avoidance of inadequately planned runoff due to development of staging areas, labor camps, etc.	Runoff from during project works will be strictly controlled as a part of construction supervision activities. Monitoring will be undertaken as a routine part of construction supervision.	Required by Project Contracts. Enforced by SE.
Disruption of Irrigation	Avoidance of interruptions to irrigation flows due to project works.	Irrigation systems have been taken into account in design and at no time will water supply be interrupted due to project works. Alternative water sources will be developed as warranted due to temporary interruptions.	Required by Project Contracts. Enforced by SE.
Effects of Construction Camps & Staging Areas	Avoidance of inappropriate wastewater disposal and runoff.	Provisions for the location and design standards for land use, drainage, health facilities, etc., are established by construction documents.	Required by Project Contracts. Enforced by SE.

SOILS

Potential Impact Source	Mitigation Objective	Mitigation Checklist Do designs and bid documents include the following provisions?	Implementation Mechanism & Responsibility
Inadequate Slope Stabilization	Minimize soil loss during slope creation and due to erosion and slope failure in the longer-term.	Side slopes standards have been established to reduce erosion potential and/or, if necessary, stabilized, covered with rip-rap or other material to prevent soil erosion. Where appropriate embankment slopes will be stabilized by re-vegetation with grazing resistant plant species, placement of fiber mats, rip-rap, rock gabions, or other appropriate technologies.	Incorporated in design. Enforced by SE. Operational maintenance by MPW.
Soil Loss Due to Water-Related Erosion		Discharge zones from drainage structures will be furnished with rip-rap when warranted, particular in instances in which drainage structures are installed and/or road formation levels are raised and create bare slopes that require stabilization. Down drains/chutes will be lined with rip-rap/masonry or concrete to prevent erosion.	Incorporated in design. Enforced by SE. Operational maintenance by MPW.
Uncontrolled Runoff from Project Works & Labor Camps	Avoid soil due to poorly designed and/or maintained constructor and labor camps.	Runoff will be controlled by proper siting of camps and staging areas.	Required by Project Contracts. Enforced by SE.

NOISE

Potential Impact Source	Mitigation Objective	Mitigation Checklist Do designs and bid documents include the following provisions?	Implementation Mechanism & Responsibility
Construction Machinery	Minimize high noise levels, vibrations at time of occurrence	Use equipment conforming to international standards and directives on noise and vibration. Maintain exhaust systems in good working order, properly design engine enclosures, use intake exhaust silencers and regularly maintain noise generating equipment.	Required by Project Contracts. Enforced by SE.
Pile Driving	Minimize high noise levels, vibrations and time of occurrence.	To be mitigated through use of : - Time limits for pile-driving activities. - Bored piles in sensitive areas. - Shrouds where warranted.	Required by Project Contracts. Enforced by SE.
Paving And Other Rehabilitation Activities.	Minimize high noise levels and times of occurrence.	Limited construction hours in sensitive areas. Use of properly maintained equipment. Use of noise barriers where warranted. Public notification of construction activities and timing of activities generating significant noise and vibration levels.	Required by Project Contracts. Enforced by SE.

SOCIAL

Potential Impact Source	Mitigation Objective	Mitigation Checklist Do designs and bid documents include the following provisions?	Implementation Mechanism & Responsibility
Disruption of Economic Activities	Minimize loss of income due to disruptions.	Unavoidable disruptions will be compensated per the recommended Guidelines and Irrigation Study for the Rauzwa area.	GOA and SE.
Temporary Impacts Due to Rehabilitation Works	Minimize temporary impacts to residents and surrounding environment.	Coordinate all construction activities with neighboring land uses and respect rights of local landowners. Maintain and clean up construction camps.	Construction requirements enforced by SE.
Health and Safety Impacts to Workers	Attend to the health and safety of Workers	Provide local, basic emergency health facilities for workers and incorporate programs aimed at the prevention of STDs.	Construction requirements enforced by SE.
In-migration of Labor	Avoidance of social tensions. Due to competition for resources.	Mitigated by control of labor camps (if any) employee orientation and public information programs.	Construction requirements enforced by SE.

HISTORIC AND CULTURAL RESOURCES

Damage to Cultural and Historic Sites during Project Works	Protect Sites of historic and cultural importance	Placement of suitable fencing and barriers near sites of known antiquities, and historic and cultural resources. Adhere to accepted international practice and all applicable historic and cultural preservation requirements of the GOA In the event of unanticipated discoveries of historical or cultural artifacts the Contractor will notify the MIC.	GOA and SE

- Controls of hazardous materials.
- Transport of dust-generating items using tarps and other devices to minimize impacts.
- Spraying of road surfaces, excavation and construction sites to keep them moist for dust control as determined advisable by the SE.

