

**ENVIRONMENTAL AND SOCIAL MANAGEMENT
FRAMEWORK**

For the

**DABS Planning and Capacity Support
Project**

Da Afghanistan Breshna Sherkat (DABS)

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List of Acronyms

ADB	Asia Development Bank
ANDS	Afghan National Development Strategy
AP	Affected Person
APSDP	Afghan Power System Development Project
ARAZI	Afghan Independent Land Authority
CDC	Community Development Council
CMS	Convention on Migratory Species
COO	Chief Operating Officer
DABM	Da Afghanistan Breshna Mossesa
DABS	Da Afghanistan Breshna Sherkat
EHSMP	Environmental Health and Safety Management Plan
EIA	Environmental Impact Assessment
ESAP	Environment and Social Advisory Panel
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plan
ESO	Environment Safeguards Officer
GoIRA	Government of Islamic Republic of Afghanistan
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
LAC	Land Acquisition Committee
LARPF	Land Acquisition and Resettlement Policy Framework
LLE	Law on Land Expropriation
LLM	Law on Land Management
MAIL	Ministry of Agriculture, Irrigation and Livestock
MEW	Ministry of Energy and Water
MOJ	Ministry of Justice
NEPA	National Environment Protection Agency
NESP	National Energy Supply Program
NEPS	North East Power System
NGO	Non Government Organisation
NHRP	Naghlu Hydropower Rehabilitation Project
O&M	Operations and Management
PDO	Project Development Objective
RAP	Resettlement Action Plan
REA	Rapid Environment Assessment
SIA	Social Impact Assessment
SSO	Social Safeguards Officer

Executive Summary

Background and Project Context

The planned Afghan power sector growth will place additional demands on the capacity of DABS. To cope with its increased responsibilities for investment, DABS will need to improve its capacity in the areas of planning and implementation of investment projects and then operating and maintaining them. To meet the demands placed on it, DABS must build its organizational capacity through the development of systems, procedures, and standards and of its staff through technical and other training and then ensure that these new capacities are applied to the task in hand.

The proposed project is intended as an entry point for scaling up investment in the power sector. It is motivated by the need to move DABS towards a model in which it drives the investment and O&M process.

Project Objective

The Project Development Objective is to improve the capacity of DABS to plan the investment and maintenance of the electricity distribution system.

Project Description

The project consists of two components: (i) DABS staff capacity building and (ii) Development of a training centre

Project Phasing

The duration of the project is 4 years and 6 months. Both components are scheduled to begin in July 2015. The training centre will be completed within 2 years of the start date.

Potential environmental and social impacts of the project components

No environmental and social impacts are envisaged under component one of this Technical Assistance project. Capacity building to improve preparation of pre-feasibility and feasibility studies is a core element of this component and will include a range of training initiatives to help DABS' staff identify and address potential downstream environmental and social impacts associated with the planning and implementation of future distribution investment projects. This ESMF, therefore, sets out general policies, codes of practice, guidelines and procedures to inform the content and design of such trainings and help DABS' staff manage potential environmental and social impacts in future power investment projects. It should be noted that negative impacts of power distribution projects are considered negligible and limited to the siting of poles and sub power stations as well as the safe disposal of old transformers which may contain hazardous materials such as polychlorinated biphenyl (PCB). It is envisaged that the impacts of proposed power distribution projects will be limited to the siting of poles and sub power stations as well as the safe disposal of old transformers which may contain hazardous materials such as polychlorinated biphenyl (PCB).

Under component two, construction of the training centre in the premises of the power plant in Deshsabz district of Kabul may cause limited, temporary and localized impacts including dust and noise pollution, increased construction traffic, establishment of temporary workers' camp etc. These impacts are expected to be small and temporary and either reversed or mitigated through an Environmental and Social Management Plan (ESMP) and construction contracts.

Policy and Legal Regulatory Environment

World Bank Operation Policies triggered in DABS planning and Capacity Support Project

Safeguard Policies Triggered by the Project

Yes

Environmental Assessment (OP/BP 4.01)	[X]
Involuntary Resettlement (OP/BP 4.12)	[X]

The primary relevant laws and legislations framing social and environmental issues which need to be considered in relation to distribution investment projects are:

- a. The Environment Law of Afghanistan (2007)
- b. The Constitution of Afghanistan (2004)
- c. Afghan Land Policy (2007)
- d. Law on Managing Land Affairs (2008)
- e. Law on Land Expropriation (2009)
- f. Law on the Preservation of Afghanistan's Historical and Cultural Heritages (2004)
- g.

Investment projects will also be required to take account of the requirements of the National Environmental Protection Agency (NEPA)

Environmental and Social Management Framework

Since the extent of investment activities and their location are not known at this time DABS is required to prepare an Environmental and Social Management Framework in accordance with the World Bank's requirements. The ESMF provides general policies, guidelines, codes of practice and procedures for the management of environmental and social issues to be integrated into the implementation of the project.

As part of the ESMF development process consultations have taken place with DABS staff, NEPA officials and local communities/government officials in the vicinity of the site where the training centre will be built.

Institutional Arrangements

The Chief Operating Officer (COO) of DABS will have overall responsibility for ensuring compliance with the requirements set out in the ESMF. The environmental and social safeguards officers assigned to the Naghlu Hydropower Rehabilitation Project (NHRP) will also take responsibility for overseeing the implementation of this project's ESMF provisions during preparation, implementation, monitoring and evaluation of all distribution investment projects.

Monitoring and Evaluation

DABS safeguards officers will be responsible for monitoring overall ESMF compliance. They together with the project management team, construction supervising engineer, local government and local communities will be responsible for monitoring that all required environmental and social mitigation measures, set out in Environment and Social Management Plans (ESMPs) are implemented satisfactorily.

Grievance Redress Mechanism

In order to ensure transparency and accountability in its investment projects a grievance redress mechanism (GRM) to address grievances related to project activities will be established by DABS as part of the ESMF implementation.

DABS Operation Division and ESS team will have an important role in ensuring that affected communities have a full understanding of the GRM, ways to access it and (i) the concept of just compensation for involuntary acquisition of land and/or assets and (ii) ensuring environmental and social mitigation measures in the ESMP's are implemented as planned.

I. Background and Project Context

I. I Background

1. The Afghan power system is small and underdeveloped but demand is growing rapidly. Sector institutions are evolving, with a gradual separation of policy and operations. The main government Ministry responsible for the power sector in Afghanistan is the Ministry of Energy and Water (MEW). It is increasingly focused on policy, strategy and planning issues while operations and investment are increasingly devolved to Da Afghanistan Breshna Sherkat (DABS). DABS is now focused on developing into a fully commercial power utility while remaining under state ownership. DABS will need to consolidate its position as the main owner and operator of the power system since neither growth in private sector participation nor unbundling or other reforms are realistic prospects over the medium term.
2. The planned sector growth will place additional demands on the capacity of DABS. To cope with its increased responsibilities for investment, DABS will need to improve its capacity in the areas of planning and implementation of investment projects and then operating and maintaining them. Currently DABS is reliant on project implementation units for this and its management has asked for Bank assistance to move towards normal electric power utility practice in investment and operations and maintenance (O&M). To meet the demands placed on it, DABS must build its organizational capacity through the development of systems, procedures, and standards and of its staff through technical and other training and then ensure that these new capacities are applied to the task in hand. It needs more and better trained staff and as such needs to draw from a wider pool of educated and capable professionals, including women.
3. Sufficient and reliable power supply is central to the Interim Strategy Note (ISN) Pillar 3, “Inclusive Growth and Jobs”. The ISN recognizes the need to scale up power supply to secure private sector led growth, particularly in the agricultural and resource sectors. It aims to do this through support of the government’s NPPs. The proposed project would improve the ability of DABS to plan and implement its program to increase power supply – a key component of the NESP, which also includes a component aimed at building capacity in sector institutions. The planned approach would improve the capacity of Afghanistan to absorb on-budget investment at a larger scale, thus contributing to Pillar 1 of the ISN which is aimed at building the legitimacy and capacity of institutions.

I.2 Project Context

4. The proposed project is intended as an entry point for scaling up investment in the power sector. Hitherto, projects have been implemented either entirely by international consultants or by project implementation units (PIUs). DABS now wishes to embed the capacity in its own organizational processes and staff to conduct pre-feasibility and feasibility studies and in the longer run eliminate the need for special-purpose PIUs for implementation of donor projects. It will continue to rely on contractors to perform design, supply and installation work under single responsibility contracts but in doing so will need to have the capacity to supervise the work and above all to manage the contracts.
5. Improved O&M is critical for sustained improvements in DABS’s performance. While there have been significant investments in distribution across the country, not least by the Bank, capacity for O&M has not kept pace. System operations and maintenance is another core competence of a utility and without good quality O&M, the gains to service quality and

coverage may be lost, fueling consumer dissatisfaction and putting at risk DABS's commercial performance. DABS seeks to regularize O&M in line with international practices through the creation of an asset monitoring system, budgeting, planning – including materials, equipment and human resources – and implementation protocols.

6. The proposed project emphasizes learning by doing. The proposed project is motivated by the need to move DABS towards a model in which it drives the investment and O&M process. A gradual process of bringing the core skills in-house is envisaged, while also ensuring that those skills which will continue to be outsourced to consultants and contractors are still available in the market. Above all the organization as a whole and the responsible staff need to learn by doing. On the investment side, the focus will therefore be on preparing sub-projects for subsequent financing by donors. On the O&M side the focus will be on preparing, implementing and monitoring of an enterprise-wide program.
7. A wide variety of capacity building tools would be used. At the organizational level, DABS needs to be organized in such a way as to facilitate investment and O&M practices. It needs to develop and codify its existing policies and procedures for selection of investments based on objective and transparent criteria as well as for carrying out O&M. It must set up effective feedback loops. At the individual level DABS staff need training and new tools as well as support and mentoring from more experienced actors. Lessons from capacity building projects worldwide and in Afghanistan show that where technical assistance has been used to fill the gap in skills needed to manage World Bank funded projects, it has had little lasting impact on strengthening capacity. So although consultants have a role to play, the proposed project will place emphasis on connecting DABS and its staff with industry exemplars, with consensus-based organizational development, participatory activities, coaching for key staff, in and out of office training and other methods to support improvements in their daily work.

I.3. Project Objective and Key Results

8. The Project Development Objective is to improve the capacity of DABS to plan the investment and maintenance of the electricity distribution system.
9. The following key results will be sought:
 - Selection of expansion and rehabilitation investments will be based on transparent, objective criteria;
 - DABS project planning, implementation and O&M functions will be based on good international practice adjusted for local conditions;
 - DABS distribution investments and O&M expenditures will be budgeted on three year rolling basis;
 - Key departments and individuals will be accountable for planning, implementation and O&M performance.

I.4. Project Description

The project consists of the following two components:

10. *Component 1: DABS staff capacity building.* This component would support capacity building for the staff of DABS including:
 - Setting up a twinning arrangement with a more experienced utility on which DABS can

model itself and make use of training facilities. Such a utility would, ideally, be well performing, relatively nearby, but with sufficient living memory that its staff can appreciate the challenges facing DABS.

- Providing general and task-specific training to managers and staff on distribution investment selection, planning and implementation, specifically on the preparation of pre-feasibility and feasibility studies, procuring design, supply and installation contractors, and supervising such contractors. Trainings on pre-feasibility and feasibility studies will cover core safeguards tools including Environmental and Social Impact Assessments, Resettlement Policy Framework/ Resettlement Action Plans and Environmental and Social Management Plans.
- Providing general and task-specific training to managers and staff on distribution operation planning and implementation, specifically on the preparation of annual O&M plans in line with the annual budgeting process, execution of the O&M plans including the hiring and supervision of contractors.
- Providing one-on-one mentoring support to managers and key specialists in the DABS planning and O&M functions.
- Enabling DABS to provide a career path for female professional staff in DABS, including recruitment, career development and identification of specific support needs.
- Strengthening the Afghanistan Energy Information Center as an integrated department of DABS

11. *Component 2: Development of training center.* This component would support setting up of a training center in DABS including:

- Design, construction and furnishing of a training center building
- Purchase of training and office equipment to supply the training facility for the DABS that will be used primarily for the capacity building activities.

I.5. Project phasing

12. Both components are planned to begin in July 2015. Support for the various capacity development activities will continue throughout the duration of the project. It is anticipated that the training centre will be completed within two years.

I.6 Potential environmental and social impacts of the project

13. No environmental and social impacts are envisaged under component one of this technical assistance project. However, trainings to improve preparation of pre-feasibility and feasibility studies will include a range of capacity building initiatives to help DABS' staff identify and address potential downstream environmental and social impacts associated with the planning and implementation of future distribution investment projects.

14. It is envisaged that the impact of power distribution projects will be limited to the siting of poles and sub power stations as well as the safe disposal of old transformers which may contain hazardous materials such as polychlorinated biphenyl (PCB) .Trainings under component one will seek to enhance DABS' staff capacity to better understand and manage issues such as :

- a. *Alignment of power lines:* alignment of all power lines under investment projects will be selected so that sensitive receptors such as water bodies, especially those supplying drinking water, and important religious and cultural sites such as

mosques, schools and health centers will be at least 50 meters from the proposed center line.

- b. *Selection of substation sites*: proposed sites of any sub-stations to be constructed under investment projects will be selected so that all sides of the perimeter are at least 100 meters away from sensitive receptors such as water bodies, especially those supplying drinking water, and important religious and cultural sites such as mosques, schools and health centers.
- c. *Changing location of power distribution lines*: distribution power poles and sub stations will only be required if pre-existing locations and buildings are not being utilized and if the distribution lines, poles, or construction, operation, and maintenance works are expected to have negative environmental and social impacts.
- d. *Ensuring limited land acquisition*: it is envisaged that distribution lines, poles and substations will mostly be sited on Government, unused, barren lands or public land areas. The project will ensure that all such land is free of all encroachment and other encumbrances. However some limited land acquisition may be necessary. Very small areas of land may be bought outright (willing buyer- willing seller) to facilitate the siting of electricity poles, pylons and substations. Also some private land may be required on a temporary basis to enable construction work and ‘stringing’. A Resettlement Policy Framework (RPF) is included as Annex 10.
- e. *Ensuring safe disposal of old transformers*: Proper disposal of all hazardous substances in government approved sites.

15. Trainings under component one will also recognize the potential significant socio-economic and environmental benefits that should arise from electrification of communities including the savings of fuel, diesel or wood as well as the time spent on their procurement or collection, Electrification may also lead to the development of new livelihood activities and enterprise development and generate new sources of income.

16. Construction of the training center under component two may cause limited, temporary and localized impacts including dust and noise pollution, increased construction traffic, establishment of temporary workers’ camp etc. These impacts are expected to be small and temporary and either reversed or mitigated through an EMP and construction contracts.

II. Policy Legal and Regulatory Framework

II.1 World Bank Operation Policies triggered in DABS Planning and Capacity Support Project

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

17. **Environmental Assessment (EA OP/BP 4.01):** The Environment Assessment safeguard is triggered because of possible negative impacts associated with:

- a. Component 1, which will finance trainings on preparation of feasibility studies, detailed engineering designs and bidding documents for the rehabilitation and/or construction of future distribution network/lines, and therefore, the siting of poles, pylons and substations associated with the supply of distribution lines, and the safe disposal of removed materials that may contain hazardous substances. These are likely to be small, temporary, local and readily avoided, reversed or mitigated and will be managed through project specific ESMPs.
- b. Component 2 which will finance the civil works related to the construction of the training center including managing construction waste, dust and noise pollution, increased construction traffic, establishment of temporary workers' camp etc. These impacts are expected to small and temporary and either reversed or mitigated through an ESMP and construction contracts.

18. **Involuntary Resettlement (OP/BP 4.12):** This technical assistance project will not involve either involuntary resettlement or land acquisition. However, this policy is triggered as feasibility studies for future power distribution investment projects may recommend some limited land acquisition. Training on preparation of pre-feasibility/feasibility studies will be financed under component 1. Very small areas of land may be bought outright (willing buyer- willing seller) to facilitate the siting of electricity poles and pylons. A Resettlement Policy Framework (RPF) is included as Annex 8.

19. OP/BP 4.11 is not triggered but Chance Find Procedures are in place. (see Annex 2).

II.2. Afghan legal and regulatory framework

20. The primary relevant laws and legislations framing social and environmental issues which need to be considered in relation to distribution investment projects are:

- h. The Environment Law of Afghanistan (2007)
- i. The Constitution of Afghanistan (2004)
- j. Afghan Land Policy (2007)
- k. Law on Managing Land Affairs (2008)
- l. Law on Land Expropriation (2009)
- m. Law on the Preservation of Afghanistan's Historical and Cultural Heritages (2004)

21. **The Environment Law of Afghanistan** promulgated in 2007 is quite comprehensive and covers most of the aspects of natural resources management. The law requires inter alia that planning for sustainable use, rehabilitation and conservation of biological diversity, forests, rangeland and other natural resources, prevention and control of pollution, and conservation and rehabilitation of the environment from adverse effects shall be an obligatory element of all national and local land-use plans and natural resources plans developed by all relevant ministries and national institutions. (art.23). Furthermore, it stipulates local communities should be involved in decision-making processes regarding sustainable natural resource management (art. 23, Para 10), and that affected persons must be given the opportunity to participate in each phase of the project. (art. 19, 1).

22. **The National Environmental Protection Agency (NEPA)** was constituted in 2005 and is the prime environmental regulatory and approval authority in the country. The Act under which NEPA was established specifies that the proponents of any project, plan, policy or activity must submit to NEPA a preliminary Environmental Assessment, in order to allow NEPA to determine the associated potential adverse effects and possible impacts. A detailed EIA procedure has been laid out by the NEPA for the proponents to follow for mandatory environmental compliance. Under Afghan law EIAs are required for all projects above 500,000 Afghani.
23. Consistent with the Articles 13(1) and 22 of the Environment Law of Afghanistan, NEPA, as the sole authorized agency, has promulgated the Environmental Impact Assessment Regulations (Gazette No. 939) on 10 March 2008, governing the process of environmental assessment for development activities. Under these regulations NEPA can either authorize – with or without conditions – the project, plan, policy or activity, provided that the potential adverse effects of the proposed activities on the environment are unlikely to be significant. NEPA may require the proponents to submit a detailed environmental impact statement including a comprehensive mitigation plan for its review and approval. NEPA is also mandated to clear social issues.
24. NEPA is also the only Government entity mandated to clear Social Impact Assessments (SIAs). Its Board of Experts will therefore review and consider environmental and social content in applications and documents of the project submitted by the proponent (including DABS). Acting on the advice of the Board of Experts, NEPA has the option of either granting or refusing permission. Once permission is granted the proponent needs to implement the project within three years of the date of which the permission has been granted, otherwise, it will lapse. The Board of Expert decisions can be appealed (Art. 19).
25. NEPA, as the knowledge center and approval authority on environmental assessment, has provided training on EIA requirements to over 20 DABS staffs as part of the World Bank capacity building program as of January 2013.
26. The Environmental Impact Assessment Regulations of 2008 have specific clauses on disclosure, consultation, and public participation as part of the due EA process, as well as the categorization of projects (Schedule 1 Screening of Activities) based on scale and nature of potential impacts, that are consistent with the World Bank and international best practices.
27. Whilst there is broad synergy between OP 4.01 and national environmental legislation and regulation, the Bank continues to work with relevant government agencies, including NEPA, to overcome shortcomings by promoting international environmental standards and practice and strengthening the implementation and enforcement of the environmental regulatory framework.
28. **The Constitution of Afghanistan (2004)** contains some articles that relate specifically to compensation and resettlement issues. These include Article 40 ‘No one’s property shall be confiscated without the order of the law and decision of an authoritative court. Acquisition of private property shall be legally permitted only for the sake of public interests and in exchange for prior and just compensation’
29. An **Afghan Land Policy** was approved by cabinet in 2007 but is yet to be operationalized. Important relevant provisions include: *Land Tenure/Land Acquisition* (i)

Land policy provides that compensation for the expropriation of ownership or of rights over land as enshrined in the Constitution be strictly enforced by law. Property rights may only be expropriated under defined legal procedures and for defined legal purposes; (ii) it also provides that no law may permit arbitrary deprivation of property rights. In the event that the government decides to implement a development project in the interest of the public, the value that the land had prior to the announcement of the expropriation will form the basis for the amount of monetary compensation to the owners of the property. *Protection of Property Rights* (i) It is a national policy that the national and provincial governments take measures to protect citizens including residents of informal settlements from arbitrary and forcible eviction. Eviction and relocation of unplanned settlement residents shall be undertaken with community involvement only for necessary spatial rearrangement which should take effect in accordance with the public's interest (ii) Compensation for expropriation of rights over land must be provided equitably in accordance with the law.

30. **The Law on Managing Land Affairs (2008)** aims to create a legislated unified, reliable land management system. This Law also aims to provide a standard system for land titling, land segregation and registration; prevent illegal land acquisition and distribution; access to land to people; and conditions for appropriation of lands. The Law on Managing Land Affairs provides that, *inter alia*, the management of land ownership and related land management affairs is the responsibility of the Ministry of Agriculture, Irrigation and Livestock (Article 4). However, in June 2013, The Afghan Independent Land Authority (ARAZI) was established as a separate agency, and the mandate on land administration and management transferred from MAIL to ARAZI. If no title deeds are possessed, a land settler may claim land ownership providing conditions are met, including that: there are signs of agricultural constructions; land owners bordering the said plot can confirm settlement of the land user for at least 35 years; the land is not under Government projects and is up to a maximum 100 Jeribs (Article 8).
31. The Law on Managing Land Affairs is currently under revision with amendments being reviewed by MoJ. If approved amendments may have implications for compensation matrix in terms expanded recognizable claims.
32. **The Law on Land Expropriation, (LLE)** (2009) sets out the provisions governing the expropriation or acquisition of land for public interest purposes, such as the establishment/construction of public infrastructure or for acquisition of land with cultural or scientific values, land of higher agricultural productivity and large gardens. It declares, *inter alia*, that: a) acquisition of a plot or portion of a plot land for public use is decided by the Council of Ministers and is compensated at fair value based on current market rates (Article 2); b) the right of the owner or land user will be terminated three months prior to the start of civil works on the project and after the proper reimbursement to the owner or person using the land has been made. (Article 6); c) the value of land, value of houses and buildings on the land and value of trees and other assets on the land will be considered for compensation (Article 8); and d) compensation is determined by the Council of Ministers.
33. Various eligibility of compensation entitlements, such as for landowners, squatters, agricultural tenants, sharecroppers and house owners/renters are available under the Resettlement Policy Framework.
34. A Provincial Level Land Settlement Commission will be established to better manage field activities and overcoming problems relating to implementation of the land settlement activities. This Commission is made up of the Provincial Governor, representative of the

Appeal Court, Head of Ministry of Agriculture, Irrigation and Livestock, Head of MEW, Land Management Department, Department of Geodesy and Cartography (Article 20); The State may appropriate land under a project for permanent use by state departments and institutions (Article 21), whilst land in built-up or under residential structures should be appropriated by the relevant Departments and not the Land Settlement Commission (Article 22). Several Articles including Article 23, 81 and 89 provide for dispute settlement in the courts. However, Article 23 also stipulates that the legal court settlement can be resorted to only after attempts to redress grievances with the settlement commission have failed. Article 25 recognizes the possibilities of customary ownership of land, water (Kariz) and other similar community linked endorsements like by elders, tribal leaders and tribes etc.

35. According to the **Law on Preservation of Afghanistan's Historical and Cultural Heritages**, 2004 operations which causes destruction or harm to recorded historical and cultural sites or artifacts is prohibited (art .11, art. 16). The law provides guidelines for how to deal with chance finds – see Annex 3. This is considered consistent with the World Bank OP 4.11 on physical cultural resources.

III. Environmental and Social Management Framework (ESMF)

III.1 ESMF General Guidelines

36. The DABS Planning and Capacity Support Project will enhance DABS's capacity to plan, implement, maintain and monitor investment projects under the National Energy Supply Program (NESP), details of which are unknown at project appraisal. The Project has been classified as Environment Category B in accordance with the World Bank's safeguard policies as the activities to be financed under the Project are not expected to have either significant environmental or social impacts. Any anticipated impacts can be readily addressed through appropriate mitigation and management measures included in the design and implementation of project-specific activities. Since the extent of these activities and their location are not known at this time DABS is required to prepare an Environmental and Social Management Framework in accordance with national laws and regulations and World Bank Operational Policies.
37. The Environmental and Social Management Framework (ESMF) provides general policies, guidelines, codes of practice and procedures for the management of environmental and social issues to be integrated into the implementation of investment projects. It seeks to both enhance environmental and social development benefits of the project and mitigate any adverse impacts, in line with GoA and World Bank policies and guidelines on management of environmental and social development issues.
38. The ESMF provides for early identification of potential adverse impacts and provides broad guidance for their effective mitigation. Consistent with existing legislation the objective of the framework is to help ensure that all activities undertaken under the project will:
 - Protect human health
 - Prevent environmental degradation as a result of either individual projects or their cumulative effect.
 - Prevent or compensate any loss of livelihood
 - Enhance positive environmental and social outcomes
 - Ensure compliance with relevant national laws and World Bank safeguards policies

- Ensure that certain types of investments with negative environmental or social impacts cannot be undertaken and are included in a negative list of prohibited investments.
39. Capacity Building activities under preparation of pre-feasibility and feasibility studies (component one of this project) will include training for DABS staff on all aspects of the ESMF including the ESIA process, preparation of site-specific ESMPs for investment projects, monitoring and reporting on progress of Environmental and Social Management issues or otherwise. Emphasis will be placed on creating/raising awareness of and building capacity to manage social and environmental issues among DABS' staff. Topics to be covered in ESMF trainings will include, but will not be limited to,: Afghan laws as set out in paragraph 17 above; the role of NEPA; development of ESIA TOR, quality assurance for ESIA's, the Resettlement Policy Framework (RPF) with special attention to guidance, procedures and documentation for all types of land acquisition, requirements and steps in formulating a resettlement action plan and the GRM.
 40. These capacity building programs will introduce DABS' staff to Environmental, Health and Safety Guidelines (EHS guidelines http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/our+approach/risk+management/ehsguidelines) and the EHS Guidelines for Electric Power Transmission and Distribution <http://www.ifc.org/wps/wcm/connect/820ba70041685e578e6caf9e78015671/2007+-+Electric+Power+Transmission+and+Distribution.pdf?MOD=AJPERES> (see annex 15) These guidelines will be considered standards to be applied by DABS in the development and implementation of power projects.
 41. The scale of the training centre to be financed under component 2 of this Project will be confirmed during project design.
 42. The purpose of the Resettlement Policy Framework (RPF) is to clarify resettlement principles, organizational arrangements, and design criteria to be applied to specific infrastructure investments linked to distribution line activities by DABS as and when they take place. In this way a consistent approach to resettlement practice will be ensured for all activities involving land acquisition and displacement.
 43. The RPF sets out the general principles and steps to be followed in connection with any land acquisition and resultant resettlement which may occur during the implementation of future distribution investment projects. The RPF for the Planning and Capacity Support Project is customized from the RPFs designed for the Naghlu Hydropower Rehabilitation Project (NHRP) and CASA 1000.

III.2 Lessons learned from ESMF implementation in other World Bank- funded projects in Afghanistan

44. ESMF implementation in other World Bank- funded projects in the country was reviewed and the main lessons learned and incorporated in the present ESMF are:
 - a. Trained staff with clear job descriptions and conducting environmental and social audits has given good results. Exposure visits to similar projects inside and outside the country can greatly enhance the understanding and attitude of the staff in terms of safeguards issues. Repeated training in relevant fields is important considering staff turnover.

- b. Regular and timely engagement of the World Bank team with the senior leadership of the line ministries helps to focus attention on, and ensure compliance with ESMFs, and equally important, with the requirement for capacity building and quality assurance of ESIA's and ESMPs for each component that requires one.
- c. Allocation of budget and resources with clear implementation and monitoring arrangements for the ESMF are essential.
- d. It is important to ensure availability of ESMF documents, including all guidelines, in local languages at project sites.
- e. ESMP provisions must be incorporated in bidding/contract documents with accompanying translation in local languages and must be reviewed with contractors by PCU management prior to start of construction work.
- f. Contractors need training in order to understand and complying with ESMP provisions.

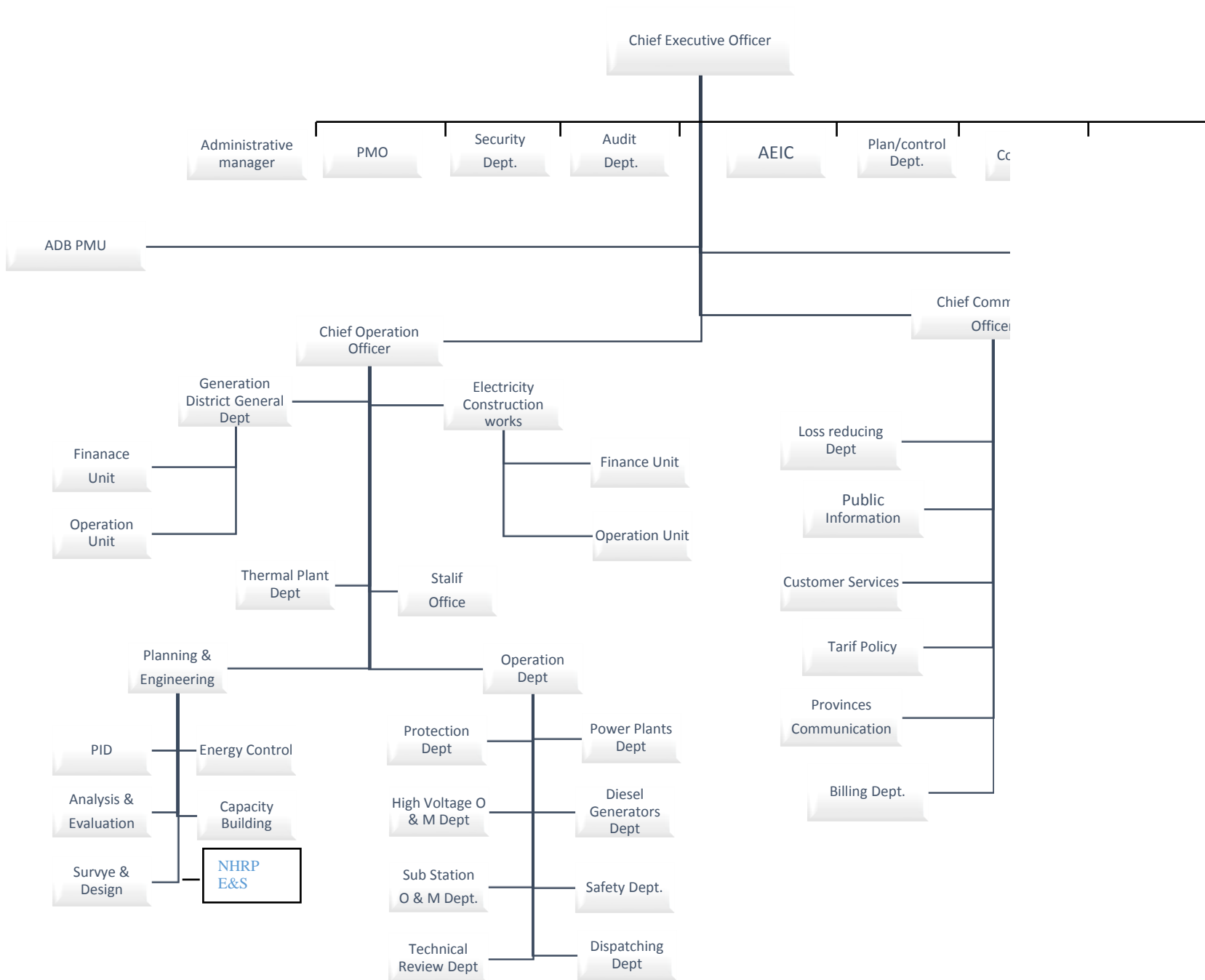
III.3 Consultations

- 45. Discussions on the Planning and Capacity Support project have taken place with staff from across the relevant departments within DABS in Kabul. These consultations provided important opportunities to receive feedback from staff on proposed capacity development initiatives and take on board their recommendations to the extent possible in final project design.
- 46. NEPA is the principal indirect stakeholder and consultations with officials from the agency were conducted in parallel to those with DABS' staff. NEPA staff will be invited to participate in relevant environmental training sessions to be delivered under component I.
- 47. Discussions were also held with the World Bank experts on environmental and social issues. In particular, consultations with the World Bank team focused on sharing their experience on ESMF implementation in other countries, discussions on capacity building plans, institutional arrangements, monitoring arrangements with respect to the implementation of Environmental and Social Management Plans (ESMP) (see annex 7.)
- 48. Local government and local community representatives in the immediate vicinity of the training center location will be consulted on the draft ESMP prior to the detailed design of the center being finalized. The manager of this project will have overall responsibility for ensuring that these consultations are held in a timely way and, as far as possible, take account of any concerns in final project design.
- 49. Conducting consultations with local communities, as part of the process of developing investment projects, will form part of the Environmental and Social Management trainings to be carried out under component 1 of this project.

III.4 Institutional Arrangements: requirements, processes and responsibility for safeguards screening and mitigation

- 50. Prior to approval of funding all proposed investment projects will be screened by either environmental and social safeguard staff or designated staff from DABS's Planning and Operations Departments to determine environmental and social concerns of the proposed activities. The screening process will also identify relevant actions to either eliminate or mitigate potential negative impacts. A screening template to facilitate project screening is attached as annex 3.

51. Analysis of information collected through the screening process will be used to develop Environmental and Social Management Plans (ESMPs) which will be approved by the head of DABS's Planning Department. DABS safeguards staff will be responsible for ensuring that either civil works contractors or other designated officials conduct these consultations and prepare ESMPs. The ESMP for the Training Centre will be cleared by the World Bank.
52. A mid-term review of the project will examine progress in building safeguards capacity within DABS. Taking account of the review's findings, consideration will then be given to addressing the need to establish an Environmental, Social, Health and Safety management system within DABS within the resources available under the project.
53. The Chief Operating Officer (COO) of DABS will have overall responsibility for ensuring compliance with the requirements set out in the ESMF. DABS's environmental and social safeguards officers, located in DABS Planning Department working on the NHRP (see DABS organogram on next page) will also assume responsibility for overseeing the implementation of this project's ESMF provisions during preparation, implementation, monitoring and evaluation of all distribution investment projects.