- **Water Quality Impacts.** Potential water quality impacts during the rehabilitation phase will also be mitigated through the controlled location of asphalt plants and similar sources of runoff, erosion controls, proper siting and provision of facilities at construction camps as tabulated by **Exhibit 4.1** with compliance assured through the oversight of the SE.

- **Soils Impacts.** Potential soil impacts will be mitigated through the control of waste disposal practices and runoff as tabulated by **Exhibit 4.1** as a routine part of construction supervision and enforced through the monitoring of the SE.

  - Embankment & Erosion Prevention Requirements
  - Mining/Quarry Activities – I.e., the requirement that only licensed quarrying operations are to be used for material sources, if available, and the contingency

provisions in the contracts if they are not. Selections of quarries used for the rehabilitation will require the approval of the SE.

- **Social Impacts.** Potential issues related to transport of construction materials, labor camps and other social impacts will be mitigated as a routine part of construction supervision. Compliance with the contract stipulation in regard to the use of local labor to the maximum extent feasibility will also be monitored by the SE.

- **Historical and Cultural Resources.** Contract provisions for the protection of cultural and historical sources during the rehabilitation phase through the use of site controls and reporting unanticipated finds as tabulated by **Exhibit 4.1** with compliance monitored by the SE.

- **Public Health**. Compliance with contract provisions to control potential contamination of local water supplies during rehabilitation; to control air pollution and noise levels; to provide basic emergency heath facilities for workers; and encourage programs aimed at the prevention of sexually transmitted diseases as a part of all construction employee orientation programs; and other factors having a potential impact will be assured through the oversight of the SE. Although it is beyond the scope of the proposed Project, the establishment of STD awareness programs is recommended

- **Impacts to Other Infrastructure Networks**. Responsibility to ensure compliance with contract provisions to coordinate with all relevant agencies and organizations to avoid disruption of other infrastructure services (water supply, irrigation systems, electricity, etc.) rests SE.

- **Noise and Vibration Impacts.** Contract provisions for the control of noise and vibration impacts during the rehabilitation phase through the use of site controls, site controls, time and activity constraints and public awareness efforts as tabulated by **Exhibit 4.1** with compliance monitored by the SE.

4.3 Recommended Actions Beyond the Scope of the Project

Recommendations for actions beyond the scope of the Project, but generally within the scope of the REFS Program, are as follows:

- **Integrate REFS Institutional Strengthening Initiatives.** Institutional strengthening actions will be necessary as a part of the Project to ensure that the dam is adequately maintained in the future, to ensure that future biding and tendering procedures are in place and to ensure that environmental issues incorporated in these activities. REFS Component 2 offers an opportunity to provide the necessary institutional initiatives.

- **Coordinate with Other Financing Organizations**. Rehabilitation of portions of the Afghanistan's irrigation systems may be supported by organizations other than USAID, including other bilateral organization and the multi-lateral development banks. The establishment of reasonably consistent technical/engineering standards for the rehabilitation activities is highly recommended. A reasonable consistency in procedural standards and requirements is also highly recommended. Coordination of the technical reporting and procedures expected by the ministries by USAID, the World Bank, the Asian Development Bank and others is highly recommended so that the burden on local organizations to supply essentially the same information in different formats is minimized.

- **Encourage and Provide Leadership for a Coordinated Water Resources Program**.

Piecemeal and uncoordinated dam improvements, wells, irrigation and water supply programs without the benefit a more complete understanding of the underlying aquifers and subsurface conditions could lead to major environmental issues. Although the Sar-e-Haus Dam Project involves only rehabilitation of an existing system and is unlikely to have a major impact on existing water resource conditions, the development of a coordinated water resources program in which future project exploiting ground water resources, or potentially impacting groundwater resources, is highly recommended.

5.0 RECOMMENDED THRESHOLD DECISION

5.0 RECOMMENDED THRESHOLD DECISION

Project works are not anticipated to induce any significant impacts on the environmental or social characteristics of the Project Area. However, minor impacts will result from some rehabilitation activities as noted in **Section 3.0**. Notwithstanding the above, all of the identified impacts can be appropriately managed or mitigated by the measures outlined in **Sections 3 & 4** and provided as Recommended Contract Provisions as **Appendix A**.

Accordingly, a Threshold Decision documenting a **Negative Determination With Conditions** (i.e., adoption of the mitigation and contingency provisions as stipulated herein) is recommended. These conditions are identified as:

- Adoption of the Contract Provisions as provided by **Appendix A**;
- Adoption of the Guidelines for the compensation of project-affected persons (PAPs) as provided by **Appendix B** for use in the event that unexpected impacts are encountered;
- Identification of specific institutional strengthening activities to ensure that the rehabilitated dam and irrigation system is adequately maintained; and
- Encourage and provide leadership for the development of a coordinated water resources program as the context for additional water-related projects in the REFS Program.
- Coordinate with other financing organizations.

APPENDIX A

APPENDIX A
CONDITIONS OF PARTICULAR APPLICATION
ENVIRONMENTAL PROVISIONS

The following has been extracted from the Conditions of Particular Application (COPA) prepared for use in the Sar-e-Haus Dam Rehabilitation Project.

4.0 ENVIRONMENTAL

4.1 General Provisions and Precautions

The Sub-Contractor shall take all necessary measures and precautions and otherwise ensure that the execution of the Works and all associated operations on the Work Sites or off-site are carried out in conformity with statutory and regulatory environmental requirements of Afghanistan including those established by local governments. The Sub-Contractor shall take all measures and precautions to avoid any nuisance or disturbance arising from the execution of the Work. This shall, wherever possible, be achieved by suppression of the nuisance at source rather than abatement of the nuisance once generated. In the event of any spoil or debris or silt from the Work Sites being deposited on any adjacent land, the Sub-Contractor shall immediately remove all such spoil debris or silt and restore the affected area to its original state to the satisfaction of the responsible authorities.

4.2 Water Quality

The following conditions shall apply to avoid adverse impacts to water quality:

- The Sub-Contractor shall prevent any interference with the supply to, or abstraction from, water resources and the pollution of water resources (including underground percolating water) as a result of the execution of the Works.

- Areas where water is regularly or repetitively used for dust suppression purposes (if any) shall be laid to fall to specially-constructed settlement tanks to permit sedimentation of particulate matter. After settlement, the water may be re-used for dust suppression and rinsing. All water and other liquid waste products arising on the Site shall be collected and disposed of at a location on or off the Site and in a manner that shall not cause either nuisance or pollution.

- The Sub-Contractor shall not discharge or deposit any matter arising from the execution of the Work into any waters except with the permission of the Contractor and regulatory authorities concerned.

- The Sub-Contractor shall at all times ensure that all existing stream courses and drains within and adjacent to the Site are kept safe and free from any debris and any materials arising from the Works.

- The Sub-Contractor shall protect all watercourses, waterways, ditches, canals, drains, lakes and the like from pollution, silting, flooding or erosion as a result of the execution of the Works.

4.3 Air Quality

The following conditions shall apply to avoid adverse impacts to air quality:

- Open burning will be prohibited.
- Solvents and volatile materials will be used and stored in manners satisfactory to the Contractor.
- Blasting (if any) will be carried out using small charges, and dust-generating items will be conveyed under cover.
- In periods of high wind, dust-generating operations shall not be permitted within 200 meters of residential areas having regard to the prevailing direction of the wind.
- Asphalt and hot-mix plants sites shall not be established prior to the approval of the Contractor and shall be located at least 500 meters away from the nearest sensitive receptor (e.g., schools and hospitals). Operators will be required to install emission controls.
- Water sprays shall be used during the delivery and handling of materials when dust is likely to be created and to dampen stored materials during dry and windy weather.
- Stockpiles of materials shall be sited in sheltered areas or within hoarding, away from sensitive areas. Stockpiles of friable material shall be covered with clean tarpaulins, with application of sprayed water during dry and windy weather. Stockpiles of material or debris shall be dampened prior to their movement whenever warranted.
- Vehicle with an open load-carrying area used for transporting potentially dust- producing material shall have properly fitting side and tailboards. Materials having the potential to produce dust shall not be loaded to a level higher than the side and tail boards, and shall be covered with a clean tarpaulin in good condition. The tarpaulin shall be properly secured and extend over the edges of the side and tailboards.
- In periods of adverse weather adverse impacts to adjacent residents or site employees during construction will be mitigated by either discontinuing until favorable conditions are restored, or, if warranted, sites may be watered to prevent dust generation, particularly at crushing plants.
- Machinery and equipment will be fitted with pollution control devices, which will be checked at regular intervals to ensure that they are in working order. Best available pollution control technologies will be required.
- Pre-construction monitor of existing ambient air quality may be undertaken to provide a baseline for the measurement of air quality impacts during the construction period if considered warranted by the Contractor.
- Periodic air quality monitoring may also be required in areas of high potential impact (asphalt plants, construction camps, etc) during the life of the Project if considered warranted by the Contractor.