54. The Environment and Social Safeguards Team will include a social safeguards officer, an environmental safeguards officer and a monitoring and evaluation officer. The team's responsibilities will include:
 - a. Preparation of site specific Environment and Social Management Plans/Environmental Management Plans of future investment projects found to have significant environmental and social impacts.
 - b. Coordinating implementation of DABS' environmental and social commitments and initiatives with relevant government agencies including NEPA and the Afghanistan Land Authority.
 - c. Training local government and communities on environmental and social safeguards issues and implementation of ESMPs.
 - d. Monitoring land acquisition and resettlement processes as required.
 - e. Monitoring and ensuring quality assurance of environmental and social impact assessments, including developing relevant TOR for consultants, for all proposed investment projects.
 - f. Coordinating with, and receiving feedback and recommendations from the construction supervision engineer who will act as the Independent Third Party Monitoring Agency.

55. Environmental and Social Safeguards staff will receive training to enable them to carry out their responsibilities to an acceptable standard.

56. The Safeguards Officers (SOs), supported by the technical specialists on the ESAP panel together with World Bank Social and Environmental Specialists, will be responsible for increasing awareness of, and coordinating training on, all aspects of safeguards within DABS. The Safeguard team will also use relevant consultancy services as required.

57. The COO will ensure that mechanisms are put in place within DABS at national and investment project level to foster knowledge sharing across the organization on: (i) the critical importance of including environmental and social safeguards in planning and implementing power projects and (ii) the content and requirements of the Planning and Capacity Support ESMF.

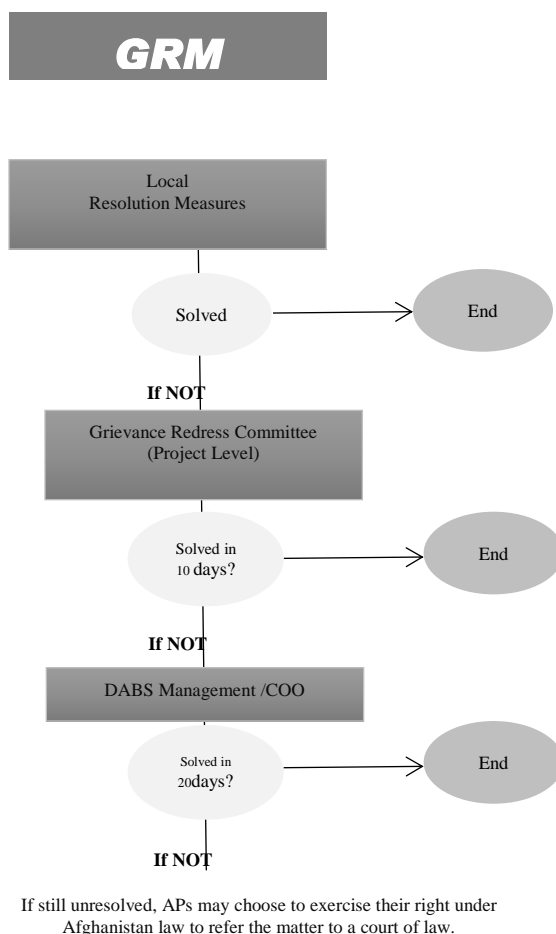
III.5 Monitoring and Evaluation

58. DABS safeguards officers together with project management will be responsible for monitoring the construction of the training center and preparation of future distribution investment projects to ensure compliance with ESMF requirements. (An indicative Environmental Monitoring Plan is attached as Annex 7) Monitoring findings will be incorporated into the safeguards officers' regular monthly reports. (see annex 13 for suggested reporting format). Monthly monitoring reports will include:
 - a. List of consultations held, including locations and dates, name of participants and occupations
 - b. Main points arising from consultations including any agreements reached
 - c. A record of grievance applications and/or grievances redress dealt with
 - d. Monitoring data on environmental and safety parameters listed in ESMPs.
 - e. The various periodic implementation progress reports and other reports
 - f. Trainings

59. Monitoring by safeguards officers will be supplemented by that of the construction supervising engineer, local government and local communities who will monitor project activities during the construction phase to ensure that all required environmental and social mitigation measures, set out in Environment and Social Management Plans (ESMPs) (see annex 4) are put in place and are being implemented satisfactorily.
60. The effectiveness of safeguards training conducted under component one will be monitored and evaluated as part of the overall monitoring and evaluation of this component. Key parameters of DABS' monitoring and assessment system will include staff's response to trainings, how much staff members actually learnt through training, how well staff have been able to incorporate learned principles, knowledge and skills into their jobs on a permanent basis and the extent to which staff training has improved the overall performance of DABS.
61. At national level DABS COO will take overall responsibility for overseeing progress in implementing the ESMF and assessing the effectiveness of mitigation measures against agreed indicators and parameters. The COO will review monthly reports with safeguards officers who, supported by World Bank specialists, will be responsible for developing reporting forms and preparing quarterly reports which will inform the Government, DABS Board and the World Bank on progress.

III.6 Grievance Redress Mechanism

62. In order to ensure transparency and accountability in its investment projects a grievance redress mechanism (GRM) to address project-related grievances will be established by DABS as part of the ESMF implementation.
63. Where an individual has a grievance with regard to a specific investment project she or he, should, in the first instance, be encouraged to make use of existing local-level structures (e.g. CDCs/shura and village leaders) to try to resolve quickly any concerns or grievances related to project development and implementation.



64. If intermediation at local level is unsuccessful, the individual or Affected Person (AP) can take his or her complaint to a formal Grievance Redress Committee (GRC) which will record the grievance and try and resolve issues relating specifically to the implementation of the investment projects. A GRC will consist of the Affected Person (AP), the project manager of the investment project, DABS Environment and Social Safeguards staff, a representative from local government, a representative from the AP's community CDC/shura which may be a representative from a women's CDC and the contractor(s).

65. The AP (or his/her representative) may submit his/her complaint in a number of ways e.g. by written letter, phone, sms messages and email to the GRC or, alternatively, raise his/her voice in a public or individual meeting with project staff. The GRC will meet to try and resolve the matter at community level and make a recommendation within 7-10 working days from receipt of complaint. If there is no decision after 10 days the AP can refer the complaint to the Chief Operating Officer (COO) of DABS in Kabul. DABS/COO will then address the complaint and respond to the complainant within 20 days.
66. The GRM procedures to be followed for all investment projects will be translated into Pashto and Dari so that they are easily accessible to all stakeholders and made available through DABS. Information on the steps to be followed in handling grievances will be incorporated into the process of providing local communities with information about proposed investment projects.
67. All submitted complaints and grievances will be added to a database/project files which will be updated regularly. Each complaint and grievance should be ranked, analyzed and monitored according to type, accessibility and degree of priority. The status of grievances submitted and grievance redress will be reported to DABS management through the monthly report.
68. ESS staff should include regular updates and analysis of the GRM in their quarterly reports and also provides regular feedback to communities and other relevant stakeholders.
69. Operation Division and ESS team will have an important role in ensuring that communities directly affected by investment projects have a full understanding of the GRM, ways to access it and (i) the concept of just compensation for involuntary acquisition of land and/or assets and (ii) ensuring environmental and social mitigation measures in the ESMP's are implemented as planned.

III.7 Key Environmental and Social Trainings under Component One

Component One: Trainings on pre-feasibility and feasibility studies		
Selected Environmental and Social Topics		Key elements
1	Environmental and Social Impact Assessments (ESIAs) -	Development of TORs, consultation on TORs, consultant recruitment process, quality assurance of ESIA.
2	Development and Implementation of Environmental and Social Management Plans (ESMPs)	Consultation with/ feedback to local communities on potential impacts and identification of appropriate mitigation measures. Monitoring.
3	Development and consultation on Resettlement Policy Framework and Resettlement Action Plans	Guidance, procedures and documentation for all types of land acquisition and steps in formulating a resettlement action plan.
4	Policy and Regulatory Environment	Relevant Afghan laws and regulations and World Bank safeguards policies. The role of NEPA in ensuring safeguards compliance
5	Grievance Redress Mechanism	Ensuring communities are aware of mechanism structure and means of accessing it, making and recording of complaints, providing feedback on complaints resolution
6.	Conducting consultations with and providing feedback to local communities and other stakeholder groups	identifying all stakeholder groups (including vulnerable groups) developing relevant communication strategy to meet the specific needs of each group.

III.8 Indicative Budget for Environmental and Social Safeguards Compliance¹

No.	Activities	Unit	Cost(US\$ Per month)	Duration (months)	Total budget (US\$)
Staffing, monitoring and evaluation					
1.	Environment Safeguards Officer	1	400	45	18,000
2.	Social Safeguards Officer	1	400	45	18,000
3	Monitoring and Evaluation	1	400	45	18,000
Manuals, translation, communications					
3	Translation of ESMF into Dari and Pashto			1	5,000
4	Preparation of Environmental and Social Safeguards Operational Manual for power Projects and translation into local languages.			2	10,000
5	Preparation of Environmental and Social Safeguards Training Manual and translation into local languages			2	10,000
6	Preparation of communication materials in local languages			2	10,000
	Total				89,000

70. These estimates reflect the costs of two safeguards officers and one monitoring and evaluation officer for the duration of the project as well as the following costs to be incurred in the first year: translation of the ESMF into Dari and Pashto, preparation of environmental and social safeguards training and operational manuals, preparation of EMP and communication materials. All training costs associated with creating awareness of safeguards and increasing the capacity of DABS' staff to implement and monitor relevant mitigation measures will be included under component 1.

III.9 PUBLIC DISCLOSURE

71. For projects such as the Planning and Capacity Support Project, the World Bank's Access to Information Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.

72. DABS will establish an easily accessible system with different options for public information/disclosure of information for communities and relevant stakeholders to be aware of processes to be followed to register complaints. DABS will apply this ESMF prior to approval of any development project funded or implemented by multi-lateral agencies such as the World Bank and others.

73. The ESMF and ESMP's will be disclosed in Pashto, Dari and English languages by DABS, and will be made available on the organisation's website.

¹ Costs of training on ESMF issues are included in component 1.

Annex 1

Negative List of Subproject Attributes

Attributes of Ineligible Subprojects
<p>Involves significant conversion or degradation of critical natural habitats including, but not limited to, any activity within:</p> <p>Ab-i-Estada Waterfowl Sanctuary; Ajar Valley (Proposed) Wildlife Reserve; Dashte-Nawar Waterfowl Sanctuary; Pamir-Buzurg (Proposed) Wildlife Sanctuary; Bande Amir National Park; Kole Hashmat Khan (Proposed) Waterfowl Sanctuary.</p>
<p>Will significantly damage non-replicable cultural property, including but not limited to any activities that affect the following sites:</p> <p>monuments of Herat (including the Friday Mosque, ceramic tile workshop, Musallah complex, Fifth Minaret, Gawhar Shah mausoleum, mausoleum of Ali Sher Navaii, and the Shah Zadehah mausoleum complex); monuments of Bamiyan Valley (including Fuladi, Kakrak, Shar-I Ghulghular and Shahr-i Zuhak); archaeological site of Ai Khanum; site and monuments of Ghazni; minaret of Jam; mosque of Haji Piyada/Nu Gunbad, Balkh province; stupa and monastery of Guldarra; site and monuments of Lashkar-i Bazar, Bost; archaeological site of Surkh Kotal.</p>

Annex 2– Chance Find Procedures

Chance find procedures are defined in the law on Law on the Preservation of Afghanistan's Historical and Cultural Heritages and Artefacts (Official Gazette, April 16, 2004), specifying the authorities and responsibilities of cultural heritage agencies if sites or materials are discovered in the course of project implementation. This law establishes that all moveable and immovable historical and cultural artefacts are state property, and further:

The Archaeology Institute and the Historical Artifacts Preservation and Repair Department are both responsible to survey, evaluate, determine and record all cultural and historical sites and collect and organize all historical documents related to each specific site. No one can build or perform construction on the recorded historical and cultural site unless approved or granted permission or agreement is issued from the Archaeology Institute.(Art. 7)

All moveable and Immovable historical and cultural artifacts and heritage items that are discovered or remain buried and not discovered/excavated in Afghanistan are the property of the Islamic Republic of Afghanistan and any kind of trafficking of such items is considered theft and is illegal.(Art. 8)

Whenever municipalities, construction, irrigation or other companies (whether they are governmental or private) find or discover valuable historical and cultural artifacts during the conduct of their projects, they are responsible to stop their project and report any findings to the Archaeology Institute about the discovery.(Art. 10)

Any finder or discoverer of historical and cultural sites is obligated to report a find or discovery to the Archeology Institute immediately but not later than one week if it is in the city and not later than 2 weeks if it is in a province. All discovered artifacts are considered public properties and the Government of Afghanistan will pay for all lands and sites which are considered to be of historical or cultural value.(Art. 19, 1)

Whenever there is an immovable historical and cultural site discovered which includes some movable historical and cultural artifacts, all such movable artifacts are considered public property and the owner of that property will be rewarded according to Article thirteen (13) of this Decree.(Art. 19, 2)

A person who finds or discovers a movable historical and cultural artifact is obligated to report the discovery to the Archaeology Department no later than seven (7) days if he/she lives in the capital city of Kabul, and in the provinces they should report the discovery to the Historical and Cultural Artifacts Preservation Department or Information and Culture Department or to the nearest governmental Department no later than fourteen (14) days. Mentioned Departments in this article are responsible to report the issue to the Archaeology Department as soon as possible and the discoverer of the artifact will be rewarded according to Article 13 of this Decree. (Art. 26)

Whenever individuals who discover historical and cultural artifacts do not report such discoveries to the related Departments within the specified period according to Articles 19

and 26 of this Decree, they will be incarcerated for a minimum of one (1) month but not more than a maximum of three (3) months.(Art. 75)

The above procedures must be referred to as standard provisions in construction contracts, when applicable. During project supervision, the Site Engineer shall monitor that the above regulations relating to the treatment of any chance find encountered are observed.

Relevant findings will be recorded in World Bank Project Supervision Reports (PSRs), and Implementation Completion Reports (ICRs) will assess the overall effectiveness of the project's cultural resources mitigation, management, and capacity building activities, as appropriate.

Annex 3
Environmental and Social Screening Form

Introduction

This form is a tool to standardize the environmental and social screening process of distribution sub-projects / project areas in each sub-component of the Planning and Capacity Support Project of Da Afghanistan Breshna Sherkat (DABS).

The main objective of the screening process is to identify and highlight environmental and social issues that need to be taken into account in further decisions, planning, and design of a project. The aim is to support the sustainable implementation of the planned investments under the above project.

The screening must be carried out at an early stage of the sub-project (i.e., pre- feasibility), in accordance with the requirement for World Bank financed projects.

The proponent must complete each section of this form, as outlined below:

Proponent and Project Identification:

Name of Project:

Project Proponent (Company / Institution): Da Afghanistan Breshna Sherkat (DABS) Company

Contact person (Proponent): Name:

Phone:

E-mail:

Responsible person and the name of the person completing this form: Company:

Name:

Phone:

E-mail:

Locality and date : Kabul

Signature
(Proponent)

Signature
(Responsible Consultant / Person)

1 The Screening Form

The questions regarding this form or the procedure may be sent to:
Da Afghanistan Breshna Sherkat

.....

Phone:

E-mail:

2 Project Description

2.1 Name and Type of Project:

2.2 Expected start and end date (month/year) and project duration (in months) of the construction phase:

2.3 List the technology and machinery to be used in the construction and operation phases:

2.4 List the materials to be used during the construction and operation phases (e.g., infrastructure, creosote treated poles, fuels and oils):

2.5 Expected number of workers during construction and during operation:

2.6 Maps (in Annexes):

2.6.1 Provide a map with the geographical location of the project;

2.6.2 Provide an appropriately-scaled map clearly showing:

The project area with existing buildings, infrastructure, vegetation, and land use;

The project area with any planned construction, plants, lines, or access roads.

2.7 Is the project area or its immediate surroundings subject to pollution or environmental damage caused by other (existing) activities?

Yes _____ No _____

2.8 Is there any other infrastructure in or close to the project area?

Yes _____ No _____

Provide an additional description for “yes” answers:

The Biological Environment

3 The Natural Environment

3.1 Describe the habitats and flora and fauna in the project area and in the entire area expected to be affected by the project (e.g., downstream areas, access roads)

3.2 Will the project directly or indirectly affect:

3.2.1 Natural forest types? Yes _____ No _____

3.2.2 Mangroves or swamps? Yes _____ No _____

3.2.3 Wetlands (i.e., lakes, rivers, swamps, seasonally inundated areas)? Yes _____ No _____

3.2.4 Other habitats of threatened species that require protection under Afghanistan laws and/or international agreements?

Yes _____ No _____ If yes, describe _____

3.3 Are there according to background research / observations any threatened / endemic species in the project area that could be affected by the project?

Yes _____ No _____

3.4 Will vegetation be cleared?

Yes _____ No _____

3.5 Will there be any potential risk of habitat fragmentation due to the clearing activities?

Yes _____ No _____

3.6 Will the project lead to a change in access, leading to an increase in the risk of depleting biodiversity resources?

Yes _____ No _____

3.7 Will the proposed project activity trigger OP 4.04 Natural Habitats?

Yes _____ No _____ If yes, please describe

Provide an additional description for “yes” answers:

4. Protected Areas

Does the project area or do project activities:

4.1 Occur within or adjacent to any designated protected areas?

Yes _____ No _____

4.2 Affect any protected area downstream of the project?

Yes _____ No _____

4.3 Affect any ecological corridors used by migratory or nomadic species located between any protected areas or between important natural habitats (protected or not) (e.g., mammals or birds)?

Yes _____ No _____

4.4 Will the proposed project activity trigger OP 4.04 Natural Habitats?

Yes _____ No _____ If yes, please describe

Provide an additional description for “yes” answers:

5. Invasive Species

5.1 Is the project likely to result in the dispersion of or increase in the population of invasive plants or animals (e.g., along distribution lines, access roads, quarry sites or borrow pits)?

Yes _____ No _____ If yes, please describe.

Provide an additional description for a “yes” answer:

6. The Physical Environment

6

 River Systems

Will the project affect / change:

6.1 Water quantity? Yes _____ No _____

6.2 Water quality (i.e., through sedimentation, chemical pollution)?
Yes _____ No _____

6.3 River stream pattern? Yes _____ No _____

6.4 Seasonal flow variations? Yes _____ No _____

6.5 Flooding regime? Yes _____ No _____

6.6 River ecology? Yes _____ No _____

6.7 Aquatic habitats? Yes _____ No _____

Provide an additional description for “yes” answers:

7 Geology / Soils

7.1 Will vegetation be removed and any surface left bare?

Yes _____ No _____

7.2 Will slope or soil stability be affected by the project?

Yes _____ No _____

7.3 Will the project cause physical changes in the project area (e.g., changes to the topography)?

Yes _____ No _____

7.4 Will local resources, such as rocks, sand, gravel or groundwater be used?

Yes _____ No _____

7.5 Could the project potentially cause an increase in soil salinity in or downstream the project area?

Yes _____ No _____

7.6 Could the soil exposed due to the project potentially lead to an increase in lixiviation of metals, clay sediments, or organic materials?

Yes _____ No _____

Provide an additional description for “yes” answers:

8 Landscape / Aesthetics

8.1 Is there a possibility that the project will adversely affect the aesthetics of the landscape?

Yes _____ No _____

Provide an additional description for a “yes” answer: _____

9 Pollution

9.1 Will the project use or store dangerous substances (e.g., large quantities of hydrocarbons, creosote-treated poles/ PCB)?

Yes _____ No _____

9.2 Will the project produce harmful substances?

Yes _____ No _____

9.3 Will the project produce solid or liquid wastes?

Yes _____

No _____

9.4 Will the project cause air pollution?

Yes _____ No _____

9.5 Will the project generate noise?

Yes _____ No _____

9.6 Will the project generate electromagnetic emissions?

Yes _____ No _____

9.7 Will the project release pollutants into the environment?

Yes _____ No _____

Provide an additional description for a “yes” answer:

13 Occupational Health and Safety, Health, Welfare, Employment, and Gender

13.1 Is the project likely to affect human / community health or welfare (e.g., through disease vectors)? Yes _____ No _____

13.2 Is the project likely to safeguard worker’s health and safety and public safety (e.g., occupational health and safety issues)? Yes _____ No _____

13.3 How will the project minimize the risk of accidents? How will accidents be managed, when they do occur?

Please describe: _____

13.4 Is the project likely to provide local employment opportunities, including employment opportunities for women? Yes _____ No _____

13.4 Is the project being planned with sufficient attention to local poverty alleviation objectives? Yes _____ No _____

13.4 Is the project being designed with sufficient local participation (including the participation of women) in the planning, design, and implementation process?

Yes _____ No _____

Provide an additional description for “yes” answers:

14 Historical, Archaeological, or Cultural Heritage Sites

Based on available sources, consultation with local authorities, local knowledge and/or observations, could the project alter:

14.1 Historical heritage site(s) or require excavation near the same?

Yes _____ No _____

14.2 Archaeological heritage site(s) or require excavation near the same?

Yes _____ No _____

14.3 Cultural heritage site(s) or require excavation near the same?

Yes _____ No _____

14.4 Graves, or sacred locations (e.g., fetish trees or stones) or require excavations near the same?

Yes _____ No _____

14.5 Will any of the project activities trigger OP 4.11 Cultural Property?

Yes _____ No _____

In the case of chance finds, please contact: _____

- National Museum of Afghanistan
- Ministry of Information and Culture

15. Livelihoods and Property

15.1. Will any project activities impact or result in the loss of immovable properties ?

Yes__----- No-----

15.2. Will any project activities affect livelihoods of women and men in the area?

Yes__----- No-----

15.3. Will any project activities affect ownership of properties in the area?

Yes----- No-----

16_Vulnerability

Will the project increase vulnerability , especially of marginalized groups such as women and landless, in the project area?

Yes----- No-----

Provide an additional description for “yes” answers:

Screening Form was completed by: Name

Position

Signature

Date

Screening Results were reviewed and approved by: Name

Position

Signature

Date

Annex 4: Generic Terms of Reference for a full Social Impact Assessment (SIA)

1. Introduction

The Government of the Islamic Republic of Afghanistan (GoIRA), through its 2006 Afghanistan National Development Strategy (ANDS) set out ambitious three to five year goals for increasing access to electricity. The aim was for electricity supply to reach at least 65 percent of households and 90 percent of non-residential establishments in major urban areas and at least 25 percent of households in rural areas. This would have represented a considerable increase over the rate of electrification – which had last been reliably estimated at six percent nationwide in 2003. More recent estimates suggest that some 25-30 percent of households have access to grid electricity. There appears to be no reliable estimate for the number of people with access to off-grid electricity although there is some 134MW of small hydro, diesel generators and solar power installed.

In 2002, when the new government came into being, donors started to finance rehabilitation and construction of the power system, partly to ensure essential services could be provided and partly because it was one of the things most frequently demanded by people to improve their lives. The North East Power System (NEPS) which serves several of the Northern provinces as well as Kabul has seen significant growth. Most notable are the interconnection with the Uzbekistan power system which allows the import of 150MW and enables provision of 24 hour power to parts of Kabul, and a connection with Tajikistan which allows the import of a further 300MW during the summer time when there is surplus hydropower capacity. Other parts of the country also benefit from imported power, including in the North West and west, which are supplied from the grids of Turkmenistan and Iran. Afghanistan's current heavy dependence on imports, at about 80 percent of its electricity needs in 2012, is likely to continue to do so for some time.

Responsibility for management and operation of the electricity system rests with Da Afghanistan Breshna Sherkat (DABS), the national electricity utility. Until 2009, DABS was a department of the Ministry of Energy and Water. DABS's corporatization has been accompanied by a strong program of commercialization supported in the early years by the World Bank and more recently by USAID. DABS is responsible for the installed domestic generation capacity, including about 230MW of hydropower and with it Naghlu, although only about 138MW is currently in service. MEW still retains a role in investment planning and project management and is the main counterpart for three existing World Bank projects.

2. Project Background

The Naghlu Hydropower Rehabilitation Project (NHRP) aims to increase the supply of domestically generated electricity to the Afghan power system of least cost electricity in a safe and environmentally and socially sustainable way.

Social impact Assessment studies will be carried out to ensure that social implications of the proposed activities under the NHRP have been identified, analysed and clearly communicated to the decision makers and stakeholders including direct affected people.

Component Two of this project - Improvement of the safety and sustainability of the dam - includes a range of studies to address safety shortfalls of the plant. A Social Impact Assessment, which may be part of an integrated Environmental and Social Impact Assessment, will be required to examine the impact of proposed activities recommended by these studies.

A detailed Social Impact Assessment will be required as part of the feasibility study for Component three of the NHRP - Dam heightening feasibility study. Both SIAs will include, where appropriate, land acquisition, resettlement and livelihood development plans.

3. Overall SIA Objectives

Social Impact Assessment (SIA) focuses on assessing the intended and unintended social consequences of planned interventions on affected populations. These assessments can help relevant authorities design and put in place suitable mitigation plans in order to improve the quality of life of all those directly affected by the project. The participatory approach that lies at the heart of social impact assessments aims to ensure greater social inclusion and participation by affected communities in the design and implementation of mitigation measures.

The broad objective is to identify, develop and incorporate social measures into project planning, preparation, implementation and monitoring as a means of identifying and addressing direct and indirect social outcomes through all aspects of project execution. This process needs to be carried out at each stage of project preparation, namely feasibility and detailed project report (DPR) stage. To carry out the detailed assessments at various stages a detailed work-plan needs to be provided as part of the inception report.

The following provides specifies objectives, activities and outputs to complete the SA process:

4. Specific SIA Objectives

SIA is an approach for incorporating social analyses and participatory processes into project design and implementation. The specific objectives of the SIA are:

- To assist the government and other stakeholders in understanding the social impacts of the proposed project;
- To carry out a socio-economic, cultural and political/institutional analysis to identify potential social impacts of the proposed project;
- To identify principal stakeholders and develop consultation framework for participatory implementation;
- To screen social development issues and scope SIA activities for feasibility and design stage;
- To ensure that results of the SIA provide inputs to the monitoring of project impacts during implementation and to the evaluation of project outcomes at completion;
- To provide inputs to the project design at the feasibility and detailed design stage including specific recommendations in selection of design alternatives (identification of areas that may require adjustments in project designs) and preparing social policy framework;
- To develop a Resettlement Action Plan (RAP) that includes comprehensive mitigation measures to ensure that the affected and displaced persons are appropriately resettled and rehabilitated i.e. to assist them to improve their livelihoods and standards of living or at least to restore them, in real terms;
- To assess the current capacity for management of social impacts, develop institutional arrangements for this and subsequent (like) projects and formulate a training and capacity building plan.

5. Scope of Work

5.1. Stage I - Feasibility Stage:

Social screening and preliminary assessment will be carried out to:

- Review all national legislation and regulations pertinent to the project, as well as the WB Safeguard policies and procedures.
- Determine nature, magnitude of adverse social impacts as well as to determine beneficial impacts and specific of social issues to scope out social issues for detailed assessment.
- Identification of stakeholders' needs and inform, consult and carry out dialogues with stakeholders on matters regarding project design alternatives, implementation of social mitigation measures and provide specific recommendations with high social risks, including, presence of significant common property that may require adjustments in project design.
- Assess the capacity of institutions and mechanisms for implementing social risk management instruments and recommend capacity building.
- Develop monitoring and evaluation mechanism to assess social development outcomes.
- Develop broad mitigative measures
- Prepare preliminary budget estimates, market-based prices for the affected people.

5.1.1. SIA Methods and Tools:

For socio-economic, cultural and political/institutional analysis combine multiple tools and employ a variety of methods for collecting and analysing data, including both quantitative and qualitative methods (expert and key informant interviews, focus group discussions, household survey, beneficiary assessments, rapid and participatory rural appraisal, gender analysis).

Develop scoping techniques, interview schedules, field survey instruments and checklist for data collection and discussions.

Screen and scope to prioritize social issues through different techniques such as ranking and composite index.

The selection of SIA methodology should emphasize consultation and participation of project affected persons (PAPs), project implementing and executing agencies and other stakeholders.

The discussions with the relevant government officials, other institutions and organizations in the civil society, should be participatory and broad-based, leading to the identification, selection and agreement on project options.

5.1.2. Outputs:

The expected output will be a Social Screening report and findings integrated in the feasibility report, including:

- Findings of analysis and consultation framework for project.
- Outline of social risk management instruments as required.
- Recommendation for adjustments in designs during feasibility and detailed design stage.
- Scope of social impact assessment to define the universe of social issues for detailed analysis for Detailed Project Report.

- Guidelines for resettlement and rehabilitation measures.

5.2. Stage II - Detailed Project Report:

The social impact assessment will cover the directly affected populations to formulate development strategies in order to assist in determining project impacts on the social, economic, cultural, and livelihood activities of affected communities. This will establish a social baseline against which changes resulting from the intervention can be measured in the future. The social surveys will be carried out after demarcation of zone of impact (area of influence).

- a) A census and socio-economic survey, including a detailed inventory of affected land/assets would however, need to be carried out for all PAPs to establish a cut-off date, loss of fixed land/assets such as land, structures and trees, loss of infrastructure (a national road, potable water point, mosques, etc.), livelihood or access to community resources and categories each type of losses as a result of project implementation.
- b) Assess local tenure and property rights arrangements which may include usufruct or customary rights to the land or other resources taken for the project including common property resources.
- c) Analysis of baseline information and its processing will include adequate measures to compensate and assist the people to restore and improve their livelihood.
- d) Carry out market survey and focus group consultation with different social groups including women to prepare socially, technically and economically feasible income generations schemes including skill up gradation plans.
- e) Identify the land and prepare a plan for relocation in consultation with the project displaced people with different social groups including women and local administration.
- f) Finalize estimate of land required that will be affected by zone of impact, resettlement and economic rehabilitation and review land transfer procedure adopted in project area for all types of activities related to project such as back water effect, distributary network, approach roads and other civil works.
- g) Carry out meaningful public consultation with project affected people and other stakeholders on the types of social risk management measures to ensure 1) that the proposed mitigation measures are feasible to assist people to improve their livelihoods and 2) provide opportunities and a plan to participate in planning and implementing resettlement. Setting out mechanisms for community participation to set out priorities to ensure consultation with project affected people and dialogues with government officials from various departments, to make recommendations on measures necessary to mitigate adverse impacts and enhance social outcomes.
- h) Determine, in consultation with DABS and government officials, the current replacement cost rates for all types of affected assets and prepare detailed cost estimates for all types of affected assets and for other assistance and allowances.
- i) For all those who are affected including ethnic minorities, the social and economic benefits they receive should be consistent with their cultural preferences and decided in consultation with affected communities.
- j) The assessment will incorporate all measures necessary to ensure compensation for assets acquired at replacement cost, assistance to facilitate shifting of structures out of the impact zone, and mitigation measures for loss of livelihood, or reduction in incomes for PAPs. A Resettlement Action Plan (RAP) is intended to be action-oriented and time-bound document. As such it should be as precise and affirmative as possible, to facilitate approval by project authorities and the WB. Clarifying the parameters of the RAPs during the early stages will ensure that the RAP is a document focused on practical steps for implementation of Resettlement & Rehabilitation (R& R) measures.

- k) Prepare the draft R & R framework in close coordination with the borrower and the project affected people, based on type of losses expected, which describes entitlements and mitigation measures needed to assist affected people, especially for the vulnerable in accordance with World Bank guidelines.
- l) Assess institutional capacity and propose the institutional arrangement for implementation of RAP, addressing grievances, and ensuring gender equity, and identify the roles and responsibilities of each agency and develop a training program on Resettlement & Rehabilitation (R &R) , based on the assessment of the capacity of the implementing agency.
- m) To develop a time schedule to implement the action plan that synchronizes with civil works.
- n) Conduct risk assessment for proposed mitigation measures and develop a risk assessment framework.
- o) Develop user friendly software package for database on Project Affected Households and families to enable monitoring.

5.2.1. Methods & Tools:

- a) Conduct census and baseline survey with the help of interview schedules and prepare linear maps at appropriate scales showing each affected property to identify all project affected households and assets.
- b) Conduct land surveys in project area with the assistance of government officials for preparing land plan schedules.
- c) Conduct focus group discussions and HH survey to discuss adjustment in designs.
- d) Conduct consultations with affected people, and district level workshops with communities and executing organizations to finalize the implementation mechanism and for informed decision making.

5.2.2. Outputs:

The following shall be the outputs:

- a) Final Social Impact Assessment study(s) including the findings of baseline data/study.
- b) Final Resettlement & Rehabilitation Policy Framework.
- c) Final Resettlement Action Plan (RAP) including a capacity building, training plan for project partners and entitlement matrix. This will also be a stand-alone document.
- d) Final data base of the socio- economic surveys.

6. Reporting Requirements

- a) Inception Report: The Consultant will submit an Inception report confirming the methodology to be adopted for the study, the deployment schedule of personnel, a schedule of site visits to be carried out and a reporting schedule, within a fixed time from the date of beginning of the assignment. The consultant may need to carry out a reconnaissance survey before submitting the inception report.
- b) Social Screening Report: The expected output will be a Social Screening report and findings integrated in the feasibility report, including findings of analysis and consultation framework for project; outline of safeguard instruments as required; recommendation for adjustments in designs during feasibility and detailed design stage; scope of social impact assessment to define the universe of social issues for detailed analysis for Detailed Project Report (DPR); and guidelines for resettlement and rehabilitation measures.
- c) Resettlement Action Plan: Project description; method of study; analysis of alternatives; minimization of adverse impacts; analyses of land tenure systems, land acquisition or

transfer mechanism and R&R policies; project area profile, profile of the affected people and Impact analyses of the project on affected and displaced people with disaggregated data analyses of men and women; impact on land and other assets vis-à-vis the total asset including impact on occupation (formal and informal) and income (formal and informal sources) with disaggregated data analyses of both men and women; cut-of date, relocation plan with alternate sites, selection of preferred sites in consultation with the affected people, and planning for development of alternative sites; livelihood restoration plan with training plan for skill up gradation, employment and credit; community participation and integration with host population; restoration and relocation plan for cultural/common properties; institutional arrangement specified with roles and responsibilities, and training plan for capacity building; implementation schedule; monitoring, and evaluation plan, including indicators and reporting formats; risk assessment; cost estimates including rate analysis, quantities for civil work items and detailed budget (entitlement matrix).

7. Reporting Schedule

No.	Title of Report	Due within date from beginning of assignment	No. of copies	Time for comment from M&E Unit of DABS/WB
I	Inception Report			15 days
II	Social Screening Report			1 month
III	Resettlement Action Plan			15 days

8. Consulting Team

The consulting team shall include the following key experts in addition to any support staff that the consultant may decide.