4.4 Protection of Soils

Cut and Fill Activities. In undertaking cut and fill activities associated with the Works the Sub-

Contractor shall:

- Select less erodable material, placement of gabions and riprap and good compaction, particularly around bridges and culverts.
- Complete final forming and re-vegetation will be completed as soon as possible following fill placement to facilitate regeneration of a stabilizing ground cover.
- Trench where necessary to ensure successful establishment of vegetation.
- Seed with a fast growing crop and potential native seed mix immediately after fill placement to prevent scour and to encourage stabilization.
- Stabilize embankment slopes and road cuts by re-vegetation with grazing resistant plant species, placement of fiber mats, riprap, rock gabions, or other appropriate technologies.
- Complete discharge zones from drainage structures with riprap to reduce erosion when required.
- Line down drains/chutes with rip-rap/masonry or concrete to prevent erosion.
- Adjust side slopes adjusted in the range from based on soil and other conditions and within a range as determined in consultation with the Contractor to reduce erosion potential or, if necessary, cover with riprap or other material to prevent soil erosion.
- Use stepped embankments for embankments greater than six meters.

Borrow Pits. The following conditions shall apply to borrow pits:

- Borrow areas will be located outside the ROWs.
- Pit restoration will follow the completion of works in full compliance all applicable standards and specifications.
- The excavation and restoration of the borrow areas and their surroundings, in an environmentally sound manner to the satisfaction of the Contractor is required before final acceptance and payment under the terms of contracts.
- Borrow pit areas will be graded to ensure drainage and visual uniformity, or to create permanent tanks/dams.
- Topsoil from borrow pit areas will be saved and reused in re-vegetating the pits to the satisfaction of the Contractor.
- Additional borrow pits will not be opened without the restoration of those areas no longer in use.

Quarries. To ensure adequate mitigation of potential adverse impacts, only licensed quarrying operations are to be used for material sources. If licensed quarries are not available the Sub-Contractors may be made responsible for setting up their dedicated crusher plants at approved quarry sites

Erosion. To avoid potential adverse impacts due to erosion, the Sub-Contractor shall:

- Line spillage ways with riprap to prevent undercutting.

- Provide Mitigation plantings and fencing where necessary to stabilize the soil and reduce erosion.

- Upgrade and adequately size, line and contour storm drainage to minimize erosion potential.

- As noted in elsewhere in these Specifications, ditches shall be designed for the toe of slopes in cut sections with gutters or drainage chutes being employed to carry water down slopes to prevent erosion. Interceptor ditches shall be designed and constructed near the top of the back of slopes or on benches in the cut slopes as well as when there is a slope on adjacent ground toward the fill. When the roadway has a steep longitudinal slope, a drain is to be designed and constructed at the down-slope end of the cut to intercept longitudinal flow and carry it safely away from the fill slopes.

4.5 Avoidance of Social Impacts

To avoid adverse social impacts, the Sub-Contractor shall:

- Coordinate all construction activities with neighboring land uses and respect the rights of local landowners. If located outside the ROW, written agreements with local landowners for temporary use of the property will be required and sites must be restored to a level acceptable to the owner within a predetermined time period.

- Maintain and cleanup campsites.

- Attend to the health and safety of their workers by providing basic emergency heath facilities for workers and incorporate programs aimed at the prevention of sexually transmitted diseases as a part of all construction employee orientation programs.

- Obtain approval of all diversions and accommodations of traffic. A stipulated by Section ___ which states that “the Sub-Contractor shall provide the Contractor with a written traffic control plan which is to include when and where flagmen shall be employed and when and where traffic cones or other devices such as barricades and/or lights will be used. Where … traffic diversions area planned for …additional areas (will) be de-mined and the diversions clearly defined for travel.”

- Construct and maintain by-passes around bridges to be reconstructed until such time as the bridge is open for traffic. By-passes will be removed and the affected areas re-graded so as to blend in with the existing contours when the bridge is opened.

4.6 Noise

To avoid adverse impacts due to noise, the Sub-Contractor shall:

- Consider noise as an environmental constraint in his planning and execution of the Works.

- Use equipment conforming to international standards and directives on noise and vibration emissions.

- Take all necessary measures to ensure that the operation of all mechanical equipment and construction processes on and off the Site shall not cause any unnecessary or

excessive noise, taking into account applicable environmental requirements.

- Maintain exhaust systems in good working order; properly design engine enclosures, use intake silencers where appropriate and regularly regular maintain noise-generating equipment.

- Use all necessary measures and shall maintain all plant and silencing equipment in good condition so as to minimize the noise emission during construction works.

- Schedule operations to coincide with periods when people would least likely be affected and limit work hours and work days to less noise-sensitive times. Hours-of-work will be approved by the Contractor having due regard for possible noise disturbance to the local residents or other activities. Construction activities will be strictly prohibited between 10 PM and 6 AM in the residential areas. When operating close to sensitive areas such as residential, nursery, or medical facilities, the Sub-Contractor's hours of working shall be limited to 8 AM to 6 PM.

- Incorporate noise considerations in public notification of construction operations and specify methods to handle complaints. Disposal sites and haul routes will be coordinated with local officials to avoid adverse traffic noise.

- Undertake pre-construction monitor of existing noise and vibration if determined warranted and requested by the Contractor to provide a baseline for the measurement of impacts during the construction period. Routine monitoring may also be required in areas of high potential impact (e.g., pile-driving sites and areas of intensive noise-generating activities) if considered warranted by the Contractor.

4.7 Fuel and Chemical Storage

The following conditions to avoid adverse impacts due to improper fuel and chemical storage:

- All fuel and chemical storage (if any) shall be sited on an impervious base within a bund and secured by fencing. The storage area shall be located away from any watercourse or wetlands. The base and bund walls shall be impermeable and of sufficient capacity to contain 110 percent of the volume of tanks.

- Filling and refueling shall be strictly controlled and subject to formal procedures.

- All valves and trigger guns shall be resistant to unauthorized interference and vandalism and be turned off and securely locked when not in use.

- The contents of any tank or drum shall be clearly marked. Measures shall be taken to ensure that no contaminated discharges enter any drain or watercourses.

4.8 Protection of Historic and Cultural Resources

To avoid potential adverse impacts to historic and cultural resources, the Sub-Contractor shall:

- Protect sites of known antiquities, historic and cultural resources by the placement of suitable fencing and barriers;

- Adhere to accepted international practice and all applicable historic and cultural

preservation requirements of the Government of Afghanistan, including all appropriate local government entities.

- In the event of unanticipated discoveries of cultural or historic artifacts (movable or immovable) in the course of the work, the Sub-Contractor shall take all necessary measures to protect the findings and shall notify the Contractor and provincial-level representatives of the Archaeological Committee under the Ministry of Information and Culture. If continuation of the work would endanger the finding, project work shall be suspended until a solution for preservation of the artifacts is agreed upon.

4.9 Protection of Utilities

To avoid potential adverse impacts to utilities, the Sub-Contractor shall:

- Ascertain and take into account in his method of working the presence of utility services on and in the vicinity of the Site.

- Take into account in his program the periods required to locate, access, protect, support and divert such services, including any periods of notice required to effect such work in consultation with authorities operating such services.

- Assume all responsibility to locate or to confirm the details and location of all utility services on or in the vicinity of the Site.

- Exercise the greatest care at all times to avoid damage to or interference with services.

- Assume responsibility for any damage and/or interference caused by him or his agents, directly or indirectly, arising from actions taken or a failure to take action, and for full restoration of the damage.

- Wherever existing ground surfaces are to be disturbed for construction of the Works, carry out full and adequate preliminary investigations to locate all services in the area by means of hand-dug trial holes and trenches in combination with electronic and electro-mechanical devices, where appropriate,. Each service thus exposed shall be identified. Every such service at risk shall be fully exposed and adequately protected and supported in situ or diverted to the satisfaction of the appropriate authority prior to the commencement of such construction.

- When working in the vicinity of overhead power cables, ascertain and satisfy himself about the safe clearances to be maintained from the power cables in consultation with the authority operating the power line. Where existing overhead power lines, communications cables or other major utilities require relocation, the Sub-Contractor will use the services of specialist enterprises with the necessary skills and technology to carry out the work.