No.	Qualification	Minimum Experience	Duration of Service Required	Continuous / Intermittent Inputs
1	Social Scientist (Team Leader) Post graduate Degree in Social Science/ Sociology	10 years		Continuous
2	Social Development Specialist Postgraduate Degree in Sociology /Anthropology	10 years		Continuous
3	Agriculturalist: Degree in Agriculture	5 years		Intermittent
4	Civil Engineer Degree in Civil Engineering	5 years		Intermittent
5	Community Participatory Specialist	10 years		Continuous
6	Gender Specialist	8 years		Intermittent

Annex 5: Generic Terms of Reference for a full Environment Impact Assessment (EIA)

Introduction

The Government of Afghanistan (GoA) intends to upgrade and expand its infrastructure to enhance the livelihood earning capacity of its people sustainably. GoA wishes that the proposed development occurs with due regards for the environmental and social concerns associated with such development. GoA's focal body on the subject, Da Afghanistan Breshna Shirkat (DABS) wishes to engage the services of a team of consultants to carry out the Environmental Impact Assessment of specific components of the Naghlu Hydropower Rehabilitation project (NHRP) preparation stage to ensure that these key concerns are addressed early in project development.

While the DABS is the focal entity of the GoA for the project, inputs are also expected from the Ministry of Energy and Water, Ministry of Agriculture and Animal Husbandry, National Environmental Protection Agency, and Ministry of Rehabilitation and Rural Development.

Project Background

The proposed multi-component Naghlu Hydropower Rehabilitation Project aims to improve infrastructure using a river-basin approach. One component of this project is also financing preparation of feasibility studies for large hydropower schemes which may be taken up in the future possibility of increasing the dam height and flushing out the settled sediment. As part of the NHRP, detailed Environmental Impact Assessments are to be carried out for candidate components identified, to feed into the overall project preparation. The XYZ project is being prepared as part of this component. {Provide a plan of the area that will be affected either indirectly or directly. Basic data should be given on existing and proposed irrigation and drainage in the area and the catchment characteristics, if available. }.

Objectives

This study is being carried out to ensure that environmental implications of the proposed XYZ project have been identified, analysed and clearly communicated to the stakeholders and decision makers. In order to achieve this target, the following objectives have been set:

To prepare inventory of the bio-physical and socio-economic environmental attributes in the study area;

To involve the local population in project preparation through active consultations which could also assist in identifying the attributes important to them?

To identify and assess the magnitude and significance of impacts due to the proposed activities on the attributes identified;

To consider a range of proposals should be considered and if so whether they would be less environmentally damaging;

To propose avoidance, mitigation and enhancement measures for adverse and positive impacts;

To assess the current capacity for environmental management to develop institutional arrangements for this and subsequent projects; and

To prepare an environmental management plan (EMP) to ensure implementation of the management measures selected from the ones proposed, along with budget and staff allocation (to feed into the overall project cost estimates) and institutional responsibility.

Environmental Assessment Requirements

The Environmental Assessment (EA) shall be guided by the requirements of OP4.01 and other relevant safeguard policies of the World Bank such as OP4.04, etc.

Scope of Work

The current information has led to the development of the following tasks, which may be modified with consent of the MEW and DABS if new information comes to light during the course of the study (e.g. the presence of sensitive receptors not known when the ToR is finalized).

Task 1. Description of the Proposed Project. General design and extent of hydropower works (specifications of dam and reservoir, size of command area, etc.); size of catchment area; operation and maintenance of civil works.

Task 2. Description of the Environment. Assemble, evaluate and present baseline data on the relevant environmental characteristics of the study area. Include information on any changes anticipated before the project commences.

Physical environment: geology; topography; soils; climate and meteorology; ambient air quality; surface and ground- water hydrology; existing sources of air emissions; existing water pollution discharges; and receiving water quality.

Biological environment: flora; fauna; rare or endangered species; sensitive habitats, including parks or preserves, significant natural sites, etc.; species of commercial importance; and species with potential to become nuisances, vectors or dangerous.

Socio-cultural environment: land use (including current crops and cropping patterns); land tenure and land titling; present water supply and water uses (including fish farming and household use and irrigation, among other current distribution and water resources if irrigation systems already exist in area); control over allocation of water resource and use rights.

Task 3. Legislative and Regulatory Considerations. Describe the pertinent regulations/law and standards governing environmental quality, health and safety, protection of sensitive areas, protection of endangered species, siting, land use control, etc., and relevant international treaties or agreements if any.

Task 4. Determination of the Potential Impacts of the Proposed Project. Potential impacts to be assessed include:

Project location: loss of forest land and natural habitats; loss of agricultural land (cropping and grazing); impact on flora and fauna; impact on historic and cultural sites; resettlement of people; effects on water resources outside and inside command area.

Project Design: Disruption of hydrology; drainage problems; design of dams and other structures; crossings for people and animals.

Project Construction: Soil erosion; construction spoils (disposal of); sanitary conditions and health risks associated with construction camp and workers coming into area; social and cultural conflicts between imported workers and local people.

Project Operation: Pollution by agrochemicals; impacts on soils (water logging, salinization, etc.); changes in ground water levels inside and outside command area; changes in surface water quality and risks of eutrophication; incidence of water-borne and water-related diseases.

Cumulative and long-term effects: which may be an issue where a number of irrigation and hydropower systems shared a common watershed or river basin system.

Task 5. Analysis of Alternatives to the Proposed Project. Describe alternatives that were examined in the course of developing the proposed project and identify other alternatives which would achieve the same objectives. The concept of alternatives extends to siting, design, technology selection, construction techniques and phasing, and operating and maintenance procedures. Compare alternatives in terms of potential environmental impacts; capital and operating costs; suitability under local conditions; and institutional, training, and monitoring requirements. When describing the impacts, indicate which are irreversible or unavoidable and which can be mitigated. To the extent possible, quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures. Include the alternative of not constructing the project, in order to demonstrate environmental conditions without it.

Task 6. Development of Environmental Management Plan (EMP), with focus on three generic areas: Mitigation measures, institutional strengthening and training, and monitoring. The emphasis on each of these areas depends on the needs in the specific project context, as identified by the EA itself.

Mitigation of environmental impact: Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Estimate the impacts and costs of those measures. Consider compensation to affected parties for impacts which cannot be mitigated. The plan should include proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures.

Institutional strengthening and training: Identification of institutional needs to implement environmental assessment recommendations. Review the authority and capability of institutions at local, provincial/regional, and national levels and recommend steps to strengthen or expand them so that the management and monitoring plans in the environmental assessment can be implemented. The recommendations may extend to new laws and regulations, new agencies or agency functions, inter-sectoral arrangements, management procedures and training, staffing, operation and maintenance training, budgeting, and financial support.

Monitoring: Prepare detailed arrangements for monitoring implementation of mitigating measures and the impacts of the project during construction and operation. Include in the plan an estimate of capital and operating costs and a description of other inputs (such as training and institutional strengthening) needed to carry it out.

Task 7. Assist in Inter-Agency Coordination and Public/NGO Participation. Assist in coordinating the environmental assessment with NEPA and other government agencies, in obtaining the views of

local NGO's and affected groups, and in keeping records of meetings and other activities, communications, and comments and their disposition.

Reporting Requirements

Inception Report: The Consultant will submit an Inception report confirming the methodology to be adopted for the study, the deployment schedule of personnel, a schedule of site visits to be carried out and a reporting schedule, within a fixed time from the date of beginning of the assignment. The consultant may want to carry out a reconnaissance survey before submitting the inception report.

Environmental Impact Assessment report:

The **EIA report** should include the following items (not necessarily in the order shown):

- (a) Executive summary. Concisely discusses significant findings and recommended actions.
- (b) Policy, legal, and administrative framework. Discusses the policy, legal, and administrative framework within which the EA is carried out. Also explains the environmental requirements of any co-financiers. Identifies relevant international environmental agreements to which the country is a party.
- (c) Project description. Concisely describes the proposed project and its geographic, ecological, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power plants, water supply, housing, and raw material and product storage facilities). Indicates the need for any resettlement plan or indigenous peoples development plan {see also sub-paragraph. (h) (v) Below. Normally includes a map showing the project site and the project's area of influence.
- (d) Baseline data. Assesses the dimensions of the study area and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences. Also takes into account current and proposed development activities within the project area but not directly connected to the project. Data should be relevant to decisions about project location, design, operation, or migratory measures. The section indicates the accuracy, reliability, and sources of the data.
- (e) Environmental impacts. Predicts and assesses the project's likely positive and negative impacts, in quantitative terms to the extent possible. Identifies mitigation measures and any residual negative impacts that cannot be mitigated. Explores opportunities for environmental enhancement. Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions, and specifies topics that do not require further attention.
- (f) Analysis of alternatives. Systematically compares feasible alternatives to the proposed project site, technology, design, and operation-including the "without project" situation in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. For each of the alternatives, quantifies the environmental impacts to the extent possible, and attaches economic values where feasible. States the basis for selecting the particular project design proposed and justifies recommended emission levels and approaches to pollution prevention and abatement.

(g) Environmental Management Plan (EMP). Covers mitigation measures, monitoring, and institutional strengthening; see outline (in III) below.

(h) Appendixes:

(i) List of EA report preparers-individuals and organizations.

(ii) References-written materials both published and unpublished, used in study preparation.

(iii) Record of interagency and consultation meetings, including consultations for obtaining the informed views of the affected people and local nongovernmental organizations (NGOs). The record specifies any means other than consultations (e.g., surveys) that were used to obtain the views of affected groups and local NGOs.

(iv) Tables: presenting the relevant data referred to or summarized in the main text.

(v) List of associated reports (e.g., resettlement plan or indigenous people's development plan).

(vi) Environmental Management Plan: The consultant will submit an environmental management plan (in line with Annex C of OP4.01) which will include the following components.

(a) Mitigation the EMP identifies feasible and cost-effective measures that may reduce potentially significant adverse environmental impacts to acceptable levels. The plan includes compensatory measures if mitigation measures are not feasible, cost-effective, or sufficient.

(b) Monitoring Environmental monitoring during project implementation provides information about key environmental aspects of the project, particularly the environmental impacts of the project and the effectiveness of mitigation measures. Such information enables the borrower and the Bank to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. Therefore, the EMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the EA report and the mitigation measures described in the EMP.

(c) Capacity Development and Training to support timely and effective implementation of environmental project components and mitigation measures, the EMP draws on the EA's assessment of the existence, role, and capability of environmental units on site or at the agency and ministry level. If necessary, the EMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of EA recommendations. Specifically, the EMP provides a specific description of institutional arrangements-which is responsible for carrying out the migratory and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most EMPs cover one or more of the following additional topics: (a) technical assistance programs, (b) procurement of equipment and supplies, and (c) organizational changes.

(d) Implementation Schedule and Cost Estimates For all three aspects (mitigation, monitoring, and capacity development), the EMP provides (a) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans with staffing requirements; and (b) the capital and recurrent cost estimates and

sources of funds for implementing the EMP. These figures are also integrated into the total project cost tables.

(e) Integration of EMP with Project the borrower's decision to proceed with a project, and the Bank's decision to support it, are predicated in part on the expectation that the EMP will be executed effectively. Consequently, the Bank expects the plan to be specific in its description of the individual mitigation and monitoring measures and its assignment of institutional responsibilities, and it must be integrated into the project's overall planning, design, budget, and implementation. Such integration is achieved by establishing the EMP within the project/contract documents so that the plan will receive funding and supervision along with the other components.

Reporting Schedule

No.

Title of Report

Due within date from beginning of assignment

No. of copies

Time for comment from M&E Unit of MEW/DABS/WB

Inception Report 15 days

Interim Report (including screening of alternatives)15 days

Environmental Impact Assessment 3 months

Environmental Management Plan15 days

Consulting Team

The consulting team shall include the following key experts in addition to any support staff that the consultant may decide.

Qualification/ Minimum Experience/ Duration of Service Required/ Continuous / Intermittent Inputs

1 Post graduate Degree in Environmental Planning/Engineering 10 years - Continuous

2 Post graduate Degree in Sociology/Anthropology 10 years - Continuous

3 Undergraduate Degree in Agronomy 8 years - Intermittent

4 Undergraduate Degree in Civil Engineering / Hydrology 8 years - Intermittent

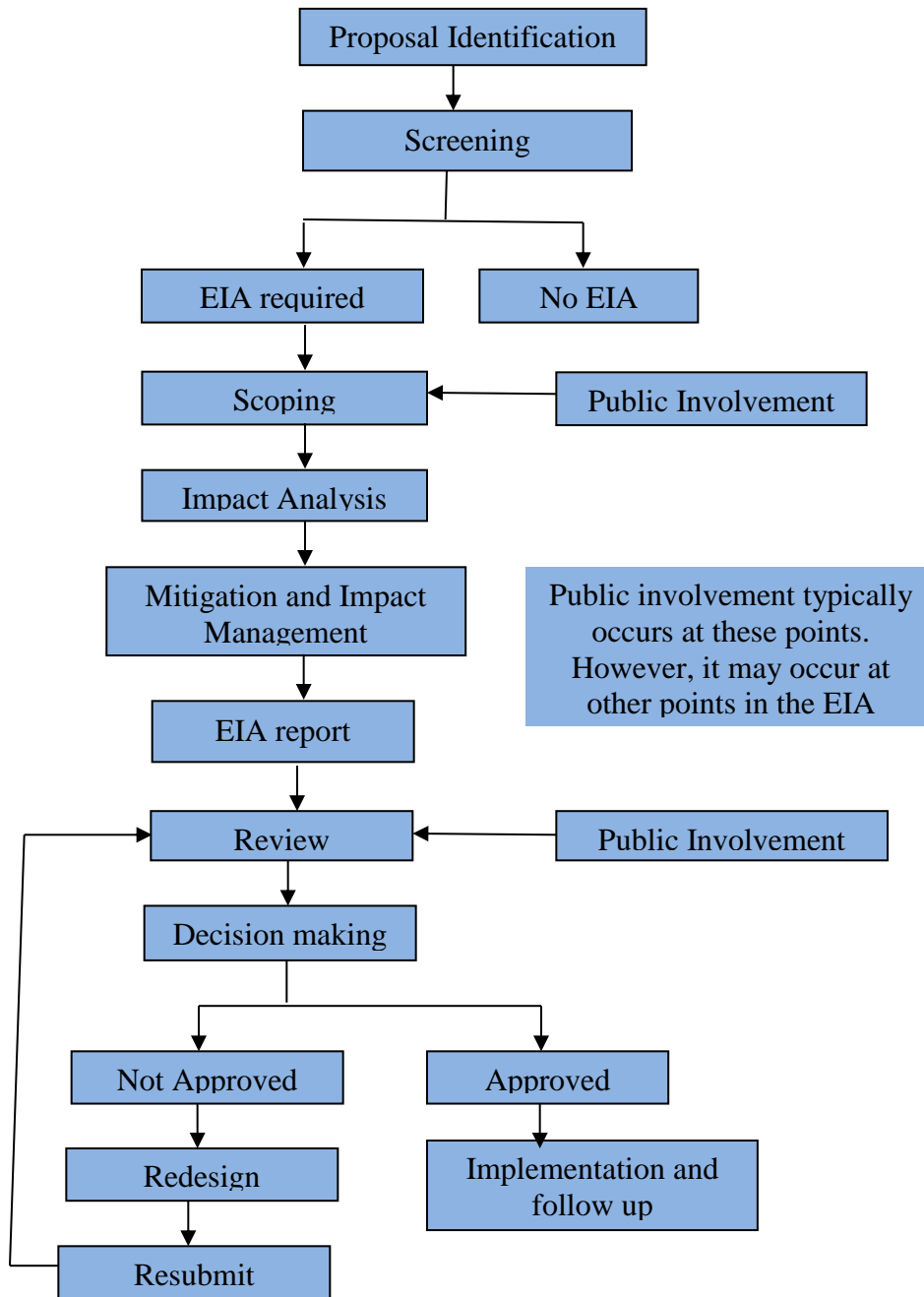
5 Undergraduate Degree in Terrestrial / Aquatic Ecology 8 years - Intermittent

6 Undergraduate Degree in Social Science 8 years - Intermittent

Annex 6: INDICATIVE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

POTENTIAL IMPACTS	MITIGATION MEASURES	Implementation Arrangements	
		Execution	Supervision
Construction Phase			
Land and/or property acquisition	Voluntary donation, willing buyer-willing seller or government land without encumbrances	DABS ESS team/Contractor	COO DABS
Contamination from waste materials	Protection of soil surfaces during construction Control and daily cleaning of construction site Provision of adequate waste disposal facilities to assure regular and efficient waste discharge	Contractor	DABS Supervising Engineer
Removal of hazardous wastes	Proper disposal of all hazardous substances. Construction of adequate sanitary facilities including appropriate disposal of wastewater and sewage.	Contractor	DABS Supervising Engineer
Dust as a result of construction activities	Dust control by water or other means to reduce/control problems of dust	Contractor	DABS Supervising Engineer
Noise disturbance during construction	Restrict construction to hours agreed with local communities.	Contractor	DABS Supervising Engineer
Risk of construction debris dumped in nearby water bodies	the building site will be cleaned and all debris and waste materials disposed of in accordance with relevant clauses in contractual agreements.	Contractor	DABS Supervising Engineer
Disposal of construction waste	Construction waste will be disposed of in government-approved sites. Maximum secondary use of wastes	Contractor	DABS Supervising Engineer
Risk of unauthorized access to the construction area	Fencing of the construction site to avoid unauthorized access.	Contractor	DABS Supervising Engineer
Construction accidents Potential negative impact from substances/materials used in construction	Training of workers on construction sites. Training of workers to handle hazardous wastes Use of appropriate individual protection clothing Ensure use of only approved materials.	Contractor	DABS Supervising Engineer

Annex 7 – Environmental Impact Assessment Procedure at NEPA



Annex 8 Environmental Guidelines for Contractors

General Environmental Management Conditions

General

1. The Contractor shall comply with any specific Environmental Management Plan (EMP) for the works he is responsible for. The Contractor shall inform himself about such an EMP, and prepare his work strategy and plan to fully take into account relevant provisions of that EMP. If the Contractor fails to implement the approved EMP after written instruction by the Supervising Engineer to fulfill his obligation within the requested time, the Owner reserves the right to arrange through the SE for execution of the missing action by a third party on account of the Contractor.

2. Notwithstanding the Contractor's obligation under the above clause, the Contractor shall implement all measures necessary to avoid undesirable adverse environmental and social impacts wherever possible, restore work sites to acceptable standards, and abide by any environmental performance Requirements specified in an EMP. In general these measures shall include but not be limited to:

(b) Ensure that noise levels emanating from machinery, vehicles and noisy construction activities (e.g. excavation, blasting) are kept at a minimum for the safety, health and protection of workers within the vicinity of high noise levels and nearby communities.

(c) Ensure that existing water flow regimes in rivers, streams and other natural or irrigation channels is maintained and/or re-established where they are disrupted due to works being carried out.

(d) Upon discovery of ancient heritage, relics or anything that might or believed to be of archeological or historical importance during the execution of works, immediately report such findings to the Supervising Engineer so that the appropriate authorities may be expeditiously contacted for fulfillment of the measures aimed at protecting such historical or archaeological resources.

(e) Discourage construction workers from engaging in the exploitation of natural resources such as hunting, fishing, and collection of forest products or any other activity that might have a negative impact on the social and economic welfare of the local communities.

(f) Implement soil erosion control measures in order to avoid surface run off and prevents siltation, etc.

(g) Ensure that garbage, sanitation and drinking water facilities are provided in construction workers camps.

- (h) Ensure that, in as much as possible, local materials are used to avoid importation of foreign material and long distance transportation.
- (k) Ensure public safety, and meet traffic safety requirements for the operation of work to avoid accidents.
3. The Contractor shall adhere to the proposed activity implementation schedule and the monitoring plan /strategy to ensure effective feedback of monitoring information to project management so that Impact management can be implemented properly, and if necessary, adapt to changing and unforeseen conditions.
4. Besides the regular inspection of the sites by the Supervising Engineer for adherence to the Contract conditions and specifications, the Owner may appoint an Inspector to oversee the compliance
With these environmental conditions and any proposed mitigation measures. State environmental Authorities may carry out similar inspection duties. In all cases, as directed by the Supervising Engineer, the Contractor shall comply with directives from such inspectors to implement measures required to ensure the adequacy rehabilitation measures carried out on the bio-physical environment and compensation for socio-economic disruption resulting from implementation of any works.

Work site/Campsite Waste Management

6. All vessels (drums, containers, bags, etc.) containing oil/fuel/surfacing materials and other hazardous Chemicals shall be bonded in order to contain spillage. All waste containers, litter and any other waste Generated during the construction shall be collected and disposed off at designated disposal sites in Line with applicable government waste management regulations.
7. Used oil from maintenance shall be collected and disposed off appropriately at designated sites or be re-used or sold for re-use locally.
8. Entry of runoff to the site shall be restricted by constructing diversion channels or holding structures Such as banks, drains, dams, etc. to reduce the potential of soil erosion and water pollution.

New extraction sites:

10. Vegetation clearing shall be restricted to the area required for safe operation of construction work.
Vegetation clearing shall not be done more than two months in advance of operations.
11. Stockpile areas shall be located in areas where trees can act as buffers to prevent dust pollution.
Perimeter drains shall be built around stockpile areas. Sediment and other pollutant traps shall be located at drainage exits from workings.

12. The Contractor shall deposit any excess material in accordance with the principles of these general conditions, and any applicable EMP, in areas approved by local authorities and/or the Supervising Engineer.

13. Areas for depositing hazardous materials such as contaminated liquid and solid materials shall be approved by the Supervising Engineer and appropriate local and/or national authorities before the commencement of work. Use of existing, approved sites shall be preferred over the establishment of new sites.

Soil Erosion Prevention

14. To the extent practicable, the Contractor shall rehabilitate the site progressively so that the rate of rehabilitation is similar to the rate of construction.

15. Always remove and retain topsoil for subsequent rehabilitation. Soils shall not be stripped when they are wet as this can lead to soil compaction and loss of structure.

16. Re-vegetate stockpiles to protect the soil from erosion, discourage weeds and maintain an active population of beneficial soil microbes.

17. To the extent practicable, reinstate natural drainage patterns where they have been altered or impaired.

18. Identify potentially toxic overburden and screen with suitable material to prevent mobilization of toxins.

19. Ensure reshaped land is formed so as to be inherently stable, adequately drained and suitable for the desired long-term land use, and allow natural regeneration of vegetation.

20. Minimize the long-term visual impact by creating landforms that are compatible with the adjacent landscape.

21. Minimize erosion by wind and water both during and after the process of reinstatement.
22. Revegetate with plant species that will control erosion, provide vegetative diversity and, through succession, contribute to a resilient ecosystem. The choice of plant species for rehabilitation shall be done in consultation with local research institutions, forest department and the local people.

Water Resources Management

23. The Contractor shall at all costs avoid conflicting with water demands of local communities.
24. Abstraction of both surface and underground water shall only be done with the consultation of the local community and after obtaining a permit from the relevant Water Authority.
25. Abstraction of water from wetlands shall be avoided. Where necessary, authority has to be obtained from relevant authorities.
26. No construction water containing spoils or site effluent, especially cement and oil, shall be allowed to flow into natural water drainage courses.
28. Wash water from washing out of equipment shall not be discharged into water courses or road drains.
29. Site spoils and temporary stockpiles shall be located away from the drainage system, and surface run off shall be directed away from stockpiles to prevent erosion.

Traffic Management

30. Location of access roads/detours shall be done in consultation with the local community especially in important or sensitive environments. Access roads shall not traverse wetland areas.
31. Upon the completion of civil works, all access roads shall be ripped and rehabilitated.
32. Access roads shall be sprinkled with water at least five times a day in settled areas, and three times in unsettled areas, to suppress dust emissions.

Disposal of Unusable Elements

33. Unusable materials and construction elements such as electro- mechanical equipment, cables, accessories and demolished structures will be disposed of in a manner approved by the Supervising Energy Expert (SE). The Contractor has to agree with the SE which elements are to be surrendered to the Client's premises, which will be recycled or reused, and which will be disposed of at approved landfill sites.

Health and Safety

34. In advance of the construction work, the Contractor shall mount an awareness and hygiene campaign.

Workers and local residents shall be sensitized on health risks particularly of AIDS.

35. Adequate road signs to warn pedestrians and motorists of construction activities, diversions, etc. shall be provided at appropriate points.

36. Construction vehicles shall not exceed maximum speed limit of 40km per hour.

Repair of Private Property

37. Should the Contractor, deliberately or accidentally, damage private property, he shall repair the property to the owner's satisfaction and at his own cost. For each repair, the Contractor shall obtain from the owner a certificate that the damage has been made good satisfactorily in order to indemnify the Client from subsequent claims.

38. In cases where compensation for inconveniences, damage of crops etc. are claimed by the owner, the Client has to be informed by the Contractor through the Supervising Engineer.

This compensation is in general settled under the responsibility of the Client before signing the Contract. In unforeseeable cases, the respective administrative entities of the Client will take care of compensation.

Contractor's Environment, Health and Safety Management Plan (EHS-MP)

39. Within 6 weeks of signing the Contract, the Contractor shall prepare an EHS-MP to ensure the adequate management of the health, safety, environmental and social aspects of the works, including implementation of the requirements of these general conditions and any specific requirements of an EMP for the works. The Contractor's EHS-MP will serve two main purposes:

For the Contractor, for internal purposes, to ensure that all measures are in place for adequate EHS management, and as an operational manual for his staff.

For the Client, supported where necessary by a Supervising Engineer, to ensure that the Contractor is fully prepared for the adequate management of the EHS aspects of the project, and as a basis for monitoring of the Contractor's EHS performance.

40. The Contractor's EHS-MP shall provide at least: a description of procedures and methods for complying with these general environmental management conditions, and any specific conditions specified in an EMP; a description of specific mitigation measures that will be implemented in order to minimize adverse impacts; a description of all planned monitoring activities (e.g. sediment discharges from borrow areas) and the reporting thereof; and the internal organizational, management and reporting mechanisms put in place for such.

41. The Contractor's EHS-MP will be reviewed and approved by the Client before start of the works.

This review should demonstrate if the Contractor's EHS-MP covers all of the identified impacts, and has defined appropriate measures to counteract any potential impacts.

EHS Reporting

42. The Contractor shall prepare bi-weekly progress reports to the Supervising Engineer on compliance with these general conditions, the project EMP if any, and his own EHS-MP. An example format for a Contractor EHS report is given below. It is expected that the Contractor's reports will include information on:

EHS management actions/measures taken, including approvals sought from local or national authorities;

-Problems encountered in relation to EHS aspects (incidents, including delays, cost consequences, etc. as a result thereof);

-Lack of compliance with contract requirements on the part of the Contractor;

-Changes of assumptions, conditions, measures, designs and actual works in relation to EHS aspects; and

-Observations, concerns raised and/or decisions taken with regard to EHS management during site meetings.

43. It is advisable that reporting of significant EHS incidents be done "as soon as practicable". Such incident reporting shall therefore be done individually. Also, it is advisable that the Contractor keep his own records on health, safety and welfare of persons, and damage to property.

44. It is advisable to include such records, as well as copies of incident reports, as appendixes to the bi-weekly reports. Example formats for an incident notification and detailed report are given below.

Details of EHS performance will be reported to the Client through the Supervising Engineer reports to the Client.

Training of Contractor's Personnel

45. The Contractor shall provide sufficient training to his own personnel to ensure that they are all aware of the relevant aspects of these general conditions, any project EMP, and his own EHS-MP, and are able to fulfill their expected roles and functions. Specific training should be provided to those employees that have particular responsibilities associated with the implementation of the EHS-MP.

General topics should be:

EHS in general (working procedures); Emergency procedures; and

social and cultural aspects (awareness rising on social issues).

Cost of Compliance

46. It is expected that compliance with these conditions is already part of standard good workmanship and state of art as generally required under this Contract. The item “Compliance with Environmental Management Conditions” in the Bill of Quantities covers these costs. No other payments will be made to the Contractor for compliance with any request to avoid and/or mitigate an avoidable EHS impact.

Annex 9.. Indicative Environmental Monitoring Plan

Phase	Environmental Impacts	What? (parameter is to be monitored)	Where? (is the parameter to be monitored)	How? (is the parameter to be monitored /type of monitoring equipment/?)	When? (is the parameter to be monitored – frequency of measurement or continuously)	Responsible Institution
	Damage to vegetation	Clearing techniques and relocation procedures utilized; record of compensation provided as agreed with MoEnv	Plant site, pipeline and access road line routes	Visual and by comparison with pre-construction photo survey	Monthly throughout construction period; Contractor/ Supervisor Engineer	DABS
During the whole project		No. of trainings to staff and /or community members Participants in training Survey feedback	In project site, PMU, Community	Supervision		
Beginning of Project, to Mainstream Environmental Concerns into the whole project cycle		Inclusion of environmental and social issues into Operation manual	PMU, Project Office	Supervision		
During Preparation and Implementation to create capacity for EMP implementation		No of people trained on environmental and social issues	PMU, Project Office	Supervision		
Preparation and Implementation		% of schemes where joint walkthrough is completed				
Material supply		Possession of official approval or valid operating license	Supplier of materials (cement and gravel)	Inspection	Before work begins	Plant operator; oversight PMU/Engineer-Monitor
Material transport according to the schedule and routes defined for deliveries		Truck loads covered/ wetted Air pollution due to the dust and fumes related to the Material Transport	Construction site and adjacent access road/	Supervision	Unannounced inspections during work hours	Works contractors; oversight PMU/Engineer-Monitor

Phase	Environmental Impacts	What? (parameter is to be monitored)	Where? (is the parameter to be monitored)	How? (is the parameter to be monitored /type of monitoring equipment/?)	When? (is the parameter to be monitored – frequency of measurement or continuously)	Responsible Institution
	Damage to vegetation	Clearing techniques and relocation procedures utilized; record of compensation provided as agreed with MoEnv	Plant site, pipeline and access road line routes	Visual and by comparison with pre-construction photo survey	Monthly throughout construction period; Contractor/ Supervisor Engineer	DABS
During the whole project		No. of trainings to staff and /or community members Participants in training Survey feedback	In project site, PMU, Community	Supervision		
Beginning of Project, to Mainstream Environmental Concerns into the whole project cycle		Inclusion of environmental and social issues into Operation manual	PMU, Project Office	Supervision		
During Preparation and Implementation to create capacity for EMP implementation		No of people trained on environmental and social issues	PMU, Project Office	Supervision		
Preparation and Implementation		% of schemes where joint walkthrough is completed				
Top-soil stripping stage. Final reinstatement.	Loss of fertile topsoil and soil erosion	Top-soil storage. Reinstatement. Landscaping	Construction site/soil storage site	Supervision	Periodic (Unannounced inspections during work hours); Following completion of the works.	Works contractors; oversight PMU/Engineer-Monitor

Phase	Environmental Impacts	What? (parameter is to be monitored)	Where? (is the parameter to be monitored)	How? (is the parameter to be monitored /type of monitoring equipment/?)	When? (is the parameter to be monitored – frequency of measurement or continuously)	Responsible Institution
	Damage to vegetation	Clearing techniques and relocation procedures utilized; record of compensation provided as agreed with MoEnv	Plant site, pipeline and access road line routes	Visual and by comparison with pre-construction photo survey	Monthly throughout construction period; Contractor/ Supervisor Engineer	DABS
During the whole project		No. of trainings to staff and /or community members Participants in training Survey feedback	In project site, PMU, Community	Supervision		
Beginning of Project, to Mainstream Environmental Concerns into the whole project cycle		Inclusion of environmental and social issues into Operation manual	PMU, Project Office	Supervision		
During Preparation and Implementation to create capacity for EMP implementation		No of people trained on environmental and social issues	PMU, Project Office	Supervision		
Preparation and Implementation		% of schemes where joint walkthrough is completed				
Work hours	Noise from construction works	Noise levels; Equipment; / or Noise level, dB[A]. Applicable limits are 70 dB(A) at 100 m	Construction site, And At 100 meter from the border of the site (closest end to a residential area)	Inspection; noise measuring device	Periodic (average once per week); Following complaints	Works contractors; oversight PMU/Engineer-Monitor

Work hours		Vibration	Construction site	Supervision	Unannounced inspections; following complaints	Works contractors; oversight PMU/Engineer-Monitor
Work hours	Air emissions of NOx, SO2, CO, and particulate matter (PM)	Dust and Air pollution (solid particles, suspended solids, flying heavy metal particles)/ or The applicable standards are: (1) NO2 ≤ 400 mg/m3; (2) SO2 ≤ 850 mg/m3; (3) CO ≤ 150 mg/m3; (4) PM ≤ 100 mg/m3	At the construction site	Visually	During material delivery and periodically in dry periods during construction	Works contractors; oversight PMU/Engineer-Monitor
Reinstatement		Removal of construction wastes Reinstatement Landscaping	At the construction site	Supervision, inspections	Supervision during working hours; unannounced inspections. Replacement of removed vegetation after completion of construction.	Works contractors; inspections by PMU/Engineer-Monitor
Whole construction period.		Storage of Special Hazrdous Waste: o Used Paint cans o Pesticides o Solvents o Heavy Metal containing materials (batteries, thermometers, computers...) o Busted Fluorescent Lamps	Construction site			Works contractors; oversight PMU/Engineer-Monitor
Whole construction period.		Vehicle/ pedestrian access Visibility/ appropriate signs	Construction site	Observation	Once per week in the evening	Works contractors; oversight PMU/Engineer-Monitor

Whole construction period.		Material and waste storage, handling, use	Material storage areas;	Observation	During material delivery and periodically during construction (average 1/week), especially during precipitation (rain/ snow/ etc).	Works contractors; oversight PMU/Engineer-Monitor
Whole construction period.		Equipment maintenance and fueling	Material storage areas; equipment maintenance facilities	Observation	During material delivery and periodically during construction (average 1/week), especially during precipitation (rain/ snow/ etc).	Works contractors; oversight PMU/Engineer-Monitor
	Inadequacies in backfilling and resurfacing	Amount and type of soil used	Project area	Observation	Once before commissioning	Works contractors; oversight PMU/Engineer-Monitor
	Disposal of excess soil/spoil materials	Accumulation of Debris	Project area And Disposal site	Observation	Once before commissioning	
Worker safety		Protective equipment. Organization of traffic by-pass/ and or Records of WHS training	Construction site	Inspection, Visual by checking (i) practical usage of equipment (ii) adequate equipment exists. Records of trainings checked and if necessary improvements made	Unannounced inspections during works	Works contractors; oversight PMU/Engineer-Monitor
Start of Work, for		Clearing techniques and relocation procedures utilized; record of compensation provided as agreed with MoEnv				

Annex 10

Draft

DABS Planning and Capacity Support Project

Resettlement Policy Framework

Prepared by:

Da Afghanistan Breshna Sherkat (DABS)

This resettlement policy framework is a document of the borrower. The views expressed herein do not necessarily represent those of the World Bank's Board of Directors, Management, or staff, and may be preliminary in nature.

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List of Acronyms

ADB	Asian Development Bank
ANDS	Afghan National Development Strategy
AP	Affected Person
APSDP	Afghan Power System Development Project
ARAZI	Afghan Independent Land Authority
CASA	Central Asia-South Asia
CDC	Community Development Council
CITES	Convention on International Trade of Endangered Species
CMS	Convention on Migratory Species
COO	Chief Operating Officer
DABM	Da Afghanistan Breshna Mossesa
DABS	Da Afghanistan Breshna Sherkat
EIA	Environmental Impact Assessment
ESAP	Environment and Social Advisory Panel
EMA	External Monitoring Agency
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plan
ESO	Environment Safeguards Officer
GoIRA	Government of Islamic Republic of Afghanistan
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
ISN	Interim Strategy Note
KfW	German Development Bank
LAC	Land Acquisition Committee
LARPF	Land Acquisition and Resettlement Policy Framework
LARP	Land Acquisition and Resettlement Plan
LLE	Law on Land Expropriation
LLM	Law on Land Management
MAIL	Ministry of Agriculture, Irrigation and Livestock
MEW	Ministry of Energy and Water
MOJ	Ministry of Justice
NEPA	National Environment Protection Agency
NESP	National Energy Supply Program
NGO	Non Government Organisation
NSP	National Solidarity Program
O&M	Operations and Maintenance
PDO	Project Development Objective
PMU	Project Management Unit
RAP	Resettlement Action Plan
REA	Rapid Environment Assessment

SIA	Social Impact Assessment
SSO	Social Safeguards Officer
UNCBD	UN Convention on Biological Diversity
UNCCD	UN Convention to Combat Desertification
UNFCCC	UN Framework Convention on Climate Change
USAID	United States Agency for International Development

Definitions of words and phrases used in the RPF

Affected Persons (APs), for the purposes of this RPF, mean all the people directly affected by project-related land acquisition that leads to their physical relocation or loss of assets, or access to assets, with adverse impacts on livelihoods. This includes any person, household (sometimes referred to as project affected family), firms, or public or private institutions who on account of project-related land acquisition would have their (i) standard of living adversely affected; (ii) right, title or interest in all or any part of a house, land (including residential, commercial, artisanal mining, agricultural, plantations, forest and/or grazing land), water resources or any other moveable or fixed assets acquired, possessed, restricted or otherwise adversely affected, in full or in part, permanently or temporarily; and/or (iii) business, occupation, place of work or residence, or habitat adversely affected, with or without displacement. APs therefore include; i) persons affected directly by the acquisition or clearing of the right of-way or construction work area; (ii) persons whose agricultural land or other productive assets such as mining, trees or crops are affected; (iii) persons whose businesses are affected and who might experience loss of income due to project-related land acquisition impacts; (iv) persons who lose work/employment as a direct result of project-related land acquisition ; and (v) people who lose access to community resources/property as a result of project-related land acquisition.

Census means the pre-appraisal population record of potentially affected people, which is prepared through a count based on village or other local population data or census.

Compensation means payment in cash or kind for an asset to be acquired or affected by a project at replacement costs.

Cut-off-date means the date after which people will not be considered eligible for compensation, if they are not included in the list of APs as defined by the census. Normally, the cut-off date for the titleholders is the date of the detailed measurement survey.

Displacement means either physical relocation or economic displacement directly caused by project-related land acquisition.

Detailed Measurement Survey means the detailed inventory of losses that is completed after detailed design and marking of project boundaries on the ground.

Encroachers mean those people who move into the project area after the cut-off date and are therefore not eligible for compensation or other rehabilitation measures provided by the project.

Entitlement means the range of measures comprising cash or kind compensation, relocation cost, income rehabilitation assistance, transfer assistance, income substitution, and relocation which are due to /business restoration which are due to APs, depending on the type and degree

nature of their losses, to restore their social and economic base.

Livelihood Restoration means the measures required to ensure that APs have the resources to *at least* restore, if not improve, their livelihoods. Restoration of livelihood of all APs is one of the key objectives of the World Bank's resettlement policy. It requires that people are given the means and assistance necessary for them to improve, or at least restore, their livelihood and living conditions to pre-project levels.

Inventory of Losses means the pre-appraisal inventory of assets as a preliminary record of affected or lost assets.

Jerib means the traditional unit of measurement of Afghanistan. One Jerib is equivalent to 2,000 square meters of land. One hectare is equivalent to 5 jeribs.

Land Acquisition means the process whereby a person is compelled by a public agency to alienate all or part of the land s/he owns, possesses, or uses, to the ownership and possession of that agency, for public purposes, in return for prompt and fair compensation. This includes direct acquisition and easement.

Non-titled means those who have no recognizable rights or claims to the land that they are occupying and includes people using private or state land without permission, permit or grant.

Poor Those falling below the UN poverty line of 1 dollar per person per day or equivalent to 52 Afghanis..

Relocation means the physical shifting of APs from his/her pre-project place or residence, place for work or business premises.

Rehabilitation means the assistance provided to severely affected APs to supplement payment of compensation for acquired assets in order to improve, or at least achieve full restoration of, their pre-project living standards and quality of life to pre-project level.

Replacement Cost means the method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. For losses that cannot easily be valued or compensated for in monetary terms (e.g., access to public services, customers, and suppliers; or to mining, fishing, grazing, or forest areas), attempts are made to establish access to equivalent and culturally acceptable resources and earning opportunities.

Resettlement means all social and economic impacts that are permanent or temporary and are (i) caused by acquisition of land and other fixed assets, (ii) by change in the use of land, or (iii) restrictions imposed on land as a result of the project.

Resettlement Plan means the time-bound action plan with budget setting out resettlement strategy, objectives, entitlements, actions, responsibilities, monitoring and evaluation.

Severely Affected APs means APs that are affected by significant impacts within the meaning of the definition below.

Significant Impact means PAPs are (i) being physically displaced from housing, or (ii) losing ten per cent or more of their productive assets (income generating).

Sharecropper and/or Tenant cultivator is a person who cultivates land they do not own for an agreed proportion of the crop or harvest.

Structures mean all structures affected, or to be acquired, by the project such as living quarters, wells, hand pumps, agricultural structures such as rice bins, animal pens, stores/warehouses, commercial enterprises including roadside shops and businesses.

Squatters mean the same as non-titled person i.e. those people without legal title to land and/or structures occupied or used by them. World Bank policy explicitly states that such people cannot be denied assistance to restore livelihoods and living conditions based on the lack of title.

Temporary displacement means displacement where an occupier or owner of land is required to vacate land for a limited period to enable public works to be carried out on the land but can then return to the land and use it as before the displacement.

Vulnerable means any people who might suffer disproportionately or face the risk of being marginalized from the effects of resettlement i.e; (i) single household heads with dependents; (ii) disabled household heads; (iii) poor households; (iv) elderly households with no means of support; (v) the landless or households without security of tenure; and (vi) ethnic minorities.

Preface

This draft Resettlement Policy Framework (RPF) sets out the general principles and steps to be followed in connection with any land acquisition and resultant resettlement which may occur during the feasibility stages and implementation of energy investment projects by DABS. It has drawn on the Resettlement Policy Frameworks prepared for CASA 1000 and the Irrigation Restoration and Development Project (IRDP) of the Ministry of Energy and Water in 2010, which were developed through a consultative process and cleared by an inter-ministerial councils

It is vital that DABS's staff working on planning, operation and maintenance of energy investment projects are familiar with this framework. Common standards and approaches to land acquisition and resettlement across government increase efficiency and effectiveness in the administration of such programmes. Officials can more easily grasp what is required; capacity can be enhanced and affected persons (APs) in all projects will have greater confidence that they are being treated fairly, so reducing the likelihood of grievances and legal and other challenges to resettlement which can delay the implementation of power projects. Common standards in practice will also make it easier to develop a national law on resettlement as and when the government decides to move in that direction.

Resettlement Policy Framework

1. Outline of the activity

1.1 Project Context

The Afghan power system is small and underdeveloped but demand is growing rapidly. Grid-based electricity is estimated to meet the needs of about 25 percent of Afghanistan's population, mainly in the urban areas and along a few limited transmission corridors. About 80 percent of electricity is imported from Iran, Tajikistan, Turkmenistan and Uzbekistan, and accounts for about 600MW of the capacity available in the country. Domestic diesel generators, thermal and hydropower account for about 340MW across the country. The transmission system consists of about eight islands linking the different generation sources, the largest of which is the North East Power System which interconnects Tajikistan and Uzbekistan with Kabul.

The National Energy Supply Program (NESP), one of GoA's National Priority Programs (NPPs), articulates an ambitious program for development of the power sector up to 2015. It plans to increase the number of consumers connected to the grid from today's 850,000 to 1.15 million requiring investment in generation, transmission and distribution estimated in the NESP at about \$2.7 billion. Accompanying that physical investment other plans include efforts to reduce losses, improve billing and collections and attract private sector investment. Although NESP may be as much aspirational as achievable, it underlines the government's clear understanding of the linkages between a better electricity supply and economic growth.

Sector institutions are evolving, with a gradual separation of policy and operations. The main government ministry responsible for the power sector in Afghanistan is the Ministry of Energy and Water (MEW). It is increasingly focused on policy, strategy and planning issues and has taken the lead on preparation of the NESP and the Power Master Plan. Given Afghanistan's dependence on imports and external financing, MEW also has a significant role in dealing with its neighbors and donors.

Operations and investment are increasingly devolved to Da Afghanistan Breshna Sherkat (DABS). Until 2009, the entity responsible for power supply, Da Afghanistan Breshna Mossesa (DABM), was a department of MEW. With World Bank and other donor support, DABM was converted into DABS, which is now focused on developing into a fully commercial power utility while remaining under state ownership. Initially responsible for day to day operation of the transmission and distribution system, DABS carried out about \$26 million of investment in the 1391 financial year (March – December 2012). DABS will need to consolidate its position as the main owner and operator of the power system since neither growth in private sector participation nor unbundling or other reforms are realistic prospects over the medium term.

The planned sector growth will place additional demands on the capacity of DABS. To cope with its increased responsibilities for investment, DABS will need to improve its capacity in the areas of planning and implementation of investment projects and then operating and maintaining them. Today, DABS is reliant on project implementation units for this and its management has asked for Bank assistance to move towards normal electric power utility practice in investment and operations and maintenance (O&M). If DABS is to meet the demands placed on it, it must build its organizational capacity through the development of systems, procedures, and standards and of

its staff through technical and other training and then ensure that these new capacities are applied to the task in hand. It needs more and better trained staff and as such needs to draw from a wider pool of educated and capable professionals, including women.

1.2. Overview of the Planning and Capacity Support Project

The proposed project is intended as an entry point for scaling up investment in the power sector. Hitherto, projects have been implemented either entirely by international consultants or by project implementation units (PIUs). DABS now wishes to embed the capacity in its own organizational processes and staff to conduct pre-feasibility and feasibility studies and in the longer run eliminate the need for special-purpose PIUs for implementation of donor projects. It will continue to rely on contractors to perform design, supply and installation work under single responsibility contracts but in doing so will need to have the capacity to supervise the work and above all to manage the contracts.

Improved O&M is critical for sustained improvements in DABS's performance. While there have been significant investments in distribution across the country, not least by the Bank, capacity for O&M has not kept pace. System operations and maintenance is another core competence of a utility and without good quality O&M, the gains to service quality and coverage may be lost, fueling consumer dissatisfaction and putting at risk DABS's commercial performance. DABS seeks to regularize O&M in line with international practices through the creation of an asset monitoring system, budgeting, planning – including materials, equipment and human resources – and implementation protocols.

The proposed project emphasizes learning by doing and is motivated by the need to move DABS towards a model in which it drives the investment and O&M process. A gradual process of bringing the core skills in-house is envisaged, while also ensuring that those skills which will continue to be outsourced to consultants and contractors are still available in the market. Above all the organization as a whole and the responsible staff need to learn by doing. On the investment side, the focus will therefore be on preparing sub-projects for subsequent financing by donors. On the O&M side the focus will be on preparing, implementing and monitoring of an enterprise-wide program.

A wide variety of capacity building tools would be used. At the organizational level, DABS needs to be organized in such a way as to facilitate investment and O&M practices. It needs to develop and codify its existing policies and procedures for selection of investments based on objective and transparent criteria as well as for carrying out O&M. It must set up effective feedback loops. At the individual level DABS staff need training and new tools as well as support and mentoring from more experienced actors. Lessons from capacity building projects worldwide and in Afghanistan show that where technical assistance has been used to fill the gap in skills needed to manage World Bank funded projects, it has had little lasting impact on strengthening capacity. So although consultants have a role to play, the proposed project will place emphasis on connecting DABS and its staff with industry exemplars, with consensus-based organizational development, participatory activities, coaching for key staff, in and out of office training and other methods to support improvements in their daily work.

2.1 Proposed objective: Planning and Capacity Support Project

The Project Development Objective is to improve the capacity of DABS to plan the investment and maintenance of the electricity distribution system.

Construction of distribution lines does not require purchase of much land, but associated works, such as erecting poles and constructing sub power stations might affect property and land use and entail some temporary displacement. Building or widening access roads to towers can also affect property use, and restrictions on land use can affect incomes. As with compensation for pipelines, an easement fee, combined with payment for any crop damage, may be appropriate way to compensate for periodic access. Such easement fees range from 5 to 20 percent of the replacement cost of the affected land. In most cases, no compensation is paid for a decrease in property value as a result of construction of distribution lines.

The partial land acquisition characteristic of many linear projects also makes it difficult to carry out accurate surveys. Often, the feasibility of making a living in the remaining area is difficult to assess. Although categories of impact (such as more than 20 percent of a plot taken) can be useful in devising entitlements, case-by-case assessment is highly recommended to ensure that households with particular vulnerabilities are not overlooked.

DABS has prepared this Resettlement Policy Framework for the Planning and Capacity Support Project. It sets out the general principles and policies to be followed in connection with any land acquisition and resultant resettlement that will occur under the auspices of DABS. This RPF is designed to tackle the specific issues noted above and set out a clear framework for the , assessment, mitigation and compensation and, where necessary, the settling of disputes arising out of such activities with respect to resettlement, albeit temporary on occasions, and compensation

2.2 Why a Resettlement Policy Framework?

The components of distribution line activity for which a Resettlement Policy Framework (RPF) are required are some purchases of land, easement imposition, and some temporary displacement in the areas through which the distribution lines are likely to pass. The investment projects covering distribution lines have not and cannot be finalised at this stage so it is not possible to develop any site-specific resettlement plan with the full details of all Affected Persons who are likely to suffer adverse impacts from project-related land acquisition or temporary displacement.

The purpose of the RPF is to clarify resettlement principles, organizational arrangements, and design criteria to be applied to specific transmission line activities as and when they take place. In this way a consistent approach to resettlement practice will be ensured for all activities involving land acquisition and displacement.

Importantly, it is also envisaged that by providing detailed technical guidance this RPF will contribute to the development of technical capacity within DABS.

There are several interlinked issues that must be addressed by way of introduction to the policy. First, the resettlement policy framework is required to be consistent both with the World Bank's Operational Policy 4.12 which deals with Involuntary Resettlement and with existing Afghan laws and policies. Where there is inconsistency between the two the WB policy prevails, unless the local requirement sets a higher standard or benefit for the Affected Person.

Second, before the details of the RPF can be outlined and explained, the basic principles and objectives of the RPF may be set out. But whereas OP 4.12 contains such principles and objectives, no laws or policies in Afghanistan deal with resettlement. There are relevant laws that will be discussed later – principally a Law on Managing Land Affairs of 2008, as amended (including proposed amendments) and a Law on Land Expropriation of 2009 but neither deal with involuntary resettlement. So setting out the principles of an RPF at the outset of developing one is unavoidably to give priority to World Bank policies on resettlement.

The principles of the RPF are:

- first, avoid or minimise adverse impacts on persons and families likely to be affected by the project (APs)
- second, ensure that where land acquisition is unavoidable, APs are
 - consulted on the operation of the project
 - compensated for lost assets at replacement costs
 - provided with assistance to improve/restore livelihoods and standards of living to pre-displacement levels in the event of displacement.

The RPF spells out how these principles will be met. It should be said at the outset that while the relevant laws of Afghanistan might not cover these matters in any detail there would appear to be nothing in the laws to stop these principles being given effect to in practice.

3. Legal & Policy Framework for Resettlement

3.1 Afghan Law & Policy on Land Acquisition

There is no country specific resettlement policy in Afghanistan. A comprehensive land policy was approved in 2007 by the cabinet; however it has yet to be fully operationalised. Ratified in early 2004, the Constitution of Afghanistan has three articles that closely relate to compensation and resettlement. For public interest purposes, such as the establishment/construction of public infrastructure or for acquisition of land with cultural or scientific values, land of higher agricultural productivity, large gardens, the Law on Land Expropriation (LLE) enacted in 2009 provides that:

(i) The acquisition of a plot or portion of a plot for public purpose is decided by the Council of Ministers and is compensated at fair value based on current market rates (Section 2);

(ii) The acquisition of a plot or part of it should not prevent the owner from using the rest of the property or hamper its use. If this difficulty arises, the whole property will be acquired (Section 4);

(iii) The right of the owner or land user will be terminated three months prior to the start of civil works on the project and after the proper reimbursement to the owner or person using the land has been made. The termination of the right of the landlord or the person using the land would not affect their rights on collecting their last harvest from the land, except when there is emergency evacuation (Section 6);

(iv) In cases of land acquisition, the following factors shall be considered for compensation:

(a) value of land;

(b) value of houses and buildings on the land;

(c) value of trees, orchards and other assets on land (Section 8);

(v) The value of land depends on the category and its geographic location (Section 13) (and see too proposed new clause 45 of the Land Management Law published in December 2012);

(vi) A person whose residential land is subject to acquisition will receive a new plot of land of the same value. He/she has the option to get residential land or a house on government property in exchange, under proper procedures (Section 13);

(vii) If a landowner so wishes his/her affected plot can be swapped with unaffected government land and if this is valued less than the plot lost, the difference will be calculated and reimbursed to the affected plot owner (Section 15);

(viii) The values of orchards, vines and trees on land under acquisition shall be determined by the competent officials of the local body (Section 16); and

(ix) A property is valued at the current rate at the locality concerned. The owner or his/her representative must be present at the time of measuring and valuing of property.

Compensation is determined by the Council of Ministers. The decision is based on the recommendation of a “committee” consisting of the following

- (i) The landlord or person who uses the land or their representatives;
- (ii) Official representative of agency who needs to acquire the land (viz., MEW);
- (iii) Representative of local municipality;
- (iv) Representative of Ministry of Finance; and
- (v) Representative of Ministry of Justice.

The Law on Land Acquisition is undergoing a thorough review and amendment process but as of February 2015, no final decisions had been taken on any amendments. It may also be noted that as the law now stands, two difficulties present themselves with respect to this RPF. First, there are no provisions in the law dealing with short-term temporary displacement such as easement from land which may be a feature of the supplying distribution lines with particular reference to the erection of pylons, poles and sub power stations (hereafter referred to as temporary displacement). Once the poles are erected/sub power stations build, land occupiers and owners will be able to go back on to the land and use it with some restrictions (apart from the land where the sub power station is located). Second, a relatively minor problem with respect to pastoralists who may temporarily lose grazing land that they have traditionally used for the depasturing of their livestock. These two difficulties will be dealt with below.

3.2 Principles of World Bank OP 4.12 on acquisition, resettlement and compensation

This part of the RPF will discuss the World Bank's Operating Policies 4.12. Rather than attempting to repeat OP 4.12 verbatim, it will be more helpful to attempt to set out the requirements of OP 4.12 in a form in which they might be provided for in any set of legal provisions or how they might be addressed by an administrative agency following a logical approach to land acquisition.

The fundamental principles of policy which inform the Bank's position on resettlement and land acquisition and will be followed under this RPF for DABS's Planning and Support project, are :

- (a) Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.
- (b) Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.
- (c) Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
- (e) Lack of title would not bar the affected population from resettlement and compensation benefits.
- (f) Compensation for losses will be delivered at replacement costs;
- (g) Compensation payments must be delivered before taking possession of the required assets;

Step 1: Preliminary issues: is acquisition necessary?

The first step addressed by OP 4.12 is avoidance of land acquisition and resettlement if possible. Land acquisition and resettlement should not be seen as the easy first option; rather it should be seen as a last resort.

From the point of view of what governmental action might be necessary to meet this first step, it is necessary that alongside an environmental impact assessment, a social impact

assessment and a financial analysis of the proposed project that is required to be undertaken,

- a preliminary investigation and assessment of the land that may be acquired must be undertaken;
- persons likely to be affected by the project (APs) and other interested parties should be given an opportunity to contribute to or comment on the location of the proposed project and the necessity of acquiring the proposed land for the project. This involvement is separate and distinct from APs participating in the planning of any resettlement that has to take place;
- a cut off date for any ultimate assistance and compensation for APs must be determined and announced. After that date, no one coming into or obtaining land or a house in the potential project area will be entitled to compensation. In the case of this particular RPF, this step will have to be taken many times over with respect to each specific erection of a tower or location of a substation. There will be a risk that there may be some speculative encroaching as word gets out unofficially about likely projects in the future. This will need careful handling.

Step 2: Preparing an acquisition and resettlement plan

The second step in the process is to prepare a land acquisition and resettlement plan which must include measures to ensure that APs are, in the words of OP 4.12:

- (i) informed about their options and rights pertaining to resettlement;
- (ii) consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives; and
- (iii) provided prompt and effective compensation at full replacement cost for losses of assets attributable directly to project-related land acquisition.

If the impacts include physical relocation, the resettlement plan or resettlement policy framework includes measures to ensure that the displaced persons are

- (i) provided assistance (such as moving allowances) during relocation; and
- (ii) provided with residential housing, or housing sites, or, as required, sites for which a combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the old site.

Where necessary to achieve the objectives of the policy, the resettlement plan should also include measures to ensure that displaced persons are

- (i) offered support after displacement, for a transition period, based on a reasonable estimate of the time likely to be needed to restore their livelihood and standards of living;
- (ii) provided with development assistance in addition to compensation measures such as land preparation, credit facilities, training, or job opportunities;
- (iii) provided with retraining or training opportunities so that they can either take up a new form of livelihood or by virtue of being trained to a higher skill standard

In terms of what must be contained in either or both law and administrative arrangements to ensure that these requirements are met, the following would need to be in any land acquisition and resettlement plan:

- the land to be acquired
- the persons who will be suffering any losses of assets, income, sources of livelihoods
- the persons to be required to move
- the place or places to which such persons are to be moved to
- the circumstances of the place to which persons are to be moved to: viz
 - whether the land is occupied and by whom
 - what the land is presently being used for
 - the condition of the land and its facilities
- the arrangements to be made to facilitate resettlement and integration
- the manner and form in which compensation is to be assessed and paid
- the heads of compensation payable
- an estimate of the compensation payable and of the resettlement expenses
- the procedures to be followed in executing the plan
- the arrangements for the involvement of APs in plan execution

- what opportunities there will be to challenge plan execution and compensation

In practice, the preparation of this plan should commence as part of the exercise of developing projects for it is regarded as a part of the project but in terms of process, it is sensible to keep separate the issue of whether any land acquisition and resettlement is necessary from the issue of what resettlement will take place and how it will be conducted.

This second step however is also to involve APs in participation in the preparation of the plan and not just in being given a chance to object to a plan made by officials. OP 4.12 spells this out very clearly as follows:

(a) Displaced persons and their communities, and any host communities receiving them, are to be provided with timely and relevant information, consulted on resettlement options, and offered opportunities to participate in planning, implementing, and monitoring resettlement. Appropriate and accessible grievance mechanisms are to be established for these groups.

(b) In new resettlement sites or host communities, infrastructure and public services are provided as necessary to improve, restore, or maintain accessibility and levels of service for the displaced persons and host communities. Alternative or similar resources are to be provided to compensate for the loss of access to community resources (such as fishing areas, grazing areas, fuel, or fodder).

(c) Patterns of community organization appropriate to the new circumstances must be based on choices made by the displaced persons. To the extent possible, the existing social and cultural institutions of resettlers and any host communities should be preserved and resettlers' preferences with respect to relocating in preexisting communities and groups honored.

The preparation of a plan must be preceded by and involve in its development meetings with potential APs and more general public consultation. There will be informal day-to-day meetings among APs, DABS's staff, and other stakeholders. The more formal consultation process in the sub-project areas will be through: (a) one-on-one meetings with directly affected households/companies; (b) village and community meetings; and (b) public consultations with government officials. Informative materials will have to be prepared and distributed within the sub-project areas before the meetings. This is set out in more detail below.

Step 3: Paying compensation, resettling the dispossessed, acquiring the land

The third step is the execution of the plan: that is the acquisition of the land and the resettlement of those persons displaced by the acquisition. This is the central part of the process of acquisition and resettlement and must be broken down into several sub-steps. Not all these sub-steps are set out specifically in OP 4.12; they are however a necessary part of land acquisition and resettlement and must be written into the RPF to take place.

Before each sub-step is summarised, a general point about the legal framework must be made. There will need to be in place a set of clear rules on the whole of step 3. This code will need to cover –

- the empowerment of institutions to execute, regulate and monitor the process
- which officials are empowered to take actions and give orders
- what actions and orders must or may these officials take or give
- the processes and institutions of participation and consultation
- to which APs and others will these actions and orders apply
- what must APs do to comply with orders and take required actions
- what must APs do to gain benefits and assert rights under the law
- with respect to compensation
 - the scope and form of compensation
 - the manner of assessment of compensation and in particular the assessment of compensation (if any) for temporary displacement
 - the manner and timing of claiming and paying compensation
 - the process of decision-making and appeals on compensation
- with respect to resettlement and displacement
 - process and procedures on resettlement and displacement
 - financial assistance with resettlement and displacement (in the case of displacement this will be assistance in moving temporarily from the land and then returning to the land)
 - assistance with retraining or development of new livelihoods
- processes and institutions relating to challenging and contesting decisions.

The ensuing discussion of the sub-steps assumes that such a code will be in place.

Sub-step 1

The first sub-step is the process of acquiring the land; informing all the qualified owners and occupiers of the land of the intention to acquire the land and pay compensation for any land so acquired. This will involve intensive personal contact with owners and occupiers of land and oral explanations of what is happening and what owners and occupiers should do in order to ensure that they obtain recognition for their occupation of land and compensation for same. Acquisition of land will also necessitate full and clear documentation of what is happening. In the case of temporary displacement, full explanation of the circumstances of such displacement – how long for; where will occupiers be temporarily located and in what form of accommodation; whether compensation will be paid – will be needed.

LAND DONATIONS

This is especially relevant where some land may be ‘donated’ by PAPs. There must be very clear documentation that any person who has ‘donated’ land to a project was made fully aware of his or her right to receive compensation for any land which he or she is losing to a project and specifically waived that right. In the past, reports have indicated that there had been inadequate documentation of this practice and that there have been some disputes arising out of the practice.

While not going so far as to suggest that voluntary donations should be rejected or banned, it will be essential to make certain that they are genuinely voluntary and that the giver of the land does not expect some special benefit or treatment from the project as a result of the donation. Where there is any possibility of such special treatment or the expectation of same, the donor of land should receive compensation under the resettlement plan rather than obtain special treatment outside the plan; in other words, a donor will be treated as if he or she had had their land acquired compulsorily.

land is donated there must be documented evidence that:

-The person donating the land was not subject to pressure to donate and that he/she could have opted not to donate

-That the donor has clear title over the land and such land is not being used by a third party who could be affected

- That livelihood impact of land donation does not exceed 10% livelihood impact and is below 100 sqm.

- The use of donated land does not disrupt productivity of remaining land

The bottom-line is that no livelihood or living condition from land owner and/or user should be adversely affected without having the corresponding mitigation measure.

ELIGIBILITY CRITERIA/OCCUPIERS

With respect to references to ‘occupiers’ of land OP 4.12 states that these embrace

- (a) those who have formal legal rights to land (including customary and traditional rights recognized under the laws of the country);
- (b) those who do not have formal legal rights to land at the time the census begins but have a claim to such land or assets—provided that such claims are recognized under the laws of the country or become recognized through a process identified in the resettlement plan;
- (c) those who have no recognizable legal right or claim to the land they are occupying.

OP 4.12 states that the first two categories of occupiers are entitled to receive compensation for loss of their land; the third category is entitled to receive resettlement assistance. However, this provision must be read in the light of the requirement in OP 4.12 that at the time of the identification of the project area, a census must be carried out within the area of those who will be affected by the project and will be eligible for assistance. Persons who encroach on the project area after the cut-off date which will be the completion of the census will not be entitled to any compensation or other assistance.

OP 4.12 thus makes clear that squatters , PAPs without recognized (legal or customary) title , must receive some compensation and assistance with resettlement. The rationale for this is that such persons are usually the poorest members of the community and those most likely to be the hardest hit by having to move. While this group does not have legal rights over the land, as part of the efforts to restore their livelihoods and living conditions, it is good practice, in relevant cases, to provide solutions that help ensure that those affected have security of tenure at their new relocation site, in the case of those being physically displaced or being offered land for land.

Sub-step 2

The second sub-step involves determining claims to compensation, assessing amounts of compensation and paying compensation. OP 4.12 distinguishes between compensation

and assistance, financial or otherwise, in connection with resettlement. This is perfectly logical as it makes clear that persons are entitled to compensation for lost assets etc whether they are being relocated or not. However, if compensation is understood as money, money's worth or land and/or other assistance to put a person back into the position as near as may be as he/she was prior to having his/her land (including buildings and natural resources on the land) acquired and or the value of retained land diminished and or having to vacate his/her land and move elsewhere, then we can deal with monetary compensation for loss of assets along with what may be called resettlement expenses.

In order to comply with OP 4.12, the content of this sub-step should include:

- making claims for compensation
- provision of assistance to APs in making claims
- assessment of claims
- determining claims and dealing with appeals
- the payment of compensation

Compensation will include

- full replacement cost of land taken at its market value plus transaction costs (e.g. registration fees, selling/buying taxes, etc)
- alternative land of the same quantity and quality so far as possible
- compensation for 'injurious affection'¹ of land not taken
- resettlement expenses (which for these purposes includes temporary displacement) which in turn may include
 - costs of moving (disturbance compensation)
 - financial and other assistance in provision of housing
 - income support and livelihood replacement including retraining

The issue of replacement cost is dealt with in OP 4.12 which states:

“Replacement cost” is the method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. For losses that cannot easily be valued or compensated for in monetary terms (e.g., access to public services, customers, and suppliers; or to fishing, grazing, or forest areas), attempts are made to

establish access to equivalent and culturally acceptable resources and earning opportunities.

The details of how to calculate various heads of compensation are dealt with below.

Sub-step 3

The third sub-step involves the actual taking of the land – the entering into possession of the land by the acquiring authority – and the departure and resettlement of APs. This will need to be handled sensitively with plenty of notice given to APs. OP 4.12 does not specifically deal with this sub-step but it is a necessary part of the process of acquisition, displacement and resettlement.

Assistance with resettlement and displacement will include

- assistance with packing up and moving including moving back on to the land after temporary displacement
- provision of transport for those being resettled
- working with and providing additional resources for the ‘host’ community
- advice and assistance to those being resettled
- preparation of land, provision of accommodation and facilities

The whole process of leaving one’s land, moving to another area, relating to a new community, getting started again is likely to be extremely stressful. There will need to be constant contact with APs both individually and via their representatives where there are substantial numbers of APs involved. A consensual rather than a confrontational approach must be taken to decision-making on awards of compensation.

Thus, it will be necessary in developing RAPs on the basis of this RPF to deal with each community as a distinct and separate entity, with its own concerns and its own approaches to resettlement and temporary displacement.

To what extent does law and practice in Afghanistan conform to the model of land acquisition and resettlement provided for by OP. 4.12? It is to this matter this report now turns via a table which compares the two systems suggesting ways of reconciling them. Notwithstanding the differences between the national laws and World Bank's Operational policies, in all cases of gaps between the two, the World Bank's Operational Policy will apply, unless the local requirement sets a higher standard or benefit for the Affected Person as reflected in this RPF will apply.

A table of comparison between the Law on Land Expropriation and OP 4.12 with proposals for reconciliation²

Law on Land Expropriation (LLE)	WB Operating Procedure 4.12 (OP 4.12)	Gaps between LLE and OP 4.12 with comments	Possible solutions to gaps	What RPF should provide
PART	ONE:	PRE	ACQUISITION	PROCEDURES
1. No legal opportunities provided to potential APs and others to challenge or discuss proposed acquisition and resettlement or for any public debate and approval on proposals. In practice early discussions do take place.	Principle that involuntary resettlement to be avoided where possible implies discussion of necessity for and alternatives to acquisition and resettlement	The principle behind OP 4.12 is followed in practice in Kabul but the law is silent on the matter.	No reason why practice in Kabul could not be applied in other areas	Potential APs must be able to discuss need for acquisition and alternatives with officials from DABS.
2. Officials visit area <i>before</i> any official action to assess land values; values so assessed are the basis of compensation. This is practice as the LLE is completely silent on pre-acquisition procedures and processes.	Land values assessed as at pre-project or pre-displacement value whichever is higher	No real gaps; just different approaches to the same need to limit claims and compensation.	No gaps	A date set prior to the commencement of acquisition should be fixed for land values. This should be the cut-off date
3. As a matter of practice in Kabul efforts are made to determine those entitled to compensation and resettlement	Census conducted of persons in the area to determine eligibility for assistance, and to limit inflow of people ineligible for assistance; encroachers	No real gap here.	Given the practice in Kabul, there would be no problem in adopting OP 4.12 as the practice to be followed in this RPF	A legal framework will require a census of eligible APs to be undertaken at the immediate pre-project stage.
4. By article 6 of LLE, the right to own or use land is terminated three months prior to the actual start of the project. So information on land to be acquired is sent to APs three months before acquisition. Informal	Prepare resettlement plan on how project to be implemented and resettlement etc provided for. Emphasis on participation by APs in preparation of process and in project implementation Emphasis on early information	LLE does not provide for what OP 4.12 requires. Some pre-planning of projects will exist and informal discussions with APs involves participation. 3 months' notice may be too little where relocation is likely but not rigidly adhered to.	There is nothing in LLE to prevent a more participative approach to acquisition as is called for in OP 4.12. The three month rule could be interpreted to mean "not less than three months" which would allow for discussions on	A legal framework within the RPF allowing for a participatory approach to acquisition and resettlement planning and implementation would not contradict the LLE and is the best way forward.