APPENDIX B

APPENDIX B
GUIDELINES FOR LAND AND ASSET ACQUISITION, ENTITLEMENTS AND COMPENSATION

The following presents the Guidelines for Land and Asset Acquisition, Entitlements and Compensation drafted for use in the World Bank Afghanistan Emergency Infrastructure Project. Adaptation of the guidelines is recommended for incorporation in the Sar-e-Haus Dam Rehabilitation Project and other projects included in the USAID Afghanistan Rehabilitation of Economic Facilities and Services (REFS) Program.

Guidelines for Land and Asset Acquisition, Entitlements and Compensation

I. Objectives

Land acquisition will be kept to a minimum and no person will be involuntarily displaced under subprojects financed by the proposed emergency reconstruction operations. Subproject proposals that would require demolishing houses or acquiring productive land should be carefully reviewed to minimize or avoid their impacts through alternative alignments. Proposals that require more than minor expansion along rights of way should be reviewed carefully. No land or asset acquisition may take place outside of these guidelines. A format for Land Acquisition Assessment is attached as Attachment 2(i).

These guidelines provide principles and instructions to compensate affected persons to ensure that all such persons negatively affected, regardless of their land tenure status, will be assisted to improve, or at least to restore, their living standards, income earning or production capacity to pre-project levels.

Categorization

Based on the number of persons that may be affected by the project (Project Affected People, PAPs) and the magnitude of impacts, projects may be categorized as S-1, S-2, or S-3 projects:

a. S-1 projects are those that will involve the resettlement of more than 200 PAPs and where a full Resettlement Action Plan (RAP) must be produced. Such interventions will be ineligible for support under the proposed emergency reconstruction operations.
b. S-2 projects are those which will involve the resettlement of less than 200 persons. In such cases, the following documentation is required: (1) a land acquisition assessment, (2) Minutes or record of consultations which assess the compensation claimed and agreement reached, and (3) a record of the receipt of the compensation, or voluntary donation, by those affected (see below).
c. S-3 projects are not expected to have any land acquisition or any other significant adverse social impacts; on the contrary, significant positive social impact and improved livelihoods are expected from such interventions.

II. Eligibility

PAPs are identified as persons whose livelihood is directly or indirectly affected by the project. PAPs deemed eligible for compensation are:

(1) those who have formal legal rights to land, water resources or structures/buildings, including recognized customary and traditional rights;

(2) those who do not have such formal legal rights but have a claim to usufruct right rooted in customary law;

(3) those whose claim to land and water resources or building/structures do not fall within(1) and (2) above, are eligible to assistance to restore their livelihood.

Acquisition of Productive Assets and Compensation

PAPs are eligible for replacement costs for lost assets as described below:

a. *Voluntary contributions*. In accordance with traditional practices, individuals may elect to voluntarily contribute land or assets and/or relocate temporarily or permanently from their land without compensation.
b. *Contributions against compensation*. A contributor/asset loser considered "affected" will be eligible for compensation from the local community or alternatively from the Government. A PAP shall lodge his/her claim for compensation to the local community representative/shura head and it shall be verified by the implementing agency. The claim shall be lodged within 2 weeks of completion of the consultations with the concerned community, and before project implementation begins.

Voluntary contribution, or contribution against compensation, should be documented. The documentation should specify that the land is free of any squatters, encroachers or other claims. A format is attached in Attachment 2(i), which includes a Schedule to be followed to assess any compensation claimed and the agreement reached.

III. Compensation Principles

The project implementing agencies shall ensure that any of the following means of compensation are provided in a timely manner to affected persons:

(1) Project affected persons losing access to a portion of their land or other productive assets with the remaining assets being economically viable are entitled to compensation at replacement cost for that portion of land or assets lost to them. Compensation for the lost assets will be according to following principles:

a. replacement land with an equally productive plot, cash or other equivalent productive assets;
b. materials and assistance to fully replace solid structures that will be demolished;
c. replacement of damaged or lost crops and trees, at market value;
d. other acceptable in-kind compensation;
e. in case of cash compensation, the delivery of compensation should be made in public, i.e. at the Community Meeting.

(2) Project affected persons losing access to a portion of their land or other economic assets rendering the remainder economically non-viable, will have the option of compensation for the entire asset by provision of alternative land, cash or equivalent productive asset, according to the principles in (1) a-d above.

Consultation Process

The implementing agencies will ensure that all occupants of land and owners of assets located in a proposed subproject area are consulted. There will be gender separate community meetings for each affected mantaqa/gozar (urban infrastructure) or village (other projects) to inform the local population about their rights to compensation and options available in accordance with these guidelines. The minutes of the community meetings shall reflect the discussions held, agreements reached, and include details of the agreement based on the format provided in Attachment 2(ii).