² Gap Analysis of OP 4.12 and Afghan Legal Framework, Prof. McAuslan (2007)

discussions and negotiations occur both on land to be acquired and on compensation. It is at this point that donations of land may be ‘invited’.	to be given to potential APs of possible resettlement		acquisition and its consequences.	
5. No special provision in LLE for a resettlement plan or any special arrangements for resettlement.	Prepare resettlement plan: contents to include – Involvement of and ensure APs their rights to (i) compensation (ii) relocation assistance (iii) development assistance in new location. Distinction drawn between short and full plans, depending on numbers to be resettled.	Major gap of substance	1. The LLE is silent on resettlement but there is nothing in the law to suggest that a resettlement plan or action to implement a resettlement plan would be illegal. 2. Provide for resettlement plan administratively but 3. Backed up by some regulations	2 and 3 the preferred option.
PART	TWO:	ACQUIRING	THE	LAND
6. The Council of Ministers approves expropriation of land. Unlike the former law, there is no provision for the owner/user and or agent to be present throughout all stages of acquisition. It follows that acquisition may proceed whether the owner etc is present or not. However under article 5 LLE ,a commission is to be formed “by the Municipality” on which the owner is represented to “determine damage incurred due to land expropriation” which is differentiated from compensation. Damage is	No specific procedures required by OP 4.12 but content of resettlement plan implies APs will be involved in all stages of acquisition	The spirit of OP 4.12 conflicts with LLE’s non-provision of involvement of the owner apart from that provided for in article 5. It is not clear why that is confined to “the Municipality”. Given many absentee owners ,it may be unavoidable to allow absentee acquisition.	Spirit of OP 4.12 could be met by more protective provisions and or practice on dealing with absentee acquisition. The silence of LLE on the details of acquisition may be taken quite legitimately as providing a gap which can be filled by appropriate participatory arrangements. There is no reason why the damage provisions of article 18 shouldn’t equally apply to all acquisitions of land.	Involvement of owners present on the land to be acquired and greater protection for absentee owners should be provided by a legal framework developed as part of the RPF which could also serve as a prototype for regulations made under article 22(5) of the new law.

explained in article 18 LLE. Under article 22, the owner etc is obliged to hand over all documentary evidence relating to land to the acquiring authority				
7. Under article 6 LLE after transfer of ownership, owner may enter acquired land and harvest crops except where urgent use of land prevents this	Not mentioned	LLE ahead of OP 4.12 on this:	A good provision. It does however make plain that the LLE is about taking agricultural land and does not deal with the issues of grazing land or pastoralism.	No change
PART	THREE:	COMPENSATION	PAYMENT	PROCEDURES
8. The bulk of LLE deals with compensation but says nothing about who is entitled to compensation. The assumption is that “owners” are entitled to compensation but the law does not define “owners”. The old law drew a clear distinction between those with legal title and those with customary title or no title with respect to the payment of compensation. Practice in rural areas was quite accommodating to those with customary titles. Practice in Kabul is to acquire documentary evidence for a claim for compensation.	Fundamental principle of OP 4.12 is that all those on land are to be entitled to fair compensation and assistance with resettlement irrespective of their title to land.	Major gap of substance in the law but given practice in rural areas, it is not unbridgeable.	Accommodate OP 4.12 by changing practices where necessary. Advantage may be taken of absence of legal definition of “owner” to accommodate those with customary titles which is likely to be the majority in project areas.	Given huge numbers of people not having and not going to get formal legal titles to their land in the foreseeable future, LLE should be interpreted so those living and or working on land at the census date receive fair compensation and resettlement assistance. As with 6 above, the RPF can develop a legal framework for compensating all those on the land and this can be a model for future regulations to be made under LLE. This is the one major area where there is considerable divergence between LLE and OP 4.12. It will be necessary to comply with OP 4.12.
9. The Constitution provides for payment of prior and just compensation. (English translation).The LLE at article	OP 4.12 requires prompt and effective cash compensation sufficient to replace the lost land and other assets at full	There does appear to be a gap between the LLE and OP 4.12. The LLE has a lot of gaps in it. Sensible not to insist on	1. OP 4.12 must be accommodated. Other resettlement plans developed in connection with ADB	Article 40 of the Constitution suggests that option 3 should be the preferred one. It should be supplemented by guidance

<p>2 provides for the payment of prior and adequate compensation. If there is a distinction between just and adequate, then the constitutional provision of just compensation prevails. Article 8 provides that compensation shall be “the price” of land or houses or trees etc and article 10 provides that the Council of Ministers shall determine the price. But article 15 provides that the municipality and the administration for agriculture determine the compensation for trees etc. Article 13 sets out detailed provisions for obtaining residential plots where a person has had land acquired; the more land acquired the more residential plots are paid as compensation. Disturbance compensation not provided for. Compensation can be land for land</p> <p>Unlike the former law which provided for compensation may be paid into a bank, LLE is silent on the mechanics of paying compensation. No assistance for APs to access bank for their compensation. Practice on the ground is careful and painstaking.</p>	<p>replacement cost in local markets. Compensation for lost livelihoods required Disturbance compensation required Land for land compensation encouraged. Resettlement costs and ‘start up’ expenses required. All these provisions can be used to provide for compensation to pastoralists and artisanal miners</p>	<p>market value in the absence of reliable functioning markets. Biggest gap is compensation for squatters and even their best practice does provide some compensation to those with no legal title. Practice of paying compensation into a bank even when APs not absentee difficult to reconcile with prompt payment of compensation.</p>	<p>projects more or less ignore the LLE and provide detailed frameworks for assessment and payment of compensation. 3. The lack of any detail in LLE on how to assess compensation and the content of compensation (apart from article 13) allows for the creation of a clear comprehensive and fair code on compensation applicable to all acquisitions including resettlement and retraining costs which can be a part of the RPF without doing violence to the existing law.</p>	<p>on how to apply the code in practice.</p>
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10. No provision in the law on resettlement support. Practice seems a little haphazard and tends to turn on legality of occupation of APs who are to be relocated	OP 4.12 requires implementation of resettlement plan the contents of which are noted at 4 above	Major gap of substance as noted in 4 above.	If preferred option at 4 above accepted, resettlement plan implementation is issue:. Choice is between formal top-down and participative involvement of APs which OP 4.12 requires.	The RPF should provide for the making of a resettlement plan (5 above) which should be based on a guided participative approach to implementation.
PART	FOUR:	ADMINISTRATIVE	& JUDICIAL	PROCEDURES
11. LLE provides for administrative agencies to manage acquisition processes and deal with compensation. APs are part of some committees dealing with compensation. No provision for courts to be involved or for appeals. In practice, committees may act to solve grievances. No provisions for e.g. legal aid to assist APs to make claims. Practice at least in Kabul does appear to try and help PAPs.	OP 4.12 silent on judicial and administrative arrangements. It requires appropriate and accessible grievance mechanisms to be established for those being resettled. Logic of OP 4.12's references to 'meaningful consultation' with APs and making use of CBOs and NGOs suggests preference for decision-making process which is not just part of the administration.	A major gap on grievance mechanisms and current administrative arrangements in LLE difficult to reconcile with the participative approach of OP 4.12. Earlier laws involved payment of compensation in the presence of a judge and allowed an appeal albeit from the judge to a Minister.	Develop grievance handling practices but keep them administrative rather than legal. Make legal provision for appeals from administrative decisions and decisions on compensation to an independent body.	A combination of law and practice guidance would be the best way forward. Grievance mechanisms to provide for co-operation with <i>shores</i> and community councils in areas where APs are. RPF to provide for these
12. LLE does not provide for any external monitoring body or process	OP 4.12 states that the borrower is responsible for adequate monitoring and evaluation of the activities set forth in the resettlement instrument.	Major gap on procedures but arguably, monitoring is not part of land acquisition so no legal impediment to providing for same.	Provide monitoring for WB projects as required by OP 4.12. Establish specialist monitoring agency for all projects involving acquisition and resettlement. Empower provincial and local institutions to monitor projects.	Meaningful monitoring is required by OP 4.12. New institutions should be kept to a minimum. Consideration should be given to use provincial authorities and NGOs. Regular reports should be made and published

4. Eligibility for compensation

4.1 General eligibility

General eligibility is defined as, “people who stand to lose land, houses, structures, trees, crops, businesses, income and other assets as a consequence of the project as of the formally recognized cut-off date will be considered as project affected persons (APs)”. For purposes of this RPF, the concepts of ‘general eligibility’ for compensation and who is an AP will be extended to include persons who may be temporarily displaced but who may be entitled to some compensation through loss of land by the erection of a tower or substation.

Although it is unlikely that many APs will be entitled to compensation or rehabilitation on the grounds that they are losing a substantial amount of land under the project, it is as well to set out the full picture on who APs are and what they are entitled to under a project:

- (i) All APs losing land with or without title, formal land-use rights or traditional land use rights;
- (ii) Tenants and sharecroppers whether registered or not;
- (iii) Owners of buildings, crops, plants, or other objects attached to the land; and
- (iv) APs losing business, income, and salaries.

Compensation eligibility will be limited by the cut-off date. DABS will inform local communities regarding this cut-off date through their local offices and through the relevant local government agencies. Those that settle after the cut-off date however will be given sufficient advance notice to vacate premises/dismantle affected structures prior to project implementation. Their dismantled structures will not be confiscated and they will not pay fines or sanctions.

4.2 Land Tenure and Compensation Entitlements

In the case of all projects, persons who may principally be entitled to compensation will be those who may lose small amounts of land. It is necessary therefore to consider the types of interests in land that such persons may have and whether those interests would entitle them to compensation. It is important to understand the prevailing land relationships and the documents and/or declarations that evince these rights over land and the various assets. The following paragraphs summarise the different types of formal and

informal land ownership/possession in Afghanistan. This will be the basis for the land impacts and the more important question of who are entitled for compensation of land affected by the project.

The system of Afghan property rights is broadly divided into two categories: formal and informal. Under the *formal system*, the 2012 proposed amendments to the Land Management Law define ownership of land as *State-owned land; private land; special land of village or villages, and public land*. Public land includes Mar'aa land which is divided into special Mar'aa land and general Mar'aa land. A fifth category of land is endowed land (Waqf land). Written evidences of land ownership under the formal system of property rights are different kinds of deeds or legal documents with copies in the Court Registries. Other formal written documentation may also be utilised for this purpose. Details are to be found in Chapter 3 of the Law on Land Management.

Land owned by an individual is considered as private property. According to Shari'a, private property can be owned individually or collectively. Private ownership may be acquired through (a) purchase, (b), allocation from a municipality, (c) transfer of ownership of which the most common form is inheritance. In addition, private land can be acquired through the principle of "dead land" or "*zameen-e-Bayer*." This classification entitles all legal owners to compensation for affected land.

Village land is land verified by Afghan Land Authority located and linked with respective village or villages, and the residents of the same village or villages as a legal person may commonly get the use of it for their own interests for their specified purposes, and which is not under the ownership of State. Special land of village or villages shall never be purchased, sold, donated, bequeathed, exchanged, mortgaged and leased, unless CEO of Afghan Land Authority agrees and the President approves otherwise. Protection and maintenance of special land of village or villages is the common responsibility of the residents of respective village or villages, particularly the respective elected land commission.

Public land is classified as (a) owned by the state, (b) owned by public juridical persons, (c) allocated for public interests, and (d) recognized by law as public property. In addition to the above, cultivable land which has no owner is deemed to be public land. The law prohibits acquisition of such land without the permission of the government. The state has recently strengthened its grip over land based on a statute of limitation which states

that all individual claims to land that has been held by the state for a period exceeding 37 years shall be barred and the state shall be considered the owner of the property. The decree provides that all land in which the ownership of individuals is not established legally shall be considered the property of the state. This classification does not entitle an occupant to compensation for the affected land but such a person is entitled to compensation for all immovable assets which are permanently fixed on the land.

Mar'aa Land meaning “dead land”. In practice, this term refers to land which is not suitable for cultivation. The concept of *mar'aa* requires three elements: 1) the ownership history of the land is not known; 2) it has not been cultivated and constructed, and 3) currently the land is not owned by any person. Even barren land (*zameen-e-bayer*) that does not have an owner may only be acquired with the permission of the government. The person who acquires and develops barren land with the permission of the government shall own the land. Shari'a generally recognizes *mar'aa* land as property neither owned by a private individual nor by the state and which could be acquired through renovation. Consistent with this, *mar'aa* land is recognized under the laws, but whoever wants to acquire *mar'aa* land must first secure permission from the President. In theory then, private property may be acquired in accordance with this concept. If *mar'aa* land is in the process of being legally acquired or have been acquired by an individual but some formal legal requirements have not been complied with, the possessor/owner is entitled to compensation for his/her affected land.

Informal System of Property Rights – There are two types of owners/possessors under the informal system that will be entitled for compensation over land affected by the project. The first group entitled for compensation is the customary or traditional owners of land and their heirs. These are individuals who inherited land that their ascendants occupied for more than fifty years. The original owners were either individuals who received royal land grants (*Farman*) in the form of decrees or legal letters, etc from the ruler of the time, or the original settlers of the land or their survivors who peacefully occupied the land for many generations. In the rural areas, these occupants may have (1) tax receipts or are included in the tax records, (2) unofficial land deeds and (3) been declared or recognised as legitimate users of lands by community development councils, jirgas or local elders. Households or persons who hold customary or traditional deeds for their properties are people who acquired de facto ownership of their land through purchase from customary or traditional owners of land.

The second type of owners/possessors under the informal system entitled to compensation are *de facto* owners of property who have bought land or a house from legal owners but did not fulfil the legal formalities required to formalize ownership. The transaction was legal but the legal formalities required to obtain a legal deed from the competent court were not completed. In many instances, buyers and sellers conclude customary agreements based on good faith and traditional norms and disregard the need to formalize the sales transaction in a competent court. Many persons perceive that a customary deed suffices to prove ownership of their property, especially when the original owner holds a formal document.

The two types of ownership/possession under the informal system of property rights have customary documents called "*orfi*" to prove their ownership/possession. These documents are usually witnessed by their neighbours, and especially local village and/or religious leaders. These documents include bills of sale and purchase, pawn agreements, wills, subdivision agreements, etc. These two types of informal ownership/possession will receive compensation for land affected by the project.

These two types of land rights under the informal system cannot be classified any more as public land. In the customary or traditional rights, the adverse, open, continuous and interrupted possession of owners over a very long time has effectively vested in them legal rights over the lands they occupy through acquisitive prescription. In the second type of land rights under the informal system, the lands involved have been effectively segregated from the classification of public land because the lands have been titled by the former owners and the failure of the new owners to comply with the formal requisites to register the lands under their names do not change the private character of these lands. Hence, the two types of land under the formal system are by their very nature private lands and as a consequence, owners will be compensated.

The other occupants of lands outside of the classifications of legal and legalisable occupancy or possession such as squatters will not be compensated for the lands that they occupy but will be compensated for the permanent improvements they may have introduced in the affected lands and restoration assistance. The other type of land occupants are encroachers. These are people who move into the project area after the cut-off date and are therefore not eligible for compensation or other rehabilitation measures provided by the project.

4.3 Entitlements to Compensation & Livelihood Restoration

The APs in the project are entitled to various types of compensation and resettlement assistance that will assist in the restoration of their livelihoods, at least, to the pre-project standards. They are entitled to a mixture of compensation measures and resettlement assistance, depending on the nature of lost assets and scope of the impact, including social and economic vulnerability of the affected persons. All APs are equally eligible for cash compensation and rehabilitation assistance (albeit with differences in entitlements), irrespective of their land ownership status, to ensure that those affected by the project shall be at least as well off, if not better off, than they would have been without the project. The compensation packages shall reflect replacement costs for all losses (such as land, crops, trees, structures, businesses, mining activities incomes, etc.) as detailed below:

- ***Agricultural land impacts*** -- These impacts will be compensated at replacement value of land in cash based on current market rates plus an additional indemnity for 3 months as transitional livelihood allowance. MEW will shoulder all transaction costs such as fees, taxes, and other charges, as applicable under relevant laws incurred in the relocation and resource establishment.
- ***Severe Agricultural Land Impacts*** -- When >10% of an AP's agricultural land is affected, APs (owners, leaseholders and sharecroppers), in addition to the compensation explained above, they will get an additional allowance for *severe impacts equal to* the market value of a year's net income crop yield of the land lost.
- ***Residential/commercial land impacts*** -- These impacts will be compensated at replacement value in cash at current market rates free of deductions for transaction costs.
- ***Houses, buildings, structures (fixed assets) damages*** -- These impacts will be compensated in cash at replacement cost free of depreciation, salvaged materials, and transaction costs deductions. Compensations will include the cost of lost water supply, electricity or telephone connections.
- ***Renters/leaseholders*** - will receive an allowance geared to the rent they are paying for 3 months to cover emergency rent costs.

- ***Income from crops losses*** -- These impacts will be compensated through cash compensation at current market rates for the full harvest of 1 agricultural season. In case of sharecropping, crop compensation will be paid both to landowners and tenants based on their specific sharecropping agreements.

- ***Tree losses*** -- These impacts will be compensated in cash based on the principle of income replacement. Fruit trees will be valued based on age of the tree in two categories: (a) not yet productive; and (b) productive. Productive trees will be valued at gross market value of 1 year income for the number of years needed to grow a new tree with the productive potential of the lost tree. Non-productive trees will be valued based on the multiple years investment they have required. Non-fruit trees will be valued at dry wood volume basis output and its current market rates.

- ***Business losses***—Compensation for business losses will be based on actual income to be established by pertinent receipts or other documents if demonstrable, otherwise based on business loss allowance computed as AF x a month. Permanent business losses will be based on actual income loss or in cash for the period deemed necessary to re-establish the business . Compensation for temporary business losses will be cash covering the income of the interruption period based on a monthly allowance of AF x . Business loss is computed at AF x per day as average net income of typical road businesses such as small stores, repair and vulcanizing shops and small food establishments. The details should be part of the RAP.

- ***Income losses for workers and employees*** -- Indemnity for lost wages for the period of business interruption up to a maximum of 3 months.

- ***Agricultural land leaseholders, sharecroppers, and workers*** -- Affected leaseholders will receive cash compensation corresponding to one year's crop yield of land lost. Sharecroppers will receive their share of harvest at market rates plus one additional crop compensation. Agricultural workers, with contracts which are interrupted, will get an indemnity in cash corresponding to their salary in cash and/or kind or both as applicable, for the remaining part of the harvest .

- **House owners/renters** -- House owners/renters who are forced to relocate their houses will be provided with relocation allowance equivalent to AF x for the time necessary and will be assisted in identifying alternative accommodation.

- **Community Structures and Public Utilities** -- Will be fully replaced or rehabilitated so as to satisfy their pre-project functions.

- **Vulnerable Households** -- Vulnerable people (APs below the poverty line, women household heads, mentally challenged headed households, etc.) will be given assistance in the form of a one-time allowance for vulnerable APs equivalent to AF x and priority in employment in project-related jobs.

- **Impacts on irrigation canals** -- Project will ensure that any irrigation channels are diverted and rehabilitated to previous standards.

- **Transitional Livelihood allowance** -- APs forced to relocate will receive a livelihood allowance of AF x for the duration of the livelihood interruption time.. Transitional livelihood allowance is computed based on the prevailing wage rate of AF x per day times for the duration needed This is also the basis for cash compensation on lost wages. Where there is temporary displacement which lasts for less than three months, a livelihood allowance will be paid only for the period of temporary displacement.

Land Replacement Values will be assessed based on a survey of land sales in project areas over the last 3 years.. Land values and compensation for other assets, will be negotiated between APs and competent authorities if concrete data on land market rates are unavailable.

Easements. An easement may, for the purpose of the RPF, be described as a right of way which one person (the owner/occupier or user of the ‘superior’ or ‘dominant’ land) has over the land of another person (as specified above) of ‘inferior’ or ‘servient’ land. The occupier of the servient land is under an obligation to allow the occupier of the dominant land to come on to the servient land and the occupier of the dominant land is obliged to keep to a defined path or right of way across the servient land. It is quite possible for an easement to be limited in its scope; that is to say, an easement or right of way could be limited to be used only for a specific purpose or benefit and not confer a general right of way for the dominant occupier over the servient land.

An easement is a species of land right which may be the subject of a market transaction; that is the occupier of the servient land can sell a right of way to the owner of the dominant land. There is nothing in the law which would prevent one person (A) from obtaining or buying a right of way similar to an easement over the land of another person (B) even though A did not own land which could be benefited from the use of an easement over the land of B.

It will be necessary for the managers and operators of the transmission line – MEW or a public or private sector entity which is operating the electricity supply system in Afghanistan – to have a right of way on to land on which a tower or substation is located so that they can go on to the land at any time to inspect and or to repair the towers and substations. The usefulness of using the term easement to describe this right of way is that it emphasises that the occupier of the land over which the right of way is to be acquired is being disadvantaged and is losing the full use of a small portion of his/her land. For this such a person must be compensated. However rather than receiving a lump sum for the loss of land, it is more appropriate that an annual payment in the nature of a rent or annual fee is paid for the use of the land set aside as a right of way. This ‘rent’ should be a percentage of the value of the land over which the right of way exists. Even allowing for the fact that some rights of way may be longer than others, it is recommended that in order to keep costs down, only two categories of easement are provided for; an easement to enter land to inspect and repair etc. towers and an easement to enter land to inspect and repair etc. substations. The first easement could attract an annual fee of 5% of the value of the land; the second an annual fee of 10% of the value of the land.

5. Unit Compensation Rates and Budget

5.1 Establishing Rates for Land Acquisition & Resettlement

As noted in the table above at paragraphs 9 and 10, the Law on Land Expropriation refers to prompt and adequate compensation but is silent on the details of compensation, has no specific provisions on resettlement and provides for the Council of Ministers to make decisions on compensation. These provisions fall some way short of what is required by OP 4.12 but it was suggested in the table that the absence of detail could be used to the advantage of developing rules and principles of compensation. The Law does not forbid the development of detailed rules on compensation and the fact that regulations may be made under the Law suggests that that is where details may ultimately be developed. In

the absence of detailed rules, it does not do violence to the Law for details to be developed in the context of this RPF and applied to the project.

To comply with the World Bank's OP. 4.12, rates used to compensate for lost land and assets must be *replacement cost at current market value*, in order to meet the policy objective of "at least" restoring people's livelihoods and ensuring that people affected by a project are not left worse off. According to OP 4.12, "replacement cost" is the method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs. In applying this method of valuation, depreciation of structures and assets should not be taken into account. For losses that cannot easily be valued or compensated for in monetary terms (e.g., access to public services, customers, and suppliers; or to fishing, grazing, or forest areas or mining assets), attempts are made to establish access to equivalent and culturally acceptable resources and earning opportunities.

In the absence of any survey of any likely project affected community or any consultations carried out with potential stakeholders, the figures which follow are drawn from a Resettlement Planning Document prepared in October 2009 for the North-South Corridor Project Mazar-i-Sharif-Pul-e-Baraq Road Section by the Ministry of Public Works (MPW) in respect of a contract to be funded by the ADB. These figures would not necessarily be the same for a this project but the principles are the same and the methods of calculation of the rates of compensation are it is suggested sound and may be followed in this RPF.

A further point must be made about the rates. In a specific project, there would have been, as part of the process of putting a project document together, at the very least a preliminary survey of the land to be affected by the project and the numbers of APs likely to be affected and the way in which they would be affected; e.g. loss of land, loss or diminution of assets, loss of livelihood etc. Discussions would have taken place with such persons so a reasonable estimate could be made of what they would be likely to claim as compensation. So alongside an explanation of the rates that are to be applied to the determination of compensation, a budget would be developed showing the amount of money that would be needed at the proposed rates to satisfy the requirements of compensation for the APs in the project area.

But an RPF is different. An RPF is prepared “when it is not possible to identify precise siting alignments or specific impacts/affected population during project preparation (financial intermediary operations, and projects with multiple subprojects)” and “a Resettlement Action Plan (RAP) is [then] prepared for each subproject that may involve land acquisition, before the subproject is accepted for Bank financing.” So an RPF cannot be accompanied by a budget showing the probable total project costs of the rates of compensation which the RPF is suggesting should be applied. The budget would be a part of each RAP which would come forward once the RPF had been accepted and a particular section of the project had started.

The rates for land, structures, crops and trees that have been used in the cost estimates prepared in the MPW plan were derived through rapid appraisal and consultation with affected parties through the census and inventory of loss survey and relevant local authorities. The affected households were asked about their personal valuation of the affected lands and other assets. This would be an essential preliminary aspect of an RAP.

However, the budgeting agency needs to ensure that funds are available for the resettlement costs, including not only compensation to PAPs, but also cost of consultations throughout the process, sustaining a grievance redress mechanism, M&E, and independent consultants as required (e.g. for final review of RAP implementation).

5.2 Valuation of Land

The location of the land influences the actual price per square meter: the nearer the land to a build-up area (e.g. a village), the higher the valuation and perception of the affected households. Hence, the valuation of the land is pegged on an average, the actual value depending on the nearness to a build-up area. In the valuation of agricultural land, the availability of water is very important to determine the fair value or market rates. Residential and commercial lands are largely dictated by the existing road alignment for accessibility rather than crop potential. The land prices are based on the district land prices in the district government. The prices follow the trend that the nearer the land to a population centre, the higher the price of the land.

5.3 Valuation of Structures

In the study area of the MPW project, almost all structures were made of mud or mud and bricks except for some government-owned structures that used cement as the binder in lieu of mud, straw and lime. The classification of structures (temporary, semi-permanent and permanent) refers to the materials used in construction. The valuation of structures into class 1 (mud/brick/wood walls, mud/tin roof), 2 (tiled roof and normal cement floor) and 3 (RCC, single/double storey building) were determined after various consultations with some owners who recently build their houses, local contractors and some local civil engineers.

5.4 Valuation of Crops and Trees

This can be quite problematic because of lack of reliable data in terms of yield. The results of socio-economic surveys can also be unreliable because many respondents may be unaware of the size of their land holdings. Their measurements of farm lots are often determined on the basis on the amount of seeds they use in sowing. Hence, they know that a certain parcel will require one kilogram of seeds and expected to yield a certain amount. Hence, in computing crop losses, a combination of main crops can be used to get the average yield and price. The unit price for crop losses for a square meter of land devoted to the main crops can be estimated per sqm, and fine-tuned at the time of the RAP.

The compensation for productive trees is based on the gross market value of 1 year income for the number of years needed to grow a new tree with the productive potential of the lost tree. Non-productive trees will be valued based on the multiple years investment they have required. However, during interviews on trees, the fluctuation of the value of tree products was influenced largely by the supply and demand and the absence of post-harvest facilities. Farmers are forced to sell tree crops when everyone else is doing so. During off-season months, the prices of tree crops quadrupled. The compensation rate for a fruit bearing tree is the average yield per tree times the age of the tree.

For the non-fruit bearing trees, the usual propagation method is grafting. Farmers buy these saplings and these are ready to be transferred in the fields after two years. On the fourth year of the tree, the tree starts to produce fruits. Hence, it is on this basis that the valuation of non-bearing fruit trees was determined. The compensation for non-

productive fruit bearing tree is the cost of the sapling plus the cost of maintaining the tree up to the time that the tree was cut because of the project.

5.5 Income Restoration Allowances

The resettlement strategy is to provide compensation for all lost assets at replacement cost in order that APs' incomes and livelihoods are not adversely affected and where possible improved. All APs whose livelihood are affected will be supported for income losses and those whose livelihoods are affected adversely provided with livelihood restoration measures (including allowances and interventions for severely affected, poor and vulnerable APs).

Income Restoration Allowance for Crops Losses -- These impacts will be compensated through cash compensation at current market rates for the full harvest of 1 agricultural season. In case of sharecropping, crop compensation will be paid both to landowners and tenants based on their specific sharecropping agreements.

Income Restoration Allowance for Business Losses -- compensation for permanent business losses will be in cash for the period deemed necessary to re-establish the business (x months). Permanent business will receive AF x a month for x months. Compensation for temporary business losses will be cash covering the income of the interruption period based on a monthly allowance of AF x

Income Restoration Allowance for Business workers and employees -- Indemnity for lost wages for the period of business interruption. .

Income Restoration Allowance for Severe Agricultural Land Impacts -- When >10% of an AP of the agricultural land is affected, AP (owners, leaseholders and sharecroppers) will get an additional allowance for *severe impacts equal to* the market value of a year's net income crop yield of the land lost. This will be unlikely to occur in this project.

Vulnerable Group Allowance -- Vulnerable people (APs below the poverty line, women household heads, mentally challenged headed households, etc.) will be given assistance in the form of a one-time allowance for vulnerable APs equivalent to AF x and priority in employment in project-related jobs.

Transitional Livelihood Allowance -- APs losing land or losing a house and forced to relocation will receive a livelihood allowance of AF x a month until relocation and livelihood restoration is completed

Rental Allowance – House Renters forced to relocate will receive a rental allowance at the prevailing market rate until a suitable accommodation has been found and will be assisted in identifying alternative accommodation. Similar payments will be made to those who suffer temporary displacement from their land or house during the erection of a tower or a substation.

Project-related employment (for unskilled and semi-skilled tasks during construction) - severely affected and vulnerable groups will be given priority for project-related employment opportunities as drivers, carpenters, masons, clearing and digging work, and if possible as clerks or basic administration support staff.

6. Institutional Arrangements

6.1 General

The resettlement and rehabilitation program described in this RPF involves distinct processes, dynamics and different agencies. This section deals with the roles and responsibilities of different institutions for the successful implementation of the project. The primary institutions that are involved in the land acquisition and resettlement process are the following;

1. Islamic Republic of Afghanistan (IRA)
2. Ministry of Energy and Water (MEW)
3. Project Management Unit (PMU)
4. Environment and Social Safeguards Unit (ESSU) at PMU level
5. Project Implementation Unit (PIU)
6. Implementing Non Governmental Organization (NGO)
7. Local level DABS
8. Local Government Units (LGUs)

The agencies involved in the planning and implementation of a resettlement and rehabilitation programme are DABS as the executing agency (EA) and the Provincial and District governments together with the appointed NGO referred to above . DABS will be

acting in the project through the Operations Division. In the field, it will act and implement through its regional staff with the support of a consulting engineer and the implementation consultant who will co-ordinate all activities related to resettlement implementation. All activities will be coordinated with the relevant local government agencies and community *shura* in which the package will be implemented.

6.2 Overall Organization – DABS

Da Afghanistan Breshna Sherkat (DABS) will be the executing agency (EA). The Director of DABS, under the direction of its Board comprising representatives from the Ministry of Finance, Ministry of Energy and Water, Ministry of Justice, and ARAZI, will have overall responsibility for policy level decisions, planning, implementation and coordination of project activities. The EA will have proper coordination with other departments of the Government of Afghanistan to resolve the following issues:

1. *Land Records and Ownership.* To resolve issues related to land records and ownership, a land management committee will be formed in the central level and will include representatives of Ministries sitting on DABS's Board including MEW Ministry of Finance, and the Geology and Cartography Department.

2. *Assets Valuation.* Values of land and other assets for compensation is determined by the Council of Ministers under the LLE on the basis of the principles set out in this RPF. The decisions are based on the recommendation of a committee consisting of the following (i) the landlord or person who uses the land or their representatives, (ii) an official representative of the agency that needs to acquire the land (e.g. DABS), (iii) a representative of the local municipality, (iv) a representative of the Ministry of Finance, and (v) a representative of the Ministry of Justice.

6.3 Project Implementation

6.3.1 DABS

Within DABS, RPF tasks will be handled at two levels described below. At local level local DABS staff, social and environment safeguards officers together with representatives from relevant local government departments will be responsible for coordinating activities in the field including the organization of surveys, consultation meetings, and the fixing of specific compensation rates based on the principles set out in the RPF. The provision of the LARP compensation finances will be the responsibility of a designated Ministry on DABS Board. The physical delivery of compensation to the APs

will be assigned to a committee selected by the Board of DABS which will include members such as local government representatives but under the supervision of the DABS and the Supervision consultants.

DABS' national Social Safeguards Officer (SSO) will be primarily responsible for the social safeguard issues. The project manager at local level will be responsible for the daily field level activities, getting all the necessary clearances required to initiate and implement all resettlement works. He will coordinate with the safeguards officer in the implementation of the project. As necessary, the SSO will coordinate with Afghan Independent Land Authority, local Governorates, NGOs and the community shuras, and locally elected councils and local water user associations established under the Water Law. The Office of the Chief Operating Officer will be responsible for ensuring that all stages of the processes of resettlement, determining and paying compensation, and acquiring land are fully documented and that hard and soft copies of the records are at all times kept in a safe and secure environment.

In addition, an international social safeguards and resettlement specialist will be recruited as an advisor to the SSO for resettlement issues. The international safeguards adviser will have overall responsibility for ensuring/monitoring compliance with safeguards. The international adviser would be responsible for mentoring/building the capacity of the SSO to (i) work with technical teams to ensure adherence to safeguard requirements at each stage of project development and (ii) facilitate outreach to other development agencies.

6.3.2 Implementing NGO

The specific tasks of the implementing/supervisory NGO will be as follows:

1. Work under close coordination with the designated Environmental and Social Safeguards staff (ESSS) within DABS's Operation Division, local government units and DABS's local staff to implement the LARP.
2. Assist DABS's ESSS in dissemination of the LARP and other resettlement related information.
3. Generate awareness about livelihood restoration activities and assist the APs to make informed choices including participating in government development programmes.
4. Identify training needs of APs for income generation activities and ensure that these are properly funded.
5. Provide counselling and awareness generation to resolve LARP related grievances and assist in seeking redress to unresolved grievances from land acquisition and resettlement disputes with the Grievance Committee.
6. Assist the APs in claims for just compensation including the collection of timely and complete payments.
7. Submit periodic implementation reports on LARP as agreed with DABS.

8. Conduct and/or undertake any other activities that may be required in the successful implementation of the LARP.

The implementing NGO must be a non-profit organization; be legally registered as an NGO in Afghanistan; have operated for at least 3 years; have a minimum of five paid staff; be committed to the principles of gender equality in terms of its own staffing; have a management or advisory board; maintain a proper accounting and financial system; have a long term presence and credibility in districts relevant to the investment projects' areas; have work with government focal agencies; and must be willing to undergo training in resettlement work for project implementation.

6.3.3 Local Government

The cooperation and coordination of the local government units (LGUs) are vital in LARP implementation. These are the provincial government, district provincial government, villages and local community Shuras. Issues relating from land records and ownership and assets valuation originate from this level and will only be taken to the Council of Ministers if these issues are not resolved locally. The provincial government, in cases of disputes on valuation of land will constitute a land valuation committee to determine the disputes on rates.

In cases of disputes regarding land ownership, land records goes through 3 offices at district level, (1) District administrator, (2) Revenue collector (Mustowfiet) and (3) the District Court. These offices have the jurisdiction on any matters related with land acquisition and verification of land entitlements. Staff of the Revenue Department (Mustowfiet), with the local municipality will carry out the tasks of identifying the titles and verification of ownership. The Office of Wloswal (the appointed District head) is expected to play a coordinating role.

6.3.4 Gender

The importance of gender awareness and taking proper account of gender issues will be included in trainings for DABS's staff carried out under this project. It is appropriate to draw special attention to gender issues within the context of project implementation.

The government's commitment to addressing gender equality principles in social and economic development is evident in the Afghan National Development Strategy (ANDS). Using established community structures to involve women meaningfully in developing RAPs will be a challenge and will need to be approached with care, sensitivity to traditional cultural norms and imagination. Working with women can be done only with female staff. The Implementing NGO will be required to have women as staff members, familiar with the areas in which investment projects are sited and should be fluent in local language, who can reach women in the affected communities. Women's CDCs should be explored as a possible vehicle for increasing women's participation in the project, especially in implementing RAPs.

Any resettlement plan will pay special attention to female-headed households, both those with and without land, as they are generally amongst the most vulnerable in communities and risk having their rights ignored. Although women's ownership of land is not widespread it is important to ensure that their land rights receive equal recognition in the project and in any resettlement activities. Thus, the implementing NGO together with DABS' ESS staff will have special responsibility to

- Ensure, as far as possible, that the DABS' projects use women's CDCs and other local formal and informal structures to enhance outreach to women.
- Identify NGOs working with women in locality and consider whether/how to 'piggy-back' on their work in order to reach women affected by the project.
- Ensure implementing NGOs have female project officers.

7. Public Consultation and Participation

7.1 General Public Consultation

This section describes the mechanisms for public consultation process with the APs, disclosure of the RPF and corresponding LARPs through distribution of informative material to create awareness among the APs regarding their entitlements and compensation payment procedures and grievances redress mechanism.

7.2 Public Consultation

In addition to informal day-to-day meetings among APs, DABS's local staff, and other stakeholders, the formal consultation process in the project will be ongoing and will be managed by ESS staff from DABS's Operations Division through village meetings and public consultations with government officials. All these mechanisms and approaches will also be used during the collection of baseline socio-economic data from the APs; and the preparation of LARP and disclosure of LARP to the APs, as explained below.

7.3 Village Meetings

A series of village meetings will be held, where the census and socio-economic surveys will be explained and later carried out. The aims and objectives of a project will be explained as will the necessity for, processes and outcomes of any resettlement or temporary displacement. The village elders and stakeholders meetings will be scheduled based on the availability of the participants. DABS's ESS staff will be responsible for conducting village consultations .

In the socio-economic survey, the project will list the names of the owners/users of assets likely to be acquired, temporarily used or damaged for which compensation will be payable and DABS will prepare a land acquisition and resettlement plan (LARP) for each defined section of the project that will ensure that all these affected assets are justly compensated. The approved LARP will be presented and explained to all affected households and persons and other interested parties. The census survey will be conducted in the affected lands.

At all times, all people will be encouraged to express their own options about resettlement. These will be relevant to the resettlement options of the APs themselves. The primary purpose of these meetings will be to provide the affected households and persons and host communities the opportunities to air and ventilate their issues, concerns and opinions about the project while on the side of the supervision consultants, it is also an opportunity to clarify and elucidate initial results of surveys as well as inquire on subject matters that were not sufficiently covered by questionnaires.

7.4 Consultations with Government Officials and Other Stakeholders

DABS' staff will meet with provincial and local officials to ensure that they are fully apprised about the project including the formulation and details on the implementation of the LARP. The Office of the Chief Operating Officer within DABS will coordinate with land valuation committees. There will be coordination with the district governors which have jurisdiction over the sub-project areas as well as village leaders. Information about the entitlement provisions and compensation packages will be shared with these government officials and other stakeholders.

7.5 Preparation of Project Specific Informative Material

Project specific informative materials will be prepared and distributed to the APs to create awareness among the APs regarding their entitlements and compensation payment procedures and grievances redress mechanism. They will cover the following:

- After approval of this RPF by the World Bank, it will be translated into local languages and disclosed to the stakeholders ,especially affected persons, by the DABS ESS staff , local government officials at village meetings. LARPs for sub-projects will be made available to the concerned district governments, village leaders and directly affected households and DAB’s regional offices as an official public document. This RPF will also be disclosed on DABS’s website.
- A summary of this RPF will be prepared specifically for this purpose and will be translated into local languages and presented to all APs in the form of a pamphlet/ brochure, to enable the APs and local communities to read it by themselves and be aware of the benefits/compensations to be made to available for various types of APs, as given in the ‘entitlement matrix’. DABS’ field staff/consultants will distribute the brochures through the village meetings and will explain the mechanisms and procedures of the consultation programme and how APs will be engaged in resettlement activities and the overall process.
- A cheque disbursement schedule – or preferably transfer of compensation through e-paisa to PAP bank accounts, explaining the date, time and venue for disbursement of compensation cheques of each AP will be prepared in local languages and distributed to all APs. This will also be disclosed in the village meetings.
- A package containing following information material will be prepared for each AP.
 - Inventory of AP’s losses
 - Schedule for compensation cheque disbursement explaining the date, time and venue for receiving cheque, vacating land and demolition of structures
 - Pamphlet/ brochure in local languages
 - Any other relevant information for the AP

7.6 Disclosure

Key features of this RPF will be disclosed to the APs through the village meetings, and informal interaction between the APs, consultants and PIU staff. After its approval by the World Bank, the disclosure plan will be followed:

- Provision of the RPF in local languages and English to DABS' staff at headquarters and regional offices, APs, provincial officers and district provincial offices, other local and district level offices of the concerned agencies.
- Disclosure of the RPF in village meetings
- The RPF will be available in all public institutions for general public information
- Posting of RPF on DABS website
- Publicity will be given to the RPF through all forms of media
- Provision of information packet to all APs

DABS safeguards officers will again conduct meetings with DABS staff in the Kabul office, local government units and other government agencies as part of the disclosure process to acquaint them of the substance and mechanics of the RPF. They together with the implementing NGO will be responsible to return to the affected villages and communities once this RPF is approved by DABS and the World Bank and conduct disclosure activities through village meetings to ensure that affected households will be familiar with this plan before the actual implementation commences.

8. Preparatory Actions and Implementation Schedule

8.1 Preparation Actions

DABS will begin the implementation process immediately after the project's approval by the World Bank. It will initiate some actions as groundwork and certain preparatory tasks regarding implementation of the LARP as follows:

- Creation of posts of Social and Environment Safeguards Officer (NSO)
- Appointment of two types of resettlement specialists (consultants)
- Establishment of Affected Persons Committees (APCs)
- Establishment of official cut-off date
- Conduct socio-economic census
- A series of public consultative meetings and workshops with APs and local representatives and active involvement APs in preparing a final RAP
- Endorsement of the first LARP by DABS Board, ALA and MAIL and its submission to World Bank for approval
- The process for developing the budget for compensation of land, trees, and crops will have already been coordinated with the Ministry of Finance
- Establishment of criteria, requirements and procedure for disbursement of compensation cheques
- Identification of the implementing consultant that will assist DABS in LARP implementation
- Development of internal monitoring indicators and procedures
- Identification of external monitoring agency who will undertake independent monitoring

DABS is also committed to provide adequate advance notice to the APs and pay their due compensation based on the eligibility criteria defined in this RPF for resettlement including relocation and income restoration/assistance prior to start of construction work. The APs of affected structures/assets (houses, shops, etc.) will be paid their due compensations at least three months (90 days) prior to demolition of any structures. This time will allow them to dismantle and remove all salvageable material for rebuilding of houses and reestablishment of businesses.

Payment of compensation of assets other than structures (land, crops, and trees) will be made at least 90 days prior to actual possession of the space being utilized by the APs. However, in case of a dispute regarding the compensation amount, up to 70% of the assessed/allocated amount of compensation will be paid to APs and the rest pledged in an escrow account in the names of the concerned APs, pending the resolution of the dispute. In case of dispute over rightful ownership, the compensation would be deposited in an escrow account awaiting the court resolution of rightful ownership. In such an exceptional case, the MEW may possess the land without full payment of compensation. Grievances or objections (if any) will be redressed as per grievance redress procedure adopted in this RPF. However, all activities related to land acquisition and resettlement will be completed prior to initiation of civil works in connection with the transmission line, the erection of towers and substations with resettlement and temporary displacement impacts. In case of absentee owners (e.g. conflict displaced persons), the compensation amount would be deposited in an escrow account and issued to the rightful PAP upon verification of identity and claim. The government will take all appropriate means (through electronic and written media, words of mouth through community relations) to identify/locate absentee landowners and provide documentation of these efforts.

8.2 Process of LARP Implementation

The following paragraphs explain in detail how compensation will be delivered to APs and the prerequisites needed in triggering the release of financial resources to the ultimate beneficiaries. These steps are formulated in the light of the assumed availability of finance, the security situation, and travelling time. No account is taken of the likely situation in any province or district where sub-projects might take place.

The steps for the delivery of compensation for all eligible APs will be the following:

- i. Obtain financial resources based on the final budget of the LARP. DABS shall obtain the needed money to fund the land/asset acquisition component from the Ministry of Finance.
- ii. Verification of the list of qualified APs: DABS, through the implementing NGO, will verify the list of APs provided in the LARP to ensure that all eligible APs will be properly compensated and non-eligible APs will be excluded. To ensure that identification and qualifications are guaranteed, village elders and community Shuras will be consulted to resolve issues arising from the list.
- iii. Notification of a detailed compensation package: DABS through the implementing NGO will prepare and provide each APs with a detailed breakdown of affected assets, and the unit cost of each asset affected and the total compensation that they will receive.
- iv. Final conciliation/expropriation: APs who disagree with the amount of the detailed compensation package and how it was arrived at will be provided with a last or final chance to settle these issues with the implementing NGO facilitating this meeting. In the event that DABS and the APs still cannot agree, DABS' Board will file expropriation proceedings in the appropriate court, asking that DABS be permitted to take possession of the affected asset. DABS will pay the AP 70% of the contested sum and deposit the remaining amount in an escrow account in a bank.
- v. Locate absentee owners: DABS, through the implementing NGO and village leaders, shall try to locate absentee owners of affected assets. There are some cases where owners are residing or working in other places and every effort must be undertaken to locate these absentee owners.
- vi. Notification to the public: available media and community bulletin boards will be utilized to inform the public that lands with the corresponding owners will be affected by the project. These will provide sufficient time for any adverse claimants on lands that will be affected to raise their opposition or claims over the affected lands.
- vii. Preparation of invoices: Invoices for each of the eligible APs will be prepared by DABS/Implementing NGO. This document entitles each of the APs to receive the amount indicated in the invoice.
- viii. Delivery of the money to local bank: the money from DABS/MoF will be remitted to a local bank in the nearest town to an investment project. However, DABS may remit the money for compensation to any bank of its choice. The bank account will be opened by DABS which will receive from Kabul the compensation on behalf of the APs.
- ix. Payment: the APs will each receive a cheque for the whole amount of compensation from DABS. The AP will sign a document acknowledging the receipt of the whole compensation and a waiver attesting that he/she has no longer any pending claim over the affected property. A photograph shall be taken with the AP receiving the cheque as part of project documentation.
- x. The AP will cash the cheque by presenting their national identification card (NIC) and/or election registration card to the bank. Persons without NICs will have to explain to the pertinent authorities the reasons why they are not in possession of the NIC.

A local NGO will assist all APs to open a bank account and monetary compensation will be directly deposited in this account. This will limit APs' risk of exposure to those who might wish illegally or with force to relieve them of their cash. The benefits of having a

saving account will be part of the information to be provided by the implementing consultant.

APs will be encouraged to open a bank account in any bank and only carry necessary money to their respective villages to avoid unnecessary exposure to those who might wish illegally or with force to relieve them of their cash. The benefits of having a saving account will be part of the information to be provided by the implementing consultant.

9. Complaints and Grievance Redress

Based on the LLE when private landholdings are acquired for public purposes such as dam building, compensation is paid to the owner based on the category and location of the affected land and the values of land for compensation are determined by the Council of Ministers. The decision is based on the recommendation of a land acquisition committee (LAC) consisting of the following members:

- Affected person who uses the land or his/her representative,
- Representative of DABS,
- Representative of the Ministry of Finance,
- Representative of the Ministry of Justice, and
- Representative of the local municipality,

The land acquisition process is initiated with the constitution of the land acquisition committee. As land and other assets are acquired for a public purpose, the law does not permit any objection to the acquisition of an individual's property by the state. Usually, there are dissatisfactions that arise with these acquisitions, mostly relating to the value of compensation. The LAC inquires into the matter and reviews the valuation and tries to arrive at a win-win solution. The whole process is based on a negotiated approach and as the AP or his/her representative is a member of this legally constituted LAC, a consensus is reached on the replacement value of the land and assets lost. The LAC thus also performs the tasks of a grievance redress committee.

However, if after this negotiated approach, the issue remains unresolved, the affected person may elevate the matter to a Grievance Redress Committee (GRC) to try to resolve the issue. It should be pointed out however, that this committee does not possess any legal mandate or authority to resolve land issues but rather acts as an advisory body or facilitator to try to resolve issues between the affected household and the MEW/PMU

who would implement the valuation based on the decision of the LAC. The GRC will be composed of the following members:

- Affected person or his/her duly appointed representative,
- Representative of the local administration (from the office of the governor),
- Representative from DABS,
- Representative from the local legal department,
- Representative of the implementing NGO

The grievance redress committee will register the unresolved matter and meet to try to resolve the issue. A recommendation should be made within 7–10 working days. In the case of the absence of any of the members during the decision-making process, an appropriate candidate will be nominated by the original representative. If no decision has been promulgated after 10 working days from the last meeting of the grievance redress committee, the affected person may take the issue to the next level. The AP always has the final recourse to seek redress through the legal system. However, every effort must be exerted to avoid this alternative because it entails loss of time and expenses of the part of the AP.

As the concept of just compensation for affected assets for public works such as dams or for major commercial or infrastructural activities such as development of electricity transmission lines is new to Afghanistan, the safeguards officers and the implementing consultant (NGO) will assist in disseminating this concept to APs, its procedures and prerequisites in filing the proper complaints. The process of grievance redress has been made simple to hasten the process of decision-making and facilitate getting on with the works. The grievance redress committee includes a representative from the local administration and the affected individual. Grievances are expected to be redressed locally within the existing framework.

10. Monitoring & Evaluation

10.1 General

Project activities will undergo both internal and external monitoring. Internal monitoring will be conducted by DABS, assisted by the Supervision Consultant. External monitoring will be assigned to an independent External Monitoring Agency (EMA) to be hired by DABS, and approved by the World Bank.

10.2 Internal Monitoring

Internal monitoring will be carried out routinely by DABS safeguards officers working closely with the implementing NGO and results will be communicated to World Bank and DABS management through the regular project implementation reports. Indicators for the internal monitoring will be those related to process, immediate outputs and results. This information will be collected directly from the field and reported monthly to DABS Chief Operating Officer to assess the progress and results of LARP implementation, and to adjust the work program, if necessary. The monthly reports will be consolidated every quarter in standard supervision reports and submitted to the World Bank. Specific monitoring benchmarks will be:

- Information campaign and consultation with APs;
- Status of land acquisition and payments on land compensation
- Entitlement matrix
- Compensation for affected structures and other assets;
- Relocation of APs;
- Payments for loss of income;
- Income restoration activities.
- Grievances received and status of redress

10.3 External Monitoring

The implementation of DABS' investment projects will take place over a number of years. It will therefore be necessary that external Third Party monitoring is carried out on a regular basis with the results communicated to DABS and the World Bank through a bi-annual compliance report. (The TOR for the External Monitoring Agency (EMA) will be part of the LARP) The EMA will be responsible for the preparation of the compliance report confirming that all compensation and related resettlement assistance in cash or kind are being delivered to the affected households. Based on the results of the compliance report, the EMA will recommend to DABS/the World Bank if the necessary civil works on rehabilitation, especially raising the height of the Naghlu reservoir, with resettlement impacts can commence. A copy of the compliance report and its recommendations will be submitted to the DABS, supervising consultant and the World Bank simultaneously. The EMA will also review the impact on upstream and downstream communities as well as host communities at resettlement sites.

The EMA will also assess the status of project affected vulnerable groups such as female-headed households, disabled/elderly and poor families. The following will be considered as the basis to develop the indicators for monitoring and evaluation of the project:

- Socio-economic conditions of the APs in the post-resettlement period;
- Communications and reactions from APs on entitlements, compensation, options, alternative developments and relocation timetables etc.;
- Changes in housing and income levels;
- Rehabilitation of squatters (if any);
- Valuation of property;
- Grievance procedures and outcomes;

- Disbursement of compensation; and
- Level of satisfaction of APs in the post resettlement period.

The EMA will carry out a post-implementation evaluation of each LARP about 1 year after its implementation to find out whether the LARP objectives were attained or not. The socio-economic survey base-line will be used to compare pre- and post- project conditions. The EMA will recommend supplemental assistance for the APs in case the outcome of the study shows that the objectives of the LARP have not been attained.

10.4 Management Information Systems

All information concerning resettlement issues related to land acquisition, socio-economic information of the acquired land and affected structures, inventory of losses by APs, compensation and entitlements, payments and relocation will be collected by the implementing consultant. This data bank would form the basis of information for RAP implementation, monitoring and reporting purposes and facilitate efficient resettlement management.

10.5 Reporting Requirements

The implementing consultant will be responsible for supervision and implementation of LARP and prepare monthly progress reports on resettlement activities and submit to the PMU for review. The implementing consultant will also monitor RAP implementation and submit quarterly reports to DABS and the World Bank. The external monitoring agency (EMA) will submit bi-annual reviews directly to the World Bank and determine whether or not resettlement goals have been achieved; more importantly whether livelihoods and living standards restored/enhanced and suggest suitable recommendations for improvement.

11.1 Matrix of Actions under the RPF

ACTIONS, MEASURES, COMPENSATION ENTITLEMENTS AND CATEGORIES IN THE RPF

ACTIONS	TO	IMPLEMENT	THE	NHRP
Who	What	When	Why (Objective)	Comments
DABS	Establish liaison arrangements with Ministries/agencies which will necessarily be involved in investment project.: MEW; MOF; MOJ, MAIL and Arazi	Assuming these arrangements already exist (DABS Board members) , they can be utilised as soon as possible to bring these Ministries up to date on specific investment projects	To facilitate the smooth implementation of the beginning and operation of specific investment projects	The vital first step in the process of developing investment projects.
DABS	Establish/confirm institutional arrangements for ensuring safeguards compliance.	On approval of RPF by World Bank	Creation of the internal DABS arrangements to implement RPF	Preparatory work to be done before approval of RPF
DABS	Appoint /confirm national safeguards officers	Desirable to confirm/appoint these officers well before the commencement of investment projects	Creation of internal DABS arrangements to implement RPF	Early confirmation/ appointment will facilitate training of these officers. Training organised by WB
DABS	Commence the preparation of materials on the RPF for distribution to probable Aps	As soon as possible	To give as much advance publicity as possible on specific projects and to alert probable APs of resettlement	No need to wait for approval of RPF by World Bank. This work should start as soon as possible
DABS	Prepare terms of reference for international social safeguards consultant	As soon as possible Advertisements can go out before RPF approved but appointment would be dependent on RPF approval	To ensure rapid recruitment processes once RPF approved	There will need to be considerable consultation on this post so action needs to start early on
DABS	Appoint the implementing NGO/consultant who is going to carry out the processes of resettlement	Initial work on appointment – terms of reference; basic requirements for an NGO/consultant to be qualified. Appointment would not be made until RPF approved	The implementing NGO will have an important role to play in all significant resettlement exercises.	Where no or only very small-scale land acquisition and resettlement will take place, the designated ESSOs together with the project manager could be the implementers but anything over that and the implementing NGO would be

				involved.
DABS	Continue with process of fixing the route of the distribution lines and location poles ,pylons and substations and preparing technical plans	ongoing	To ensure no delay in process of erecting the distribution lines	No comment needed. Self-evident action.
DABS	Where likely resettlement will be involved in a site located for a power substation begin preparation of RAP under the RPF	This action should begin to be incorporated into plans developing the sites for action.	To ensure no delay in beginning of implementation	Processes for preparing RAP set out in the text of RPF
DABS	Census of residents and probable APs within project area	As early as possible after studies completed.	An essential first step in the process of resettlement	Explanation of the importance of this in the RPF
DABS	Begin the processes of publicity and consultation with APs.	Alongside taking the census of APs	An essential first step in the process of planning resettlement and developing a resettlement action plan	Consultation must be genuine. As much information as possible must be given to APs. Utilise village and other meetings
DABS	Consult and liaise with local governments and regional offices of associated Ministries on above actions.	Alongside consultation with APs	Essential to ensure that Ministries and local governments know of what is happening	These bodies will be needed to assist with village meetings and consultation with APs.
DABS	Undertake the process of inviting APs to submit claims for compensation; assessing discussing and settling claims with APs	Part of the process of consultation and preparing an RAP as an RAP must contain precise details of the compensation and resettlement payments	Compensation and the process of resettlement is at the heart of an RAP and its implementation.	ESSOs and NGO will be involved here
GRC	The GRC will be involved in attempting to settle any grievances which APs may have over the compensation that they are being offered	The GRC should be ready to be involved from the start of the process of assessing and determining the compensation payable to APs	To assist in the process of settling claims to compensation	The GRC must be prepared to work speedily and flexibly so as to ensure that a sub-project does not get bogged down in never-ending disputes about compensation.
DABS	Finalise RAP	Preparation of RAP is a continuous process	A necessary step to commencing action on the	RAP must be approved by World Bank

		commencing with consultation in connection with census taking	ground	
DABS	Prepare information pack for each AP	The information pack to be distributed when RAP approved	The pack provides all the basic information which an AP will need to know. What is to occur on resettlement; how much compensation will be provided; how the compensation will be provided and the opportunities for complaints and settling same.	This is a vital component of an RAP. The details of what must be in the information pack are contained in the RPF
DABS	Implement the compensation and resettlement processes of the RAP	Everything should be ready to be rolled out once the RAP is approved	Once the APs have been paid their compensation and been resettled, infrastructural activities on the ground may commence	<i>It is absolutely vital to bear in mind that all APs claims must be settled (subject to the limited exception of payment of only part of compensation if a dispute is going to court as set out in the RPF) before entry may be made on to land from which APs have been moved and infrastructural activities may commence.</i>
Implementing NGO	1. Work closely with ESSOs in generating awareness of all aspects of resettlement and compensation 2. Work closely with APs in assisting in making, negotiating and if necessary taking to the GRC claims for compensation 3. Submit regular reports on the process to DABS and the monitors	Throughout the execution of the RAP	The presence of an independent agency whose prime function is to act on behalf of and support APs in their claims for compensation is designed as a guarantee that the process complies with principles of substantive and procedural (administrative) justice	This is a key element in the RPF. It will be important that a reputable and effective NGO is appointed and that the external monitoring body has terms of reference that embrace the monitoring on the NGO
GRC	Handle AP grievances over compensation	During the process of determining compensation.	As with the implementing NGO, a GRC is a further	Another key element on the RPF. Important that the

		Meet regularly and settle disputes within 10 days.	guarantee to APs that the process is both substantively (a second and independent opinion on compensation) and procedurally (an AP can have a hearing and put his/her case) fair	members of the GRC see themselves as independent and operate accordingly. They are not there ‘to save government money’.
DABS	Internal monitoring conducted by ESSOs/project management team	Throughout the process of the implementation of an RAP with regular reports to the World Bank	The Operations and Maintenance Department is responsible for managing the . It will not have the major hands-on role which will be that of the implementing NGO. So it is in a good position to monitor and report on what is happening and will do that via ESSOs	An essential aspect of the RPF as it provides an element of project assurance to the World Bank with respect to the implementation of DABS investment projects.
The External Monitoring Agency (EMA must be independent of all bodies involved in the implementation of the NHRP and with independent standing in its own right. Could be a University department or a consortium of departments.	External monitoring conducted by the EMA.	The EMA will have guaranteed access to investment project sites and will report regularly to officials in DABS, World Bank;, Aps and other relevant public and private bodies	An independent overview of the implementation of an investment project’s RAP.	It is considered very unlikely that significant land acquisition or resettlement will be required for any investment project. The independence of the EMA must be assured in the contract between it and the MEW. The World Bank has a substantial interest in the EMA and its outputs so will likely be involved in the selection process.

11.2 Matrix of Compensation Entitlements and Rates

ELIGIBILITY	CRITERIA	FOR	IDENTIFYING	Aps
Who is eligible	What are they eligible for	How to determine eligibility and compensation levels	What's the objective	Comments
Landowners	Loss of land and rights to land	<ol style="list-style-type: none"> 1. Official documentation issued by or on behalf of government 2. Customary documents; i.e. documents recognised by both official and customary law as giving rise to ownership rights 3. Oral and other evidence with probative value that the claimant and his/her family have been in occupation of the land for at least 35 years. 4. Open, continuous and interrupted possession of persons over a very long time which effectively vests in them legal rights over the lands they occupy through acquisitive prescription. 	The aim of OP. 4.12 is to compensate all those who have lost 'their' land. OP 4.12 goes beyond technical rules of law or evidence which in part are designed to bring disputes over land to an end and ensure security to title. OP 4.12 aims at simple and substantive justice: "if you've been on this land for a long time and there is good evidence of that then you should be compensated for losing it"	As the matrix on the comparison of the LLE and OP 4.12 shows, there is nothing in LLE which prevents the approach of 4.12 being adopted here
Squatter	Permanent improvements they have made to the land they have occupied	Observance of permanent improvements; questioning the squatter and neighbours on when improvement made; consulting maps and other relevant documents	The objective here is to compensate the squatter for expenditure on the land but not for the value of the land itself	Ditto to above.
Agricultural tenants and tenants of artisanal mines	Loss of income	Cash compensation corresponding to one year's crop yield of land lost.	A fair approximation of loss of income	Ditto
Sharecroppers	Loss of income	Their share of the harvest at market rates plus one	Ditto to above	Ditto

		additional crop compensation.		
House owners/renters	Costs of relocation to other accommodation	relocation allowance of Afs x per months until suitable accommodation established, and assistance in identifying alternative accommodation	This is a very standard element of compensation in all systems	Not specifically provided for in LLE but nothing to stop is being paid
Loss of livelihoods by agriculturalists	Replacement costs for all losses	1. losses will be compensated at replacement value in cash based on current market rates plus an additional . Indemnity for x months as transitional livelihood allowance. 2. When >10% of an AP's agricultural land is affected, APs will get an additional allowance for <i>severe impacts equal to</i> the market value of a year's net income crop yield of the land.	The aim is to provide a reasonable measure of compensation for loss of livelihoods but on the assumption that APs will make a go of things on their new land. It provides temporary relief but not an amount which invites future indolence	This is already an approach which has been accepted in Afghanistan
Residential/commercial land impacts	Replacement costs for all losses	Replacement value in cash at current market rates free of deductions for transaction costs	See above. The same reasoning applies	Ditto
Those who lose or have buildings damaged	Replacement costs	These impacts will be compensated in cash at replacement cost free of depreciation, salvaged materials, and transaction costs deductions. Renters/leaseholders will receive an allowance geared to the rent they are paying for 3 months to cover emergency rent costs.	See above.	Ditto
Those who lose income from crop losses	Replacement of lost income	These impacts will be compensated through cash	See above	Ditto

		compensation at current market rates for the full harvest of 1 agricultural season. In case of sharecropping, crop compensation will be paid both to landowners and tenants based on their specific sharecropping agreements.		
Those who have lost income from loss of trees	Replacement of lost income	Income replacement based on types of trees lost.	See above	Ditto
Those who have suffered business losses	Replacement of lost income	Compensation for business losses will be based on actual income to be established by pertinent receipts or other documents if demonstrable, otherwise based on business loss allowance.	See above	Ditto
Those who have suffered loss of wages	Replacement of lost wages for a limited period	Compensation, based on actual income loss for time duration until income source is re-established. .	See above	Ditto
Vulnerable households	Additional compensation over and above strict loss of income	Vulnerable people (APs below the poverty line, women household heads, mentally challenged headed households, etc.) will be given assistance in the form of a one-time allowance for vulnerable APs equivalent to AF x and priority in employment in project-related jobs.	This is a recognition that those classified as vulnerable households will likely suffer losses over and above income loss and will find it especially hard to get started again somewhere else.	Ditto
Transitional living allowance for APs forced to relocate	Disturbance compensation	APs forced to relocate will receive a livelihood allowance of AF x a month for three months. Transitional livelihood allowance is computed based on the prevailing wage rate of AF x per day times during	This is a standard head of compensation in most systems of compensation.	Ditto

ESTABLISHING	VALUATION	RATES	FOR	ACQUISITION
What is being valued	How is valuation conducted	Input of APs	Indicative figures	Comments
Matters common to all specific types of valuation	Rapid appraisal; consultation with APs; information derived from census and from local authorities	Yes but not necessarily decisive	Where figures are given they are indicative only being based on a 2009 valuation exercise. They will almost certainly be changed when budgets for RAPs are developed CASA 1000	none
Land including easements (rights of way) over land	Valuation of the land is pegged on an average, the actual value depending on the nearness to a built up area. Land prices are based on the district land prices in the district government	Land values are so far as possible determined on the basis of 'objective' factors but it is not possible to ignore the assumptions of APs about land values which do play a part in valuation	None	Land values are dealt with after a fashion in the LLE.. The Council of Ministers determines values but there is a local process that valuation goes through.
Structures	Structures may be classified (temporary, semi-permanent and permanent) based on the materials used in construction. They may be classified into class 1(mud/brick/wood walls, mud/tin roof), 2 (tiled roof and normal cement floor) and 3 (RCC, single/double storey building)	In the project from which these classifications are based, they were arrived at after various consultations with some owners who recently build their houses, local contractors and some local civil engineers.	None	This approach to structures seems a good one to adopt. Some APs considered that the length of time a structure had been standing should affect value but this was not a factor used in valuation
Crops	in computing crop losses, a combination of four main crops was used to get the average yield and price..		The unit price for crop losses for a square meter of land devoted to the four main crops	Valuation was problematic because of lack of reliable data in terms of yield. The results of the socio-economic survey were not reliable because the majority of the respondents were not aware of size of their land holdings.
Trees	Compensation for productive	During interviews with APs on	The compensation rate for a	The same point as above

	<p>trees is based on the gross market value of 1 year income for the number of years needed to grow a new tree with the productive potential of the lost tree.</p> <p>Non-productive trees are valued based on the multiple years investment they have required.</p> <p>Compensation for non-productive fruit bearing tree is the cost of the sapling plus the cost of maintaining the tree up to the time that the tree was cut because of the project.</p>	<p>trees, it was pointed out that the fluctuation of the value of tree products was influenced largely by the supply and demand and the absence of post harvest facilities. Fruit was sold when all other farmers sold their fruit. In the off-season, prices were higher but few farmers could store their crops until then</p>	<p>fruit bearing tree is the average yield per tree times the age of the tree.</p>	<p>applies here too</p>
<p>Restoration of income 1. Crop losses</p>	<p>cash compensation at current market rates for the full harvest of 1 agricultural season. In case of sharecropping, crop compensation will be paid both to landowners and tenants based on their specific sharecropping agreements.</p>	<p>No apparent input from APs. But there may be disputes between owners and sharecroppers which officers from the implementing NGO and possibly from ESSU might become involved in</p>	<p>No figures can be given</p>	<p>As noted in column 3 this may not be as straightforward as it seems. Inter-AP disputes may erupt and the GRC called into action.</p>
<p>2. Business losses</p>	<p>compensation for permanent business losses will be in cash for the period deemed necessary to re-establish the business Compensation for temporary business losses will be cash</p>	<p>The figures in the next column do not seem to admit of negotiation but there will be an issue of whether a business is permanent or temporary on which APs will wish to be consulted and have their views taken on board</p>	<p>Permanent business will receive AF x a month for 6 months. Temporary business losses will be paid for a limited number of months at AF x a month</p>	<p>This is another area where disputes could arise but between those offering and those receiving compensation.</p>
<p>3. Income restoration for workers and employees</p>	<p>Indemnity for lost wages for the period of business</p>	<p>This does not admit of much negotiation although there may</p>	<p>No figures because wages differ depending on the work</p>	<p>Ditto but in addition, there could be disputes between</p>

	interruption	be differences of opinion of what count as wages	being done	employer and employee on wages which the project will have to arbitrate on.
Income Restoration Allowance for Severe Agricultural Land Impacts.	When >10% of the agricultural land of a AP is affected, APs will get an additional allowance for <i>severe impacts equal to</i> the market value of a year's net income crop yield of the land lost.	Given the problems of measurement of APs' holdings – see above column 5 on crop losses – this may be difficult to compute and careful negotiations with the APs will be necessary	No figures because the exact sums of money involved will depend on the use to which the land is being put	Although this has the appearance of objectivity for reasons noted in column 3 there may be disputes which will need to be handled sympathetically.
Vulnerable group allowance	Vulnerable people (APs below the poverty line, women household heads, mentally challenged headed households, etc.) will be given assistance.	There will need to be careful and sympathetic consultation and negotiation with these APs	A one-time allowance for vulnerable APs equivalent to at least AF x and priority in employment in project-related jobs.	Whether this will be seen as adequate will depend on the income forgone. It might be advisable to build in some flexibility here hence the 'at least'.
Transitional livelihood allowance	APs losing land or losing a house and forced to relocate will receive a livelihood allowance.	Disturbance is a standard head of compensation but it will need a willingness to be flexible on rates as disturbance is not an objective matter.	At least AF xa month for transitional period	This is very much a 'guestimate'. It may be the best that can be done in the circumstances. Here too the words 'at least' have been added to provide for some flexibility
Rental allowance	House renters forced to relocate will receive a rental allowance and will be assisted in identifying alternative accommodation	Negotiations with APs central to the operation of this head of compensation	x months' rent at the prevailing market rate in the project area	What the prevailing market rent is must differ from place to place. It is probably not worth while trying to create a 'shadow' market. As with other heads of 'allowances' some flexibility must be built into the outcome.

Annex 11 A: RESETTLEMENT ACTION PLAN CONTENT

The scope and level of detail of a resettlement plan vary with the magnitude and complexity of resettlement. The plan is based on up-to-date and reliable information about (a) the proposed resettlement and its impacts on the displaced persons and other adversely affected groups, and (b) the legal issues involved in resettlement. The resettlement plan covers the elements below, as relevant. When any element is not relevant it should be noted in the resettlement plan.