The implementing agency shall provide a copy of the minutes to affected persons and confirm in discussions with each of them their requests and preferences for compensation, agreements reached, and any eventual complaints. Copies will be recorded in the posted project documentation and be available during supervision.

Subproject Approval

In the event that a subproject involves acquisition against compensation, the implementing agency shall:

a) Not approve the subproject unless a satisfactory compensation has been agreed between the affected person and the local community;
b) Not allow works to start until the compensation has been delivered in a satisfactory manner to the affected persons;
c) If more than 200 persons are affected and require compensation, the subproject shall be deemed ineligible for support under the emergency reconstruction operations.

Complaints and Grievances

All complaints should first be negotiated to reach an agreement at the local community/village level. If this fails, complaints and grievances about these guidelines, implementation of the agreements recorded in the community meeting minutes or any alleged irregularity in carrying out the project can also be addressed by the affected persons or their representative at the municipal or district level. If this also fails, the complaint may also be submitted to the relevant implementing agency for a decision.

Verification

The community meeting minutes, including agreements of compensation and evidence of compensation having been made shall be provided to the municipality/district, to the supervising engineers, who will maintain a record hereof, and to auditors and socio-econimic monitors when they undertake reviews and project post-assessment. This process shall be specified in all relevant project documents, including details of the relevant authority for complaints at municipal/district or implementing agency level.

Attachment 2(i)

Land Acquisition Assessment Data Sheet

(To be used to record information on all land to be required)

1. Quantities of land/structures/other assets required:

2. Date to be acquired:

3. Locations:

4. Owners:

5. Current Uses:

6. Users:

   - Number of Customary claimants:
   - Number of squatters:
   - Number of encroacher:
   - Number of owners:
   - Number of tenants:
   - Others (specify): Number:

7. How land/structures/other assets will be acquired (identify one):

   - Donation
   - Purchase

8. Transfer of title:

   - Ensure that these lands/structures/other assets free of claims or encumbrances
   - Written proof must be obtained (notarized or witnessed statements) of the voluntary donation, or acceptance of the prices paid, from those affected together with proof of title being vested in the community, or guarantee of public access, by the title holder.

9. Describe grievance mechanisms available:

Attachement 2(ii)

Format to Document Contribution of Assets

The following agreement has been made on……..day of……between…….resident of ……..(the owner) and …….(the recipient).

1. That the owner holds the transferable right of ……..jerib of land/structure/asset in……

2. That the owner testifies that the land/structure is free of squatters or encroachers and not subject to other claims.

3. That the owner hereby grants to the recipient this asset for the construction and development of …….for the benefit of villagers and the public at large.

(Either, in case of donation :)

4. That the Owner will not claim any compensation against the grant of this asset

(Or, in case of compensation :)

5. That he Owner will receive compensation against the grant of this asset as per the attached Schedule.

6. That the Recipient agrees to accept this grant of asset for the purposes mentioned.

7. That the Recipient shall construct and develop the …….... and take all possible precautions to avoid damage to adjacent land/structure/other assets.