1. Description of the Project Area

General description of the project and description of the project area

2. Potential Impacts

Identification of :

- The project component or activities that give rise to resettlement
- The zone of impact of such component or activities
- The alternatives considered to avoid or minimize resettlement
- The mechanisms established to minimize resettlement to the extent possible during project implementation

3. Objectives

The main objectives of the resettlement program

4. Socio-economic studies:

The findings of socio-economic studies to be conducted in the early stages of project preparation and with the involvement of potentially displaced people, including

- The results of a census survey covering:
 - Current occupants of the affected area to establish a basis for the design of the resettlement program and to exclude subsequent inflows of people from eligibility for compensation and resettlement assistance.
 - Standard characteristics of displaced households, including a description of production systems, labor and household organization; and baseline information on livelihoods (including, as relevant, production levels and income derived from both formal and informal economic activities) and standards of living (including health status) of the displaced population.
 - The magnitude of the expected loss – total or partial- of assets, and the extent of displacement, physical or economic
 - Information on vulnerable groups or persons as provided for in OP4.12. para. 8, for whom special provision may have to be made
 - Provisions to update information on the displaced people's livelihoods and standards of living at regular intervals so that the latest information is available at the time of their displacement.
 - Other studies describing the following:

- Land tenure and transfer systems, including an inventory of common property natural resources from which people derive their livelihoods and sustenance, non-title-based usufruct systems (including fishing, grazing, or use of forest area) governed by local recognized land allocation mechanisms and any issues raised by different tenure systems in the project area.
- The patterns of social interaction in the affected communities, including social networks and social support systems, and how they will be affected by the project.
- Public infrastructure and social services that will be affected and
- Social and cultural characteristics of displaced communities, including a description of formal and informal institutions (e.g. community organizations, ritual groups, NGOs) that may be relevant to the consultation strategy and to designing and implementing the resettlement activities.

5. Legal Framework

The RAP is based on the RPF which sets out the legal and regulatory framework governing resettlement, land acquisition and asset loss for the NHRP. (See section 2 of the RPF)

6. Institutional Framework

The findings of an analysis of the institutional framework covering:

- The identification of agencies responsible for resettlement activities and NGOs that may have a role in project implementation.
- An assessment of the institutional capacity of such agencies and NGOs
- Any steps that are proposed to enhance the institutional capacity of agencies and NGOs responsible for the resettlement implementation.

7. Eligibility

Definition of displaced persons and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cut-off dates.

8. Valuation of and compensation for losses

The methodology to be used in valuing losses to determine their replacement cost; and a description of the proposed types and levels of compensation under local law, and such supplementary measures as are necessary to achieve replacement cost for lost assets.

9. Resettlement Measures

A description of the packages of compensation and other resettlement measures, including an entitlement matrix, that will assist each category of eligible displaced persons to achieve the objectives of the policy (see.0p 4.12. para. 6). In addition to being technically and economically feasible the resettlement packages should be compatible with the cultural preferences of the displaced persons, and prepared in consultation with them.

10. Site Selection, Site Preparation and Relocation

Alternative relocation sites considered and explanation of those selected covering:

- Institutional and technical arrangements for identifying and preparing relocation sites, whether rural or urban, for which a combination of productive potential, locational advantages, and other factors is at least comparable to the advantages of the old sites with an estimate of the time needed to acquire and transfer land and ancillary resources.
- Any measures necessary to prevent land speculation or influx of ineligible persons at the selected sites.
- Procedures for physical relocation under the project, including timetables for site preparation and transfer and
- Legal arrangements for regularizing and transferring titles to resettlers.

11. Housing, infrastructure and social services

Plans to provide (or to finance resettlers' provision of) housing, infrastructure (e.g. water supply, feeder roads), and social services (e.g. schools, health services) – plans to ensure comparable services to host populations; any necessary site development, engineering, and architectural designs for these facilities.

12. Environmental protection and management

A description of the boundaries of the relocation area and an assessment of the environmental impacts of the proposed resettlement and measures to mitigate and manage these impacts (coordinated as appropriate with the environmental assessment of the main investment requiring the resettlement)

13. Community participation, involvement of resettlers and host communities

- A description of the strategy for consultation with and participation of resettlers and hosts in the design and implementation of the resettlement activities.
- A summary of the views expressed and how these views were taken into account in preparing the resettlement plan.
- A review of the resettlement alternatives presented and the choices made by displaced persons regarding options available to them, including choices related to forms of compensation and resettlement assistance, to relocating as individual families or as parts of preexisting communities or kinship groups, to sustaining existing patterns of group organization and to retaining access to cultural property (e.g. places of worship, pilgrimage centers, cemeteries)
- Institutionalized arrangements by which displaced persons can communicate their concerns to project authorities throughout planning and implementation, and measures to ensure that such vulnerable groups as indigenous people, ethnic minorities, the landless, and women are adequately represented.

14. Integration with host populations

Measures to mitigate the impact of resettlement on nay host communities including:

- Consultations with host communities and local governments
- Arrangements for prompt tendering of any payment due the hosts for land or other assets provided to resettlers.
- Arrangements for addressing any conflict that may arise between resettlers and host communities
- Any measures necessary to augment services (e.g. education, water, health and production services) in host communities to make them at least comparable to services available to resettlers.

15. Grievance Procedures

Grievances and complaints raised during the implementation of the RAP will be dealt with in accordance with the Grievance Redress Mechanism set out in Section 8 of the RPF. The Land Acquisition Committee (LAC) established by the Council of Ministers under the LLE, also performs the duties of a grievance redress committee in relation to the value of land and/or assets acquired. The LAC will use a negotiated approach to reach a consensus on the replacement value of lands and assets. If this approach fails an AP may bring the matter to a Grievance Redress Committee which will try and resolve the issue and make a recommendation within 7- 10 days. If no decision is reached after 10 days, the AP may seek recourse through the legal system as a last resort.

16. Organizational responsibilities

The organizational framework for implementing resettlement , including identification of agencies responsible for delivery of resettlement measures and provision of services; arrangements to ensure appropriate coordination between agencies and jurisdictions involved in implementation; any measures (including technical assistance) needed to strengthen the implementing agencies' capacity to design and carry out resettlement activities; provisions for the transfer to local authorities or resettlers themselves of responsibility for managing facilities and services provided under the project and for transferring other such responsibilities from the resettlement implementing agencies, when appropriate.

17. Implementation schedule

An Implementation schedule covering all resettlement activities from preparation through implementation, including target dates for the achievement of expected benefits to resettlers and hosts and termination of the various forms of assistance. The schedule should indicate how the resettlement activities are linked to the implementation of the overall project.

18. Costs and budget

Tables showing itemised cost estimates for all resettlement activities, including allowances for inflation, population growth, and other contingencies, timetables for

expenditures, sources of funds, and arrangements for timely flow of funds and funding for resettlement, if any, in areas outside the jurisdiction of the implementing agencies.

19. Monitoring and Evaluation

Arrangements for monitoring of resettlement activities by the implementing agency, supplemented by independent monitors as considered appropriate by the Bank, to ensure complete and objective information; performance monitoring indicators to measure inputs, outputs and outcomes for resettlement activities; involvement of the displaced persons in the monitoring process, evaluation of the impact of resettlement for a reasonable period after all resettlement and related development activities have been completed; using the results of resettlement monitoring to guide subsequent activities.

ABBREVIATED RESETTLEMENT ACTION PLAN

An abbreviated RAP must contain a minimum of the following elements:

- (i) A census survey of displaced persons and valuation of assets
- (ii) Description of compensation and other resettlement assistance to be provided
- (iii) Consultation with displaced people about acceptable alternatives
- (iv) Compensation Matrix w. all PAPs and their complete entitlements etc
- (v) Institutional responsibilities for implementation and procedures for grievance redress
- (vi) Arrangements for monitoring and evaluation
- (vii) A timetable and budget

ANNEX 11 B: Generic Terms of reference for independent monitoring of RAP implementation

External Monitoring

External (or independent) monitoring is often needed to periodically assess resettlement implementation and impacts, verify internal reporting and monitoring, evaluate qualitative aspects of the resettlement program, and suggest adjustments to the delivery mechanisms and procedures, as required. Integral components of this monitoring activity include a social and economic assessment of the results of entitlements and a measurement of the income and standards of living of the Displaced Persons (DP) before and after resettlement. The following activities are the standard functions of the external monitors:

- Verifying internal reports by field-checking delivery of compensation to intended recipients, including the levels and timing of the compensation; readjustment of land; preparation and adequacy of resettlement sites; construction of houses; provision of employment, the adequacy of the employment, and income levels; training; special assistance for vulnerable groups; repair, relocation, or replacement of infrastructure; relocation of enterprises, compensation, and adequacy of the compensation; and transition allowances;
- Interviewing a random sample of DPs in open-ended discussions, to assess their knowledge and concerns about the resettlement process, their entitlements, and the rehabilitation measures;
- Observing the functioning of the resettlement operation at all levels, to assess its effectiveness and compliance with the RPF/RAP;
- Checking the type of grievance issues and the functioning of grievance redress mechanisms by reviewing the processing of appeals at all levels and interviewing aggrieved DPs and members from the host community;
- Surveying standards of living of DPs (and people in an unaffected control group, where feasible) before and after implementation of resettlement, to assess the effects of the resettlement on their standards of living;
- Interviewing a random sample of people from the host communities to assess their level of satisfaction with/ grievances as a result of the resettlement process; and
- Advising project management regarding possible improvements in the implementation of the RP.

Regular external monitoring begins about the same time as implementation activities and continues until the end of the project. It sometimes continues even beyond project completion if the standards of living of all DPs have not at least been restored and the Bank and the borrower agree that the situation needs continued follow-up. In projects with large-scale resettlement impacts, good practice is to conduct standard-of-living surveys before beginning resettlement (baseline survey) and then to repeat them 3 years after resettlement and thereafter, as required, to assess the effectiveness of remedial measures.

Monitoring Indicators

Some indicators to measure the progress in RAP implementation are suggested below. The indicators have been formulated at outcome, output and activity (performance levels). The frequency of collection of data on the indicators and the agency responsible for the collection has also been suggested.

No.	Indicator	Frequency of collection	Agency Responsible
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1.	Monthly income level of PAPs restored to pre-project levels	Mid-term and end of RAP	Consultant (third party monitoring)
2.	Increase in number of PAPs that are 'very satisfied' with the services of DABS and Government of Afghanistan by 50% from Baseline	Mid-term and end of RAP	Consultant (TM)
3.	No. of vulnerable persons (poor, women-headed households and widows, elderly and physically challenged) expressing their satisfaction with RAP measures taken.	Mid-term and end of RAP	Consultant (TM)

Reporting

- **Inception report** describing approach and methodology for conducting review of implementation of RAPs in connection to component 2 & 2 – document review as well as field review of project (components) implementation.
- **Half-yearly** monitoring reports of implementation of Resettlement Action Plans (RAPs)
- **Annual** Reviews of RAPs during implementation, and post implementation stages.
- **Social audits** of implementation of RAPs under NHRP.

Consulting Team

The consulting team shall include the following key experts in addition to any support staff that the consultant may decide.

No.	Qualification	Minimum Experience	Continuous / Intermittent Inputs
1	Post graduate Degree in Social Sciences	10 years	Continuous
2	Specialist in Community Participation	10 years	Continuous
3	Gender/Social Inclusion Specialist	10 years	Continuous

Annex 12: Sample Grievance Registration Form

Grievance Number: _____ LOCATION : District: _____ Village: _____ CDC Name: _____ NAME OF COMPLAINANT: _____ Tazkira number: _____ ADDRESS: _____ Telephone #: _____ DATE RECEIVED: _____	
Classification of the grievance (Check boxes)	
<input type="checkbox"/> Siting of poles and pylons <input type="checkbox"/> Disruption of work/business <input type="checkbox"/> Land acquisition and Compensation <input type="checkbox"/> Financial <input type="checkbox"/> Water Quality <input type="checkbox"/> Sanitation	<input type="checkbox"/> Dispute with contractors <input type="checkbox"/> Inter-community dispute <input type="checkbox"/> Technical/operational coordination <input type="checkbox"/> Process delays <input type="checkbox"/> Noise <input type="checkbox"/> Water Use
<input type="checkbox"/> Other (specify) _____	
Brief description of the grievance:	
What is the perceived cause?	
Suggested action (by complainant) to address grievance:	

Annex 13. Scheduling and Reporting by DABS Environmental and Social Safeguards Staff

Activity	Year 1				Year 2				Year 3				Remarks			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Mitigation Measures ----- ----- etc.																
Monitoring ----- ----- etc																
Institutional Strengthening ----- ----- etc																
Training ----- ----- etc																

Environmental and Social Progress Report Format

Sl. No	Planning And Capacity support	Key environmental and social issues	Mitigation measures taken	Implementation and monitoring of ESMP	Training & capacity-building programs implemented	Convergence	Lessons learnt	Remarks

SUMMARY OF PROCEEDINGS FROM STAKEHOLDER CONSULTATIONS
on
DRAFT ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)
DABS PLANNING AND CAPACITY SUPPORT PROJECT
and
DRAFT TOR for ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENTS (ESIAs)
NAGHLU HYDROPOWER REHABILITATION PROJECT (NHRP)

11/03/15

VENUE: DABS's OFFICE, KABUL

Introduction

The ESMF has been developed to address environmental and social concerns and impacts that may arise during the development and implementation of DABS 'investment projects. The framework provides general guidelines, codes of practice and procedures for the management of environmental and social issues. Ongoing consultations with various stakeholders, throughout the life of the project, are a central plank of the ESMF. Consultations help improve a project's design, effectiveness and sustainability.

Consultations on the ESMF for the Naghlu Hydropower Rehabilitation Project took place in 2013. Environmental and Social Impact Assessments (ESIA) for components 2 and 3 of the NHRP are key requirements of this ESMF. These impact assessments will identify and evaluate all potential environmental and social impacts likely to result from works associated with removal of sediment from the Naghlu dam and increasing power generated from the dam.

The draft ESMF for the DABS Planning and Capacity Support Project and the draft ESIA TOR were disclosed on DABS's website in advance of the consultations. The ESMF summary was translated into Dari and Pashto and circulated to participants.

Summary of Proceedings

1. The meeting was opened by DABS's Chief Operating Officer, Shekeeb Nessar (SN) who welcomed participants and provided a brief overview of both the Technical Assistance and the NHRP projects. He went on to say that DABS and the World Bank share a common expectation to involve local communities throughout the planning and development of projects. SN indicated that if a decision was taken to raise the height of the dam some villages would likely be impacted. In which case he confirmed that all affected families would be compensated in line with Afghan national laws and policies. Enhanced power generation capacity would enable the electrification of more areas including villages in the immediate vicinity of the dam. SN reconfirmed that the GoIRA is working to produce a notification letter to inform Pakistan of proposed project activities.
2. Hameed Quraishi, the World Bank's Task Team Leader (TTL) for the DABS Planning and Capacity Support project, confirmed that the purpose of the meeting was to discuss and receive feedback from participants on the draft ESMF for the capacity support project and the draft TOR for the ESIAs to be carried out under components 2 and 3 of the NHRP. He encouraged active participation from all present.
3. Ramatullah Safi (RS) DABS's environmental safeguards officer presented key elements of the ESMF for the DABS Technical Assistance project. He explained that the project consisted of two core components – (i) building the capacity of DABS's staff to plan, implement and evaluate all aspects of power distribution projects and (ii) building and equipping a training centre.

Key points raised on the draft Planning and Capacity Support ESMF

4. There are clear and comprehensive environmental laws and regulations with clear procedures and processes already in place. Why is it necessary to produce an ESMF?

Response: Consideration of, and compliance with, all relevant National laws and regulations are an essential requirement of the ESMF.

5. There should be a comprehensive checklist on tasks that have already been completed and those to be carried out in the future.

Response: Agreed.

6. Vocational Training for skilled laborers working on investment projects should also be included under component 1 of the project.

Response: There was general agreement that vocational training should have a higher priority and that consideration should be given as to how such training might be included in the project.

7. A common standard needs to be applied to all equipment imported into Afghanistan for the energy sector.

Response: Standards are already in place and efforts are made to ensure that there is effective compliance with these standards.

8. The project should ensure that training on clean energy investment is included under component 1. Solar/ wind energy is one source that should be considered

Response: Agreement that clean energy is important for Afghanistan but that the private sector is the primary investor in this source.

9 Jawad Noori (JN), DABS social safeguards officer, introduced the draft TOR for the Environmental and Social Impact Assessments (ESIA) to be carried out for components 2 & 3 of the NHRP. He briefly outlined the various tasks included under the ESIA and presented an indicative timeline for carrying out the assessments.

Key points raised on the draft ESIA TOR for the NHRP

10. The representative from downstream villages pointed out that potential adverse impacts on downstream communities need to be identified and proper mitigation measures put in place. He also mentioned that since the consultations last September to establish the Grievance Redress Mechanism (GRM), there has been no follow up on from DABS. Villages have the impression that there is too much focus on technical issues with insufficient attention being paid to community concerns about the project's impact on them.

Response: Another meeting with community representatives will be organised soon to update them on project progress and to discuss their concerns.

11. Some of the natural habitat will be destroyed during the removal of the sediment from the dam.

Response: this potential impact will be thoroughly addressed as part of the ESIA.

12. One participant commented that (i) there are approximately 10 metres of sediment accumulated within the reservoir based on his observation (ii) the dam structure is leaking in a number of places and these leaks are being contained by the use of galvanised corrugated iron sheets (iii) he had been advised that sediment should be pumped from the dam and

identifying proper locations to place sediment (temporarily) is likely to be an issue. He also observed that prior to the Mujahedeen (before 1992) the sediment accumulation was regularly monitored and sediment flushed from the dam on an annual basis. This approach directly affected downstream communities. (iv) He also requested that the capacity support project include training for skilled laborers currently responsible for running the plant.

13. Why is it necessary to notify Pakistan of proposed project?

Response: In order to comply with riparian laws (international waterways)

14. DABS should assign a group of national experts to study various options to remove sediment and identify the most appropriate. If DABS requests a company, selected through a bidding process, to do this, the selected company may propose only one option which would not be ideal.

Response: the successful company will be expected to conduct rigorous analysis of a range of options and make a recommendation based on that analysis.

15. If the decision is taken to raise the height of the dam then some villages will be submerged. In which case:

(a) is it logical to provide electricity to some affected villages before a decision is taken on how to optimise power generation?

(b) will the sites selected for relocation also have access to electricity?

Response: These are very important issues. The planned social survey and the ESIA's together with the technical feasibility studies will clarify which villages will be directly affected and identify relocation sites - should those be necessary. Communities and local government will be kept informed throughout these studies.

16. Mr Nangialai Miakhail, DABS' Director of Planning closed the meeting by thanking participants for their contribution and requesting that any final comments on both documents should be sent to DABS by 19 March.

List of Participants

Shekeeb Nessar	Chief Operations Officer, DABS (part)
Nangialai Miakhil	Director Planning, DABS
Ahmad Shah Atayee	Budget Officer, Ministry of Finance
Hamidullah Faizi	Budget Officer, Ministry of Finance
Eng. Sayed Ahmad	Safety Manager, DABS
Sher Agha	Community representative
Abdullelah Rasooli	Professor, Kabul Polytechnic University
Abdul Refi Ghayour (NEPA)	ESIA expert, National Environment Protection Agency
Eng Sayed Yahya Zewari	Sustainable Development , NEPA
Saheb Gul Alfridi	Director Cascade, DABS
Fatih Khan	Chief Engineer, ActionAid
Mr Abdul Baqi	Freelance Engineer/Vocational Training
Eng. Ahmad Abdullah	Head of Planning, Ministry of Energy and Water
M. Akran- Laweer	Assistant Manager, MEW
Eng. Jawad Noori	Safeguards, NHRP, DABS
Eng. Ramattullah Safi	Safeguards, NHRP, DABS
Amir Khan	Administrative and Marketing, DABS
Eng. Nasir Ahmad	Electrical Engineer, DABS
Zabihullah Gihyasi	Electrical Engineer, DABS
Abdul Hameed Quraishi	World Bank TTL, DABS Planning and Capacity Support project
Afsana Afshar	World Bank Power Engineer
Hafiza Yazdani	World Bank Gender Specialist
Yasin Noori	World Bank Social Development Specialist
Obaidullah Hidayat	World Bank Environmental Specialist
Elizabeth McCall	World Bank Social Development Consultant

ANNEX 15: Environmental, Health, and Safety Guidelines for Electric Power Transmission and Distribution

Introduction

The Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry specific examples of Good International Industry Practice (GIIP)¹. When one or more members of the World Bank Group are involved in a project, these EHS Guidelines are applied as required by their respective policies and standards. These industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors. For complex projects, use of multiple industry-sector guidelines may be necessary. A complete list of industry-sector guidelines can be found at:

www.ifc.org/ifcext/enviro.nsf/Content/EnvironmentalGuidelines.

The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. Application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them.

The applicability of the EHS Guidelines should be tailored to the hazards and risks established for each project on the basis of the results of an environmental assessment in which site specific variables, such as host country context, assimilative capacity of the environment, and other project factors, are taken into account. The applicability of specific technical recommendations should be based on the professional opinion of qualified and experienced persons.

When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent. If less stringent levels or measures than those provided in these EHS Guidelines are appropriate, in view of specific project circumstances, a full and detailed justification for any proposed alternatives is needed as part of the site-specific environmental assessment. This justification should demonstrate that the choice for any alternate performance levels is protective of human health and the environment.

Applicability

The EHS Guidelines for Electric Power Transmission and Distribution include information relevant to power transmission between a generation facility and a substation located within an electricity grid, in addition to power distribution from a substation to consumers located in residential, commercial, and industrial areas. Annex A provides a summary of industry sector activities. This document is organized according to the following sections:

¹ Defined as the exercise of professional skill, diligence, prudence and foresight that would be reasonably expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally. The circumstances that skilled and experienced professionals may find when evaluating the range of pollution prevention and control techniques available to a project may include, but are not limited to, varying levels of environmental degradation and environmental assimilative capacity as well as varying levels of financial and technical feasibility.

Section 1.0 — Industry-Specific Impacts and Management
Section 2.0 — Performance Indicators and Monitoring
Section 3.0 — References and Additional Sources
Annex A — General Description of Industry Activities

1.0 Industry-Specific Impacts and Management

The following section provides a summary of EHS issues associated with electric power transmission and distribution that occur during the construction and operation phases of a facility, along with recommendations for their management. Additional recommendations for the management of environmental issues during the construction and decommissioning phases of power transmission and distribution systems are provided in the General EHS Guidelines. Examples of the impacts addressed in the General EHS Guidelines include:

- Construction site waste generation;
- Soil erosion and sediment control from materials sourcing areas and site preparation activities;
- Fugitive dust and other emissions (e.g. from vehicle traffic, land clearing activities, and materials stockpiles);
- Noise from heavy equipment and truck traffic;
- Potential for hazardous materials and oil spills associated with heavy equipment operation and fueling activities.

1.1 Environmental

Environmental issues during the construction phase of power transmission and distribution projects specific to this industry sector include the following:

- Terrestrial habitat alteration
- Aquatic habitat alteration
- Electric and magnetic fields
- Hazardous materials

Terrestrial Habitat Alteration

The construction and maintenance of transmission line rights-of way, especially those aligned through forested areas, may result in alteration and disruption to terrestrial habitat, including impacts to avian species and an increased risk of forest fires.

Construction of Right-of-Way ²

Right-of-way construction activities may transform habitats, depending on the characteristics of existing vegetation, topographic features, and installed height of the transmission lines. Examples of habitat alteration from these activities includes fragmentation of forested habitat; loss of wildlife habitat, including for nesting; establishment of non-native invasive plant species; and visual and auditory disturbance due to the presence of machinery, construction workers, transmission towers, and associated equipment.³

² Also known as a “wayleave” or “easement” in some countries, but referred to as right-of-way for the purposes of these Guidelines.

³ Alteration of terrestrial habitat for construction of transmission and distribution projects may also yield benefits for wildlife such as the creation of protective nesting, rearing, and foraging habitat for certain species; the establishment of travel and foraging corridors for ungulates and other large mammals; and nesting and perching opportunities for large bird species atop transmission towers and associated infrastructures. California Energy Commission (2005).

⁴ Considering potential for electrical interference with telecommunication lines and railway lines due to mutual induction

Recommended measures to prevent and control impacts to terrestrial habitats during construction of the right-of-way include:

- Site transmission and distribution rights-of-way, access roads, lines, towers, and substations to avoid critical habitat through use of existing utility and transport corridors for transmission and distribution, and existing roads and tracks for access roads, whenever possible;⁴
- Installation of transmission lines above existing vegetation to avoid land clearing;
- Avoidance of construction activities during the breeding season and other sensitive seasons or times of day;
- Revegetation of disturbed areas with native plant species;
- Removal of invasive plant species during routine vegetation maintenance (see right-of-way maintenance section below);
- Management of construction site activities as described in relevant sections of the General EHS Guidelines

Right-of-Way Maintenance

Regular maintenance of vegetation within the rights-of-way is necessary to avoid disruption to overhead power lines and towers. Unchecked growth of tall trees and accumulation of vegetation within rights-of-way may result in a number of impacts, including power outages through contact of branches and trees with transmission lines and towers; ignition of forest and brush fires; corrosion of steel equipment; blocking of equipment access; and interference with critical grounding equipment.

Regular maintenance of rights-of-way to control vegetation may involve the use of mechanical methods, such as mowing or pruning machinery that may disrupt wildlife and their habitats, in addition to manual hand clearing and herbicide use. Vegetation management should not eradicate all vegetation, but aim to maintain trees and plant growth that may negatively affect infrastructure at a level that is under an economically-damaging threshold. Excessive vegetation maintenance may remove unnecessary amounts of vegetation resulting in the continual replacement of successional species and an increased likelihood of the establishment of invasive species.

Recommended measures to prevent and control impacts from right-of-way vegetation maintenance include:

- Implementation of an integrated vegetation management approach (IVM). The selective removal of tall-growing tree species and the encouragement of low-growing grasses and shrubs is the common approach to vegetation management in transmission line rights-of-way. Alternative vegetation management techniques should be selected based on environmental and site considerations including potential impacts to non-target, endangered and threatened species;⁵
- Removal of invasive plant species, whenever possible, cultivating native plant species;
- Scheduling activities to avoid breeding and nesting seasons for any critically endangered or endangered wildlife species;
- Observing manufacturer machinery and equipment guidelines, procedures with regard to noise, and oil spill prevention and emergency response;
- Avoiding clearing in riparian areas;
- Avoiding use of machinery in the vicinity of watercourses.

⁵ Mowing with heavy-duty power equipment may be used to control growth of ground covers and prevent the establishment of trees and shrubs in the right-of way. Herbicides, in combination with mowing, may control fast-growing weedy species that have a potential to mature to heights over those permitted within the right-of-way. Trimming and pruning may be utilized at the boundaries of rights-of-way to maintain corridor breadth and prevent the encroachment of tree branches. Hand removal or removal of vegetation, while labor intensive, may be used in the vicinity of structures, streams, fences, and other obstructions which make the use of machinery difficult or dangerous.

An integrated approach to vegetation management may indicate that use of herbicides is the preferred approach to control fast-growing vegetation within transmission and distribution rights-of-way. In this case, the following guidance on herbicide application, storage, and handling should be considered.

If herbicides (in this sector, herbicides are the most common type of pesticide used) application is warranted, they should be managed to avoid their migration into off-site land or water environments (see Pesticides under the Hazardous Materials Section).

Forest Fires

If underlying growth is left unchecked, or slash from routine maintenance is left to accumulate within right-of-way boundaries, sufficient fuel can accumulate that may promote forest fires.

Recommended measures to prevent and control risk of forest fire include:

- Monitoring right-of-way vegetation according to fire risk;⁶
- Removing blow down and other high-hazard fuel accumulations;
- Time thinning, slashing, and other maintenance activities to avoid forest fire seasons;
- Disposal of maintenance slash by truck or controlled burning ⁷. Controlled burning should adhere to applicable burning regulations, fire suppression equipment requirements, and typically must be monitored by a fire watcher;
- Planting and managing fire resistant species (e.g. hardwoods) within, and adjacent to, rights-of-way;
- Establishing a network of fuel breaks of less flammable materials or cleared land to slow progress of fires and allow fire fighting access.

Avian and Bat Collisions and Electrocutions

The combination of the height of transmission towers and distribution poles and the electricity carried by transmission and distribution lines can pose potentially fatal risk to birds and bats through collisions and electrocutions.⁸ Avian collisions with power lines can occur in large numbers if located within daily flyways or migration corridors, or if groups are traveling at night or during low light conditions (e.g. dense fog).⁹ In addition, bird and bat collisions with power lines may result in power outages and fires.

Recommended prevention and control measures to minimize avian and bat collisions and electrocutions include ¹⁰:

- Aligning transmission corridors to avoid critical habitats(e.g. nesting grounds, heronries, rookeries, bat foraging corridors, and migration corridors);
- Maintaining 1.5 meter (60-inch)11 spacing between energized components and grounded hardware or, where spacing is not feasible, covering energized parts and hardware;

6 As an example, the British Columbia Transmission Corporation (BCTC) maintains a Wildfire Risk Management System (WRMS) that classifies wildfire risk and provides a variety of corresponding mitigation measures. See (Blackwell et al., 2004).

7 Controlled burning should only be performed after considering potential impacts to air quality and according to the local air quality management requirements.

8 Birds and bats may be electrocuted by power lines in one of three ways: i) Simultaneously touching an energized wire and a neutral wire; ii) Simultaneously touching two live wires; and iii) Simultaneously touching an energized wire and any other piece of equipment on a pole or tower that is bonded to the earth through a ground wire. Raptor Protection Video Group (2000)

9 Larger species (e.g. hawks, falcons, owls, vultures, cranes, egrets, and ravens) are at particular risk of simultaneously touching two wires or components while flying due to their long wingspans. Anderson (1991)

¹⁰ Further information is available from Avian Power Line Interaction Committee (2005) and the U.S. Fish and Wildlife Service (2005).

¹¹ Manville (2005)

- Retrofitting existing transmission or distribution systems by installing elevated perches, insulating jumper loops, placing obstructive perch deterrents (e.g. insulated "V's"), changing the location of conductors, and / or using raptor hoods;¹²
- Considering the installation of underground transmission and distribution lines in sensitive areas (e.g. critical natural habitats);
- Installing visibility enhancement objects such as marker balls, bird deterrents, or diverters.¹³

Aquatic Habitat Alteration

Power transmission and distribution lines, and associated access roads and facilities, may require construction of corridors crossing aquatic habitats that may disrupt watercourses and wetlands, and require the removal of riparian vegetation. In addition, sediment and erosion from construction activities and storm water runoff may increase turbidity of surface watercourses.

Recommended measures to prevent and control impacts to aquatic habitats include:

- Site power transmission towers and substations to avoid critical aquatic habitat (e.g. watercourses, wetlands, and riparian areas), as well as fish spawning habitat, and critical fish over-wintering habitat;
- Maintaining fish access when road crossings of watercourses are unavoidable by utilizing clear span bridges, open-bottom culverts, or other approved methods;
- Minimizing clearing and disruption to riparian vegetation;
- Management of construction site activities as described in the relevant sections of the **General EHS Guidelines**.

Marine Habitat Alteration

Transmission across ocean stretches may require use of submarine transmission cables on the ocean floor. Submarine cables are also occasionally used to transmit high-voltage power across long stretches of water to islands and other locations that are inaccessible by conventional techniques. Cables are installed using a cable-laying vessel and a remotely operated, underwater vehicle. Issues associated with marine habitat alteration include disruption to intertidal vegetation (e.g. eelgrass), coral reefs, and marine life, including marine mammals, and sedimentation resulting in turbidity and reductions in water quality.

Recommended measures to prevent and control impacts to marine habitats include:

- Locating and siting cable routes, and shore access, to avoid critical marine habitats (e.g. breeding grounds and eelgrass) and coral reefs;
- Burying submarine cables when traversing sensitive intertidal habitat;
- Monitoring cable laying path for presence of marine mammals;
- Avoiding laying submarine cable during fish and marine mammals breeding periods, calving periods, and spawning seasons.

Electric and Magnetic Fields

Electric and magnetic fields (EMF) are invisible lines of force emitted by and surrounding any electrical device (e.g. power lines and electrical equipment). Electric fields are produced by voltage and increase in strength as the voltage increases. Electric field strength is measured in volts per meter (V/m). Magnetic fields result from the flow of electric current and increase in strength as the current increases. Magnetic fields are measured in units of gauss (G) or tesla (T), where 1T equals 10,000G.

¹² California Energy Commission (2005)

¹³ Several studies have found that bird diverters that are installed to increase the visibility of power lines reduce collision rates considerably. Crowder and Rhodes (1999).

Electric fields are shielded by materials that conduct electricity, and other materials, such as trees and building materials. Magnetic fields pass through most materials and are difficult to shield. Both electric and magnetic fields decrease rapidly with distance. Power frequency EMF typically has a frequency in the range of 50 – 60 Hertz (Hz), and is considered Extremely Low Frequency (ELF). ¹⁴

Although there is public and scientific concern over the potential health effects associated with exposure to EMF (not only high voltage power lines and substations, but also from everyday household uses of electricity), there is no empirical data demonstrating adverse health effects from exposure to typical EMF levels from power transmissions lines and equipment. ¹⁵

However, while the evidence of adverse health risks is weak, it is still sufficient to warrant limited concern. ¹⁶

Recommendations applicable to the management of EMF exposures include:

- Evaluating potential exposure to the public against the reference levels developed by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). ^{17,18} Average and peak exposure levels should remain below the ICNIRP recommendation for General Public Exposure ;¹⁹
- Considering siting new facilities so as to avoid or minimize exposure to the public. Installation of transmission lines or other high voltage equipment above or adjacent to residential properties or other locations intended for highly frequent human occupancy, (e.g. schools or offices) should be avoided;
- If EMF levels are confirmed or expected to be above the recommended exposure limits, application of engineering techniques should be considered to reduce the EMF produced by power lines, substations, or transformers.

Examples of these techniques include:

- o Shielding with specific metal alloys ²⁰
- o Burying transmission lines²¹
- o Increasing height of transmission towers
- o Modifications to size, spacing, and configuration of conductors

Hazardous Materials

Hazardous materials in this sector include insulating oils / gases (e.g. Polychlorinated Biphenyls [PCB] and sulfur hexafluoride [SF₆]), and fuels, in addition to chemicals or products for wood preservation for poles and associated wood construction material. The use of herbicides for right-of-way vegetation maintenance is discussed in the above section on ‘Right-of- Way Maintenance .

Insulating Oils and Fuels

Highly-refined, mineral insulating oils are used to cool transformers and provide electrical insulation between live components. They are typically found in the largest quantities at electrical substations

¹⁴ National Institutes of Environmental Health Sciences (2002)

¹⁵ International Commission on Non-Ionizing Radiation Protection(ICNIRP) (2001); International Agency for Research on Cancer (2002); U.S. National Institute of Health (2002); Advisory Group to the Radiation Protection Board of the UK (2001), and U.S. National Institute of Environmental Health Sciences (1999)).

¹⁶ U.S. National Institute of Environmental Health Sciences (2002)

¹⁷ ICNIRP is a non-governmental organization formally recognized by the World Health Organization (WHO), which published the “Guidelines for Limiting Exposure to Time-varying Electric, Magnetic, and Electromagnetic Fields” following reviews of all the peer-reviewed scientific literature, including thermal and non-thermal effects. The standards are based on evaluations of biological effects that have been established to have health consequences. The main conclusion from the WHO reviews is that exposures below the limits recommended by the ICNIRP international guidelines do not appear to have any known consequence on health.

¹⁸ An additional source of information is the Institute of Electrical and Electronics Engineers. See IEEE (2005).

¹⁹ The ICNIRP exposure guidelines for General Public Exposure are listed in Section 2.1 of this Guideline.

²⁰ This is effective for reduction of electric field exposure, but not for reduction of magnetic field exposure.

²¹ Ibid.

and maintenance shops. Sulfur Hexafluoride (SF₆) may also be used as a gas insulator for electrical switching equipment and in cables, tubular transmission lines, and transformers. SF₆ may be used as an alternative to insulating oils. However, the use of SF₆, a greenhouse gas with a significantly higher global warming potential (GWP) than CO₂, should be minimized. In cases the gas is used for applications involving high voltages (>350 KV), equipment with a low leakage- rate (<99 percent) should be used.

Liquid petroleum fuels for vehicles and other equipment may also be used and stored at transmission and distribution projects. Recommendations for prevention and control of hazards associated with spill prevention, emergency response, clean-up, and contaminated soil remediation are addressed in the General EHS Guidelines.

Polychlorinated Biphenyls (PCB) were widely used as a dielectric fluid to provide electrical insulation, although their use has been largely discontinued due to potential harmful effects on human health and the environment. Recommendations for the management of PCB include:

- Replacing existing transformers and other electrical equipment containing PCB, and ensuring appropriate storage, decontamination, and disposal of contaminated units;
- Prior to final disposal, retired transformers and equipment containing PCB should be stored on a concrete pad with curbs sufficient to contain the liquid contents of these containers should they be spilled or leaked. The storage area should also have a roof to prevent precipitation from collecting in the storage area. Disposal should involve facilities capable of safely transporting and disposing of hazardous waste containing PCB;²²
- Surrounding soil exposed to PCB leakage from equipment should be assessed, and appropriate removal and / or remediation measures should be implemented, as addressed in the section on contaminated soil in the **General EHS Guidelines**.

Wood Preservatives

The majority of wooden utility poles are treated with pesticide preservatives to protect against insects, bacteria, and fungi, and to prevent rot. The preservatives most commonly used for power poles are oil-based pesticides such as creosote, pentachlorophenol (PCP), and chromated copper arsenate (CCA). Use of these preservatives is being limited in some countries due to their toxic effects on the environment. While in use, poles may leach preservatives into soils and groundwater, however, levels are highest directly beside poles and decrease to within normal levels at approximately 30 centimeters (cm) distance from the pole.²³ The most significant potential environmental impacts occur at specialized wood treatment facilities if not managed appropriately.

Poles should be pretreated at an appropriate facility to ensure chemical fixation and prevent leaching, and to impede the formation of surface residues at the right-of-way²⁴. Further information is available in the EHS Guidelines for Sawmilling and Wood-based Products.

Recommended measures to prevent and control the impacts of wood preservatives at the point of use include:

- Evaluating the cost and benefit of using alternative pole materials (e.g. steel, concrete, and fiberglass);
- Consider use of alternative preservatives(e.g. copper azote);

²² For a complete discussion on the identification and management of PCB in this industry sector, please see the UNEP publication "PCB Transformers and Capacitors: From Management to Reclassification and Disposal" (2002).

Available at: <http://www.chem.unep.ch/pops/pdf/PCBtranscap.pdf>

²³ Zagury et al. (2003)

- Undertake appropriate disposal of used poles. Landfill facilities should be capable of handling wastes that may have chemical leaching properties. Disposal through incineration or through recycling should consider associated air emissions and secondary product residues of preservative chemicals.

Pesticides

Pesticide use should be established as part of an Integrated Pest Management (IPM) strategy and a documented Pest Management Plan (PMP). The following stages should be considered when designing and implementing an IPM strategy, giving preference to alternative pest management strategies, with the use of synthetic chemical pesticides as a last option.

Alternatives to Pesticide Application - The following alternatives to pesticides should be considered:

- Provide those responsible for deciding on pesticides application with training in pest identification, weed identification, and field scouting;
- Use mechanical weed control and / or thermal weeding;
- Support and use beneficial organisms, such as insects, birds, mites, and microbial agents, to perform biological control of pests.
- Protect natural enemies of pests by providing a favorable habitat, such as bushes for nesting sites and other original vegetation that can house pest predators;
- Use animals to graze areas and manage plant coverage;
- Use mechanical controls such as traps, barriers, light, and sound to kill, relocate, or repel pests.

Pesticide Application - If pesticide application is warranted, users should take the following precautions:

- Train personnel to apply pesticides and ensure that personnel have received applicable certifications or equivalent training where such certifications are not required;²⁵
- Review the manufacturer's directions on maximum recommended dosage or treatment, as well as published reports on using the reduced rate of pesticide application without loss of effect, and apply the minimum effective dose;
- Apply pesticides based on criteria (e.g. field observations, weather data, time of treatment, and dosage) and maintain a pesticide logbook to record such information;
- Avoid the use of pesticides that fall under the World Health Organization Recommended Classification of Pesticides by Hazard Classes 1a and 1b;
- Avoid the use of pesticides that fall under the World Health Organization Recommended Classification of Pesticides by Hazard Class II if the project host country lacks restrictions on distribution and use of these chemicals, or if they are likely to be accessible to personnel without proper training, equipment, and facilities to handle, store, apply, and dispose of these products properly;
- Avoid the use of pesticides listed in Annexes A and B of the Stockholm Convention, except under the conditions noted in the convention²⁶;
- Use only pesticides that are manufactured under license and registered and approved by the appropriate authority and in accordance with the Food and Agriculture Organization's (FAO) International Code of Conduct on the Distribution and Use of Pesticides²⁷;

²⁵ Examples of certification schemes are provided by the US EPA (2006), which classifies pesticides as either "unclassified" or "restricted" and requires workers that apply unclassified pesticides to be trained according to the Worker Protection Standard (40 CFR Part 170) for Agricultural Pesticides. It further requires restricted pesticides to be applied by or in the presence of a certified pesticide applicator.

²⁶ The Stockholm Convention on Persistent Organic Pollutants (2001) controls the use of the following POPs-pesticides: Aldrin, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene, Mirex, and Toxaphene.

²⁷ FAO (2002)

- Use only pesticides that are labeled in accordance with international standards and norms, such as the FAO Revised Guidelines for Good Labeling Practice for Pesticides ²⁸ ;
- Select application technologies and practices designed to reduce unintentional drift or runoff only as indicated in an IPM program, and under controlled conditions;
- Maintain and calibrate pesticide application equipment in accordance with manufacturer's recommendations;
- Establish untreated buffer zones or strips along water sources, rivers, streams, ponds, lakes, and ditches to help protect water resources.

Pesticide Handling and Storage - Contamination of soils, groundwater, or surface water resources, due to accidental spills during transfer, mixing, and storage of pesticides should be prevented by following the hazardous materials storage and handling recommendations presented in the General EHS Guidelines. Additional recommendations include the following:

- Store pesticides in their original packaging, in a dedicated, dry, cool, frost-free, and well aerated location that can be locked and properly identified with signs, with access limited to authorized people ²⁹. No human or animal food may be stored in this location. The store room should also be designed with spill containment measures and sited in consideration of potential for contamination of soil and water resources;
- Mixing and transfer of pesticides should be undertaken by trained personnel in ventilated and well lit areas, using containers designed and dedicated for this purpose.
- Containers should not be used for any other purpose (e.g. drinking water). Contaminated containers should be handled as hazardous waste, and should be treated accordingly. Disposal of containers contaminated with pesticides should be done in a manner consistent with FAO guidelines and with manufacturer's directions;³⁰
- Purchase and store no more pesticide than needed and rotate stock using a “first-in, first-out” principle so that pesticides do not become obsolete. ³¹ Additionally, the use of obsolete pesticides should be avoided under all circumstances; ³² A management plan that includes measures for the containment, storage and ultimate destruction of all obsolete stocks should be prepared in accordance to guidelines by FAO and consistent with country commitments under the Stockholm, Rotterdam and Basel Conventions. Collect rinse water from equipment cleaning for reuse (such as for the dilution of identical pesticides to concentrations used for application);
- Ensure that protective clothing worn during pesticide application is either cleaned or disposed of in an environmentally responsible manner
- Implement groundwater supply wellhead setbacks for pesticide application and storage
- Maintain records of pesticide use and effectiveness.

1.2 Occupational Health and Safety

Most occupational health and safety issues during the construction, operation, maintenance, and decommissioning of electric power distribution projects are common to those of large industrial facilities, and their prevention and control is discussed in the General EHS Guidelines. These impacts include, among others, exposure to physical hazards from use of heavy equipment and cranes; trip and fall hazards; exposure to dust and noise; falling objects; work in confined spaces; exposure to hazardous materials; and exposure to electrical hazards from the use of tools and machinery.

28 FAO (2000)

29 FAO (2002)

30 See FAO Guidelines for the Disposal of Waste Pesticides and Pesticide Containers.

31 See FAO (1996).

32 See the FAO publication on pesticide storage and stock control manual. FAO Pesticide Disposal Series No. 3 (1996)

Occupational health and safety hazards specific to electric power transmission and distribution projects primarily include:

- Live power lines
- Working at height
- Electric and magnetic fields
- Exposure to chemicals

Live Power Lines

Workers may be exposed to occupational hazards from contact with live power lines during construction, maintenance, and operation activities. Prevention and control measures associated with live power lines include:

- Only allowing trained and certified workers to install, maintain, or repair electrical equipment;
- Deactivating and properly grounding live power distribution lines before work is performed on, or in close proximity, to the lines;
- Ensuring that live-wire work is conducted by trained workers with strict adherence to specific safety and insulation standards. Qualified or trained employees working on transmission or distribution systems should be able to achieve the following ³³:
 - Distinguish live parts from other parts of the electrical system
 - Determine the voltage of live parts
 - Understand the minimum approach distances outlined for specific live line voltages
 - Ensure proper use of special safety equipment and procedures when working near or on exposed energized parts of an electrical system.
- Workers should not approach an exposed energized or conductive part even if properly trained unless:
 - The worker is properly insulated from the energized part with gloves or other approved insulation; or,
 - The energized part is properly insulated from the worker and any other conductive object; or,
 - The worker is properly isolated and insulated from and other conductive object (live-line work).
- Where maintenance and operation is required within minimum setback distances, specific training, safety measures, personal safety devices, and other precautions should be defined in a health and safety plan. (Table 2 in Section 2.2 provides recommended minimum safety setbacks for workers);
- Workers not directly associated with power transmission and distribution activities who are operating around power lines or power substations should adhere to local legislation, standards, and guidelines relating to minimum approach distances for excavations, tools, vehicles, pruning, and other activities;
- Minimum hot stick distances may only be reduced provided that the distance remaining is greater than the distance between the energized part and a grounded surface

³³ Further information is available from the Occupational Safety and Health Administration (OSHA). Available at:

Working at height on poles and structures

Workers may be exposed to occupational hazards when working at elevation during construction, maintenance, and operation activities. Prevention and control measures for working at height include:

- Testing structures for integrity prior to undertaking work;
- Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrester workers, among others;
- Establishment of criteria for use of 100 percent fall protection (typically when working over 2 meters above the working surface, but sometimes extended to 7 meters, depending on the activity). The fall protection system should be appropriate for the tower structure and necessary movements, including ascent, descent, and moving from point to point;
- Installation of fixtures on tower components to facilitate the use of fall protection systems;
- Provision of an adequate work-positioning device system for workers. Connectors on positioning systems should be compatible with the tower components to which they are attached;
- Hoisting equipment should be properly rated and maintained and hoist operators properly trained;
- Safety belts should be of not less than 16 millimeters (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts should be replaced before signs of aging or fraying of fibers become evident;
- When operating power tools at height, workers should use a second (backup) safety strap;
- Signs and other obstructions should be removed from poles or structures prior to undertaking work;
- An approved tool bag should be used for raising or lowering tools or materials to workers on structures.
-

Electric and magnetic fields

Electric and magnetic fields (EMF) are described in Section 1.1 above. Electric utility workers typically have a higher exposure to EMF than the general public due to working in proximity to electric power lines.³⁵ Occupational EMF exposure should be prevented or minimized through the preparation and implementation of an EMF safety program including the following components:

- Identification of potential exposure levels in the workplace, including surveys of exposure levels in new projects and the use of personal monitors during working activities;
- Training of workers in the identification of occupational EMF levels and hazards;
- Establishment and identification of safety zones to differentiate between work areas with expected elevated EMF levels compared to those acceptable for public exposure, limiting access to properly trained workers;

Implementation of action plans to address potential or confirmed exposure levels that exceed reference occupational exposure levels developed by international organizations such as the International Commission on Non-Ionizing Radiation Protection (ICNIRP), and the Institute of Electrical and Electronics Engineers (IEEE)³⁶. Personal exposure monitoring equipment should be set to warn of exposure levels that are below occupational exposure reference levels (e.g. 50 percent).

³⁴ A 1994 study estimated the average exposure of electrical workers (including jobs in electric utilities and other industries) in Los Angeles, California to be 9.6 milligauss (mG), compared to 1.7 mG for workers in other fields (S. J. London et al., 1994).

³⁵ Although detailed studies of workplace exposure to EMF in the United States, Canada, France, England, and several Northern European countries have found no conclusive link or correlation between typical occupational EMF exposure and adverse health effects, some studies have identified a possible association between occupational exposure to EMF and cancer, such as brain cancer (U.S. National Institute of Environmental Health Sciences 2002) indicating there is evidence to warrant limited concern.

³⁶ The ICNIRP exposure guidelines for Occupational Exposure are listed in Section 2.2 of this Guideline.

Action plans to address occupational exposure may include limiting exposure time through work rotation, increasing the distance between the source and the worker, when feasible, or the use of shielding materials.

Exposure to chemicals

Occupational exposures to chemicals in this sector primarily include handling of pesticides (herbicides) used for right-of-way maintenance, and exposure to PCB in transformers and other electrical components.

Pesticides

Occupational health and safety impacts associated with pesticides are similar to those for other hazardous substances, EHS Guidelines. Potential exposures to pesticides include dermal contact and inhalation during their storage, preparation and application. The effect of such impacts may be increased by climatic conditions such as wind, which may increase the chance of unintended drift, or high temperatures, which may deter the use of personal protective equipment (PPE).

Recommendations specific to the use of pesticides include:

- Train personnel to apply pesticides and ensure that personnel have received the necessary certifications,³⁷ or equivalent training where such certifications are not required;
- Respect post-treatment intervals to avoid operator exposure during reentry to crops with residues of pesticides;
- Ensure hygiene practices are followed (in accordance to FAO and PMP) to avoid exposure of family members to pesticides residues.

PCBs

Maintenance shops and other facilities, and activities may involve potential contact with PCB or PCB-contaminated machinery. Recommendations for chemical exposure, including PCB, are addressed in the General EHS Guidelines.³⁸

1.2 Community Health and Safety

Community health and safety impacts during the construction and decommissioning of transmission and distribution power lines are common to those of most large industrial facilities, and are discussed in the General EHS Guidelines. These impacts include, among others, dust, noise, and vibration from construction vehicle transit, and communicable diseases associated with the influx of temporary construction labor. In addition to general health and safety standards outlined in the General EHS Guidelines, the operation of live power distribution lines and substations may generate the following industry-specific impacts:

- Electrocutation
- Electromagnetic interference
- Visual amenity
- Noise and Ozone
- Aircraft Navigation Safety

³⁷ The US EPA classifies pesticides as either “unclassified” or “restricted.” All workers that apply unclassified pesticides must be trained according to the Worker Protection Standard (40 CFR Part 170 and 171) for Agricultural Pesticides. Restricted pesticides must be applied by or in the presence of a certified pesticide applicator. For more information, see <http://www.epa.gov/pesticides/health/worker.htm>

³⁸ Further information on the management of occupational exposure to PCB can be obtained at UNEP publication “PCB Transformers and Capacitors: From Management to Reclassification and Disposal” (2002) available at: <http://www.chem.unep.ch/pops/pdf/PCBtranscap.pdf>

Electrocution

Hazards most directly related to power transmission and distribution lines and facilities occur as a result of electrocution from direct contact with high-voltage electricity or from contact with tools, vehicles, ladders, or other devices that are in contact with high-voltage electricity. Recommended techniques to prevent these hazards include:

- Use of signs, barriers (e.g. locks on doors, use of gates, use of steel posts surrounding transmission towers, particularly in urban areas), and education / public outreach to prevent public contact with potentially dangerous equipment;
- Grounding conducting objects (e.g. fences or other metallic structures) installed near power lines, to prevent shock.

Electromagnetic Interference

The corona of overhead transmission line conductors and high frequency currents of overhead transmission lines may result in the creation of radio noise. Typically, transmission line rights-of way and conductor bundles are created to ensure radio reception at the outside limits remains normal. However, periods of rain, sleet or freezing rain sharply increases the streaming corona on conductors and may affect radio reception in residential areas near transmission lines.

Visual Amenity

Power transmission and distribution are necessary to transport energy from power facilities to residential communities, but may be visually intrusive and undesirable to local residents. To mitigate the visual impact of power distribution projects, the following mitigation measures should be implemented:

- Extensive public consultation during the planning of power line and power line right-of-way locations;
- Accurate assessment of changes in property values due to power line proximity;
- Siting power lines, and designing substations, with due consideration to landscape views and important environmental and community features;
- Location of high-voltage transmission and distribution lines in less populated areas, where possible;
- Burying transmission or distribution lines when power must be transported through dense residential or commercial areas.

Noise and Ozone

Noise in the form of buzzing or humming can often be heard around transformers or high voltage power lines producing corona. Ozone, a colorless gas with a pungent odor, may also be produced. Neither the noise nor ozone produced by power distribution lines or transformers carries any known health risks. ³⁹

The acoustic noise produced by transmission lines is greater with high voltage power lines (400-800 kilo volts [kV]) and even greater with ultra-high voltage lines (1000 kV and higher) ⁴⁰. Noise from transmission lines reaches its maximum during periods of precipitation, including rain, sleet, snow or hail, or as the result of fog. The sound of rain typically masks the increase in noise produced by the transmission lines, but during other forms of precipitation (e.g. snow and sleet) and fog, the noise from overhead power lines can be troubling to nearby residents.

Measures to mitigate this impact may be addressed during project planning stages to locate rights-of-way away from human receptors, to the extent possible. Use of noise barriers or noise canceling acoustic devices should be considered as necessary.

³⁹ WHO (1998)

Aircraft Navigation Safety

Power transmission towers, if located near an airport or known flight paths, can impact aircraft safety directly through collision or indirectly through radar interference. Aircraft collision impacts may be mitigated by:

- Avoiding the siting of transmission lines and towers close to airports and outside of known flight path envelopes;
- Consultation with regulatory air traffic authorities prior to installation;
- Adherence to regional or national air traffic safety regulations;
- Use of buried lines when installation is required in flight sensitive areas.

2.0 Performance Indicators and Monitoring

2.1 Environment

Emissions and Effluent Guidelines

The power transmission and distribution sector does not typically give rise to significant air emissions or effluents. Where dust or potentially contaminated water runoff exists, site operations should comply with principles and guidelines described in the General EHS Guidelines to meet ambient air and surface water guidelines. Table 1 lists exposure limits for general public exposure to electric and magnetic fields published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP)

Table 1. ICNIRP exposure limits for general public exposure to electric and magnetic fields

Frequency	Electric Field (V/m)	Magnetic Field (μ T) 50 Hz
50 HZ	5000	100
60 Hz	4150	83

Source: ICNIRP (1998) : “Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz).”

Environmental Monitoring

Environmental monitoring programs for this sector should be implemented to address all activities that have been identified to have potentially significant impacts on the environment during normal operations and upset conditions. Environmental monitoring activities should be based on direct or indirect indicators of emissions, effluents, and resource use applicable to the particular project. Monitoring frequency should be sufficient to provide representative data for the parameter being monitored

Monitoring should be conducted by trained individuals following monitoring and record-keeping procedures and using properly calibrated and maintained equipment. Monitoring data should be analyzed and reviewed at regular intervals and compared with the operating standards so that any

necessary corrective actions can be taken. Additional guidance on applicable sampling and analytical methods for emissions and effluents is provided in the General EHS Guidelines

2.2 Occupational Health and Safety

Occupational Health and Safety Guidelines

Occupational health and safety performance should be evaluated against internationally published exposure guidelines, of which examples include the Threshold Limit Value (TLV®) occupational exposure guidelines and Biological Exposure Indices (BEIs®) published by American Conference of Governmental Industrial Hygienists (ACGIH),⁴¹ the Pocket Guide to Chemical Hazards published by the United States National Institute for Occupational Health and Safety (NIOSH),⁴² Permissible Exposure Limits (PELs) published by the Occupational Safety and Health Administration of the United States (OSHA),⁴³ Indicative Occupational Exposure Limit Values published by European Union member states,⁴⁴ or other similar sources.

Additional indicators specifically applicable to electric power transmission and distribution activities include the minimum safe working distances for trained employees listed in Table 2 and the ICNIRP exposure limits for occupational exposure to electric and magnetic fields listed in Table 3.

Table 2. Alternating Current Minimum Working Distances for Trained Employees ^a	
Voltage Range (phase to phase – Kilovolts)	Minimum Working and Clear Hot Stick Distance (meters)
2.1 to 15	0.6
15.1 to 35	0.71
35.1 to 46	0.76
46.1 to 72.5	0.91
72.6 to 121	1.01
138 to 145	1.06
161 to 169	1.11
230 to 242	1.5
345 to 362	2.13 ^b
500 to 552	3.35 ^b
700 to 765	4.5 ^b

^a OSHA
^b NOTE: From 345-362 kv., 500-552 kv., and 700-765 kv., the minimum working distance and the minimum clear hot stick distance may be reduced provided that such distances are not less than the shortest distance between the energized part and a grounded surface.

41 Available at: <http://www.acgih.org/TLV/> and <http://www.acgih.org/store/>

42 Available at: <http://www.cdc.gov/niosh/npq/>

43 Available at:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992

44 Available at: http://europe.osha.eu.int/good_practice/risks/ds/oel/

Table 3. ICNIRP exposure limits for occupational exposure to electric and magnetic fields.

Frequency	Electric Field (V/m)	Magnetic Field (μ T)
50 Hz	10,000	500
60 Hz	8300	415

Source: ICNIRP (1998) : “Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)

Accident and Fatality Rates

Projects should try to reduce the number of accidents among project workers (whether directly employed or subcontracted) to a rate of zero, especially accidents that could result in lost work time, different levels of disability, or even fatalities. Facility rates may be benchmarked against the performance of facilities in this sector in developed countries through consultation with published sources (e.g. US Bureau of Labor Statistics and UK Health and Safety Executive) ⁴⁵.

Occupational Health and Safety Monitoring

The working environment should be occupational hazards relevant to the specific project. Monitoring should be designed and implemented by accredited professionals⁴⁶ as part of an occupational health and safety monitoring program. Facilities should also maintain a record of occupational accidents and diseases and dangerous occurrences and accidents. Additional guidance on occupational health and safety monitoring programs is provided in the **General EHS Guidelines**.

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⁴⁵ Available at: <http://www.bls.gov/iif/> and <http://www.hse.gov.uk/statistics/index.htm>

⁴⁶ Accredited professionals may include Certified Industrial Hygienists, Registered Occupational Hygienists, or Certified Safety Professionals or their equivalent.

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Annex A: General Description of Industry Activities

Electric power transmission is the bulk transfer of electricity from one place to another. Typically, power transmission occurs between a power generation facility and a substation located in close proximity to consumers. Power distribution refers to the delivery of electricity from a substation to consumers located in residential, commercial, and industrial areas.

Due to the large amount of power involved, transmission-level voltages are generally considered those above 110 kilo volts (kV). Voltages between 110 kV and 33 kV are typically considered sub-transmission voltages, but are occasionally used for long transmission systems with light loads. Voltages of less than 33 kV are representative of distribution projects.

Electric power transmission and distribution systems are often located in conjunction with highway, road, and other rights-of way to minimize both costs and disturbance to ecological, socioeconomic and cultural resources. Other factors, including land value, view sheds, archaeological resources, geotechnical hazards, accessibility, parks and other important features also contribute to the locating of transmission and distribution line right-of-way alignments.

Project development and construction activities typically include access road construction or upgrade, site preparation and development, removal of select vegetation, if any, and the grading and excavation of soils for the installation of structural foundations and site utilities. These activities are typical of industrial development projects and depend upon a number of factors, including topography, hydrology, and desired site layout, among others. Activities generally associated with the development and construction of power transmission and distribution include land clearing for transmission line rights-of way, access road construction or upgrade, equipment staging areas, substation construction and / or upgrade, site preparation, and installation of transmission line components (e.g. transmission towers and substations, access and maintenance roads).

Operational activities may include maintenance of access to the transmission lines, towers and substations (e.g. low-impact trails or new / improved access roads) and vegetation management. Upgrades and maintenance for existing infrastructure are a consideration throughout the life cycle of the project.

Power transmission and distribution facilities are decommissioned when they are obsolete, damaged (e.g. by corrosion) or replaced due to increased power demand. Many power facilities are replaced with new or updated equipment at the same site or right-of-way. Decommissioning activities depend on the proposed subsequent use of the site, environmental sensitivities (e.g. natural grasslands) and the project specifics (e.g. aboveground or underground power lines). Activities may include demolition and removal of the installed infrastructure (e.g. transmission towers, substations, aboveground and underground utilities and road decommissioning) and reclamation of the project site, including ground stabilization and re-vegetation.

The following sections provide a description of the facilities and activities associated with the construction and operation of power transmission and distribution projects. Facilities and activities common to transmission and distribution projects, including right-of-way management and substations, are outlined below as well as facilities unique to transmission and distribution systems, including towers and utility poles. Typical components of a power transmission and distribution project are illustrated in Figure A-1.

Power Transmission Systems

The electric power transmission system is often referred to as a grid. Redundant paths and lines are provided so that power can be routed from any generation facility to any customer area through a variety of routes, based on the economics of the transmission path and the cost of power. The

redundant paths and lines also allow power flow to be rerouted during planned maintenance and outages due to weather or accidents.

Power transmission occurs via a system of aboveground power lines and towers located between a power plant and a substation. When crossing a dense residential area is necessary, transmission and distribution systems can also be buried within underground conduits. Though the transmission efficiency is typically lower for underground lines and installation and maintenance are costly, locating the transmission system underground reduces impacts on land values, visual aesthetics, and vegetation loss. Submarine cables placed on the ocean floor by cable-laying boats are also occasionally used to transmit high-voltage power across long stretches of water to islands and other locations that are inaccessible by conventional techniques. Submarine cables are typically self-contained and fluid filled to provide insulation over long distances.

Regional transmission grids consist of several large transmission systems connected by substations that are designed to transport electricity as efficiently as possible. Transmission networks can cover thousands of kilometers and encompass tens of thousands of towers. Energy is typically transmitted using a three-phase alternating current (AC) that is more efficient than a single phase. Energy is generally produced at low voltage (up to 30 kV) at a generating facility and then stepped up by a power station transformer to a higher voltage in order to reduce resistance and reduce the percentage of energy lost during transmission over a long distance. For long distance transmission, electricity is usually transmitted at voltages between 110 and 1200 kV. At extremely high voltages, such as those over 2000 kV, corona discharge⁴⁷ energy losses associated with charged conductors can offset benefits of reductions in energy losses from reduced resistance. Over long distances, energy can also be transmitted via High Voltage

Direct Current (HVDC). In these instances, smaller losses in energy and lower construction costs offset the need to construct conversion stations at each end of the transmission line to convert the direct current to alternating current for use in distribution systems.

Transmission towers or pylons are utilized to suspend high voltage overhead power lines. These systems usually transmit three-phase electric power (the common method for transmission of high-voltage lines of over 50 kV) and, therefore, are designed to carry three (or multiples of three) conductors. One or two ground conductors are often added at the top of each tower for lightning protection. Transmission towers can be constructed from steel, concrete, aluminum, wood and reinforced plastic. The wire conductors on high-voltage lines are generally constructed of aluminum, or aluminum reinforced with steel strands. Each transmission tower or support structure must be constructed to support the load imposed on it by the conductors. As a result, foundations for transmission towers can be large and costly, particularly in areas where ground conditions are poor such as in wetlands. Guy wires can be utilized to stabilize transmission towers and resist some of the force of the conductors.

There are three main types of transmission towers or pylons used in a transmission system. Suspension towers support straight stretches of a transmission line. Deviation towers are located at points where a transmission line changes direction. Terminal towers are located at the end of overhead transmission lines where they connect with substations or underground cables.

The most common type of transmission tower or pylon used for high-voltage power lines is a steel lattice structure. Tubular steel monopoles are also used to support high or medium voltage transmission lines, usually in urban areas. Transmission towers constructed of a steel framework can be used to support lines of all voltages, but they are most often used for voltages over 50 kV. Lattice towers can be assembled on the ground and erected by cable (which uses a large laydown area), erected by crane, or, in inaccessible areas, by helicopter. Transmission towers typically range from approximately 15 to 55 meters (m) in height.⁴⁸

⁴⁷ A corona discharge is an electrical discharge resulting from the ionization of the air around the conductor, generally generating power losses and ambient noise.

⁴⁸ United Kingdom Parliament (2001).

Wooden transmission towers consisting of single poles, Hframes, or shapes resembling A's or V's are also commonly used to support high-voltage transmission lines. Wooden towers are limited by the height of available trees (approximately 30m), and generally carry voltages of between 23 kV and 230 kV, lower than those carried by steel lattice transmission towers ⁴⁹. Aluminum towers are often used in remote areas where they can be transported in and installed by helicopter. Towers of reinforced plastic are now available, but high costs currently restrict their use.

For underground transmission lines, the three wires used to transmit the three-phase power must be located in individual pipes or conduits. These pipes are covered in thermal concrete and surrounded in thermal backfill materials. Underground cable conduit systems typically require trenches of at least 1.5m in depth and width. Due to difficulties in dissipating heat, underground conduits are typically not used for high-voltage transmission lines over 350 kV.⁵⁰

Power Distribution Systems

Prior to consumer use, high-voltage energy is stepped down to a lower voltage aboveground line for use in sub-transmission or distribution systems. Distribution lines typically vary from 2.5 to 25 kV. Finally, the energy is transformed to low voltage at the point of residential or commercial use. This voltage ranges between 100 and 600 volts (V) depending on country and customer requirements. Power distribution poles (or utility or telephone poles) are typically constructed of wood, but steel, concrete, aluminum and fiberglass are also used. Distribution poles are typically spaced no further than 60m apart and are at least 12m in height ⁵¹. Wooden distribution poles are limited by the height of available trees (approximately 30m).

Electrical Substations

Electrical substations are stations along the electricity transmission and distribution system that transform voltage from low to high or high to low using transformers. Step-up transformers are used to increase voltage while decreasing current, while step-down transformers are used to decrease voltage while increasing current. Substations typically consist of one or more transformers, as well as switching, control, and protection equipment. Substations can be located in fenced enclosures, underground, or inside buildings.

There are two main types of electrical substations. Transmission substations contain high-voltage switches used to connect together high-voltage transmission lines or to allow specific systems to be isolated for maintenance. Distribution substations are used to transfer power from the transmission system to the distribution system. Typically at least two transmission or sub transmission lines enter a distribution substation, where their voltage is reduced to a value suitable for local consumption. Distribution substations can also be used to isolate faults in either the transmission or distribution systems. Complicated distribution substations containing high-voltage switching, switching, and backup systems are often located within large urban centers.

Rights-of-Way Management

Both aboveground transmission and distribution projects require rights-of-way to protect the system from windfall, contact with trees and branches, and other potential hazards that may result in damage to the system, power failures, or forest fires. Rights of- way are also utilized to access, service, and inspect transmission and distribution systems. Underground distribution lines also require rights-of-way where excavation is prohibited or strictly monitored, construction activity is limited, and access to lines can be achieved if necessary. Being larger systems transmitting higher voltages, transmission

⁴⁹ Great River Energy (2006)

⁵⁰ American Transmission Company (2005)

⁵¹ United States of America Department of Defense (2004)

rights-of-way are typically much larger than those for distribution systems and, consequently, require more extensive management.

Right-of-ways widths⁵² for transmission lines range from 15 to 100m depending on voltage and proximity to other rights-of-way (typical range is between 15 and 30m)⁵³. For overhead distribution power lines up to 35 kV, 12 to 24m corridors (6 to 12m on each side) are recommended⁵⁴. Access roads are often constructed in conjunction, or within, transmission line rights-of way to provide access for maintenance and upkeep of the system.

To avoid disruption to overhead power lines and towers, regular maintenance of vegetation within the rights-of-way is required. Unchecked growth of tall trees and accumulation of vegetation within rights-of-way can result in a number of impacts including power outages through contact of branches and trees with transmission lines and towers; ignition of forest and brush fires; corrosion of steel equipment; blocking of equipment access; and interference with critical grounding equipment.

Regular maintenance and clearing of rights-of-way prevents natural forest succession and the establishment and growth of tall trees. Typically, tall trees of approximately 4.5m or more are not permitted within aboveground rights-of-way.⁵⁵ Underground rights-of-way have far fewer vegetation restrictions, though trees with deep tap roots that may interfere with duct banks are usually prohibited from being grown within the right-of-way. Vegetation maintenance of rights-of-way can be accomplished with the following measures.

Mowing with heavy-duty power equipment is used to control growth of ground covers and prevent the establishment of trees and shrubs in the right-of-way. Herbicides, in combination with mowing, control fast-growing weedy species that have a potential to mature to heights over those permitted within the right-of-way. Trimming and pruning is utilized at the boundaries of rights-of-way to maintain corridor breadth and prevent the encroachment of tree branches. Hand removal or removal of vegetation is costly and time-consuming but is often used in the vicinity of structures, streams, fences, and other obstructions making the use of machinery difficult or dangerous.

⁵² For example, Duke Energy prescribes 21-meter minimum rights-of-way for voltages between 44 and 100 kV, 46-meter minimum rights-of-way for voltages of 230 kV, and 61-meter minimum rights-of-way for voltages of 525 kV (Duke Energy, 2006).

⁵³ Santee Cooper (2002)

⁵⁴ United States of America Department of National Defense (2004)

⁵⁵ Georgia Power (2006)

Figure A-1: Electric Power Transmission and Distribution