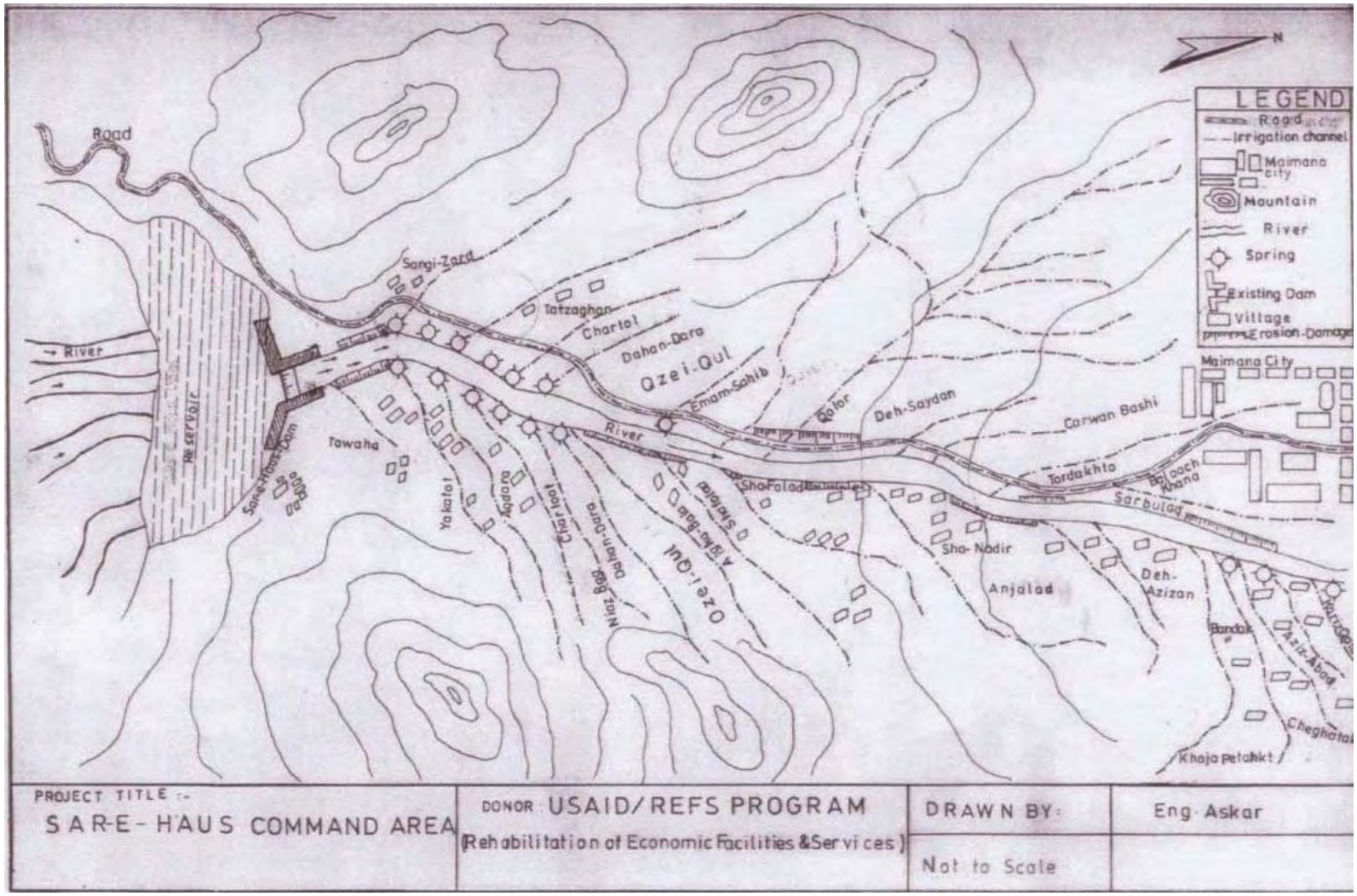
8. That both the parties agree that the ……..... so constructed/developed shall be public premises.

9. That the provisions of this agreement will come into force from the date of signing of this deed.

_____ _____
Signature of the Owner: Signature of the Recipient:

Witnesses:
1._____
2._____
(Signature, name and address)

APPENDIX C



PROJECT TITLE :-	DONOR : USAID/REFS PROGRAM	DRAWN BY:	Eng. Askar
SAR-E-HAUS COMMAND AREA	(Rehabilitation of Economic Facilities & Services)	Not to Scale	

APPENDIX C – PROJECT AREA SKETCH MAP

APPENDIX D

PERSONS CONTACTED

Dr Pir Mohammad Azizi
Deputy Minister (Technical)
Ministry of Irrigation, Water Resources and Environment (MIWRE)
Darulman
Kabul
Afghanistan

Asif Ali Zaidi
Programme Manager
United Nations Environment Programme
MIWRE
Darulman
Kabul
Afghanistan

Ghulam Mohd Malikyar
Environmental Specialist
Asian Development Bank
MIWRE
Darulman
Kabul
Afghanistan

APPENDIX E

LIST OF PREPARERS

The principal authors of the Initial Environmental Examination (IEE) for the Sar-e-Haus Dam Rehabilitation Project are:

Nick Skinner, Environmental Specialist
Louis Berger (UK) Ltd.
Roberts House
103 Hammersmith Road
London W14 0QH
United Kingdom

Robert J. Hefferon, Director of Special Projects
The Louis Berger Group, Inc.
2300 N Street NW
Washington, DC 20037 USA

Important contributions to the IEE have been made by all members of the Louis Berger Group, Inc. (LBG) team for the Afghanistan Rehabilitation of Economic Facilities and Services (REFS) Program.