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NEPAL

POWER DEVELOPMENT PROJECT

**POLICY FRAMEWORK
FOR ENVIRONMENTAL IMPACT ASSESSMENT
FOR PROJECTS UNDER THE POWER DEVELOPMENT FUND
(including Process Guidance)**

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**POLICY FRAMEWORK
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List of Abbreviations

ACRP	Acquisition, Compensation and Rehabilitation Plan
BP	Bank Policy (World Bank)
EDC	Electricity Development Centre
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
GP	Good Practices (World Bank)
HMGN	His Majesty's Government of Nepal
IPDP	Indigenous Peoples Development Plan (see VCDP)
IEE	Initial Environmental Examination
MOPE	Ministry of Population and Environment
MOWR	Ministry of Water Resources
NEA	Nepal Electricity Authority
NEIAG93	National Environmental Impact Assessment Guidelines 1993
NGO	Non Governmental Organization
OD	Operational Directives
OP	Operational Policy (World Bank)
PAF	Project Affected Family
PCP	Public Consultation Process
PDF	Power Development Fund
R&R	Resettlement and Rehabilitation
RAP	Resettlement Action Plan
ROW	Right-of-Way
S&R	Screening and Ranking
SD	Social Development
SPAF	Seriously Project Affected Family
ToR	Terms of Reference
VCDP	Vulnerable Communities Development Plan
WECS	Water and Energy Commission Secretariat
WRS	Water Resources Sector

The Definition of Terms

- a. **Compensation** means payment in cash or in kind of the replacement value of the acquired property.
- b. **Compensation Fixation Committee** means the committee established under Land Acquisition Act, 1977 to determine the replacement value and the compensation rates for property acquired under the Act.
- c. **Grievance Redress Committee** means the committee established by HMGN and/or the sub-project to hear the complaints or the grievances of PAFs or PAPs regarding resettlement, including acquisition of land, houses and other assets, and loss of livelihoods caused by the project.
- d. **Land Acquisition** means the process whereby a person is compelled by a public agency to alienate all or part of the land he/she owns or possesses, to the ownership and possession of that agency, for public purpose in return for a consideration.
- e. **PAF** means Project Affected Family, and consists of the members of a household, including elderly dependents and minor children (under 18 years of age) residing under one roof and operating as a single economic unit, who are adversely affected by the Project, or any of its components. Major children, over 18 years of age, shall be separately entitled to rehabilitation benefits, even if they live with their parents but will not be eligible for separate housing or compensation for properties held by other members of their shared household.
- f. **PAP** means Project Affected Person, and includes any person or persons who, on account of the execution of the project, or any of its components or sub-projects or parts thereof, would have their:
 - (i) right or title in any house, land (including residential, agricultural and grazing land) or any other fixed or movable assets acquired or possessed, in full or in part, permanently or temporarily; or
 - (ii) business, occupation, work, place of residence or habitat adversely affected; or
 - (iii) standard of living adversely affected.
- g. **Policy Framework** refers to the overall Policy Framework for Environmental Impact Assessment, and Resettlement and Rehabilitation of Project Affected Families for all power generation, as well as transmission and distribution systems falling under the Power Development Fund (PDF) Project. The Policy Framework describes the process and methods for assessing the environmental and social impacts including adverse impacts on, benefits to, and role of local communities in the Project, and the compensation, relocation and rehabilitation of people who have been adversely affected by the Project.
- h. **RAP** means the detailed resettlement action plans prepared for sub-projects, where the number SPAFs exceeds 25.
- i. **Rehabilitation** means the compensatory measures provided under the Policy Framework other than payment of the replacement value of acquired property.

j. **Relocation** means the physical relocation of PAFs from their pre-Project place of residence.

k. **Replacement Cost or Replacement Value**

- (i) For agricultural land : It is the pre project market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of land preparation to levels similar to those of the affected land, plus the cost of any registration and transfer taxes;
- (ii) For land in urban areas : It is the pre-project market value of land of equal size and use, with similar or improved public infrastructure facilities and services and located in the vicinity of the affected land, plus the cost of registration and transfer taxes;
- (iii) For houses and other structures : It is the market cost of the materials to build a replacement structure with an area and quality similar to or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site , plus the cost of any labor and contractor's fees, plus the cost of any registration and transfer taxes.

In determining the replacement cost, depreciation of the asset and the value of salvage materials are not taken into account, nor is the value of benefits to be derived from the project deducted from the valuation of an affected asset.

l. **Resettlement** means all the measures taken to mitigate any and all adverse impacts of the Project on PAF's property and/or livelihoods, including compensation, relocation (where relevant), and rehabilitation.

m. **Right of Way Easement** or ROW easement means the process whereby the owner or possessor of land is compelled to permit the continued use of a part of his land as a means of transit of persons or services, in return for a consideration, but where the ownership of the land remains unchanged.

n. **SPAF** is a family who loses over 25 % of its total landholding or whose land is reduced to an uneconomic holding (less than 5.0 Katha), or who is being relocated. For determining the number of SPAF's acquisition of houses shall be treated separately, each house acquired being equivalent to one SPAF.

o. **Sub-project** means each of the power generation or transmission and distribution schemes to be financed, wholly or in part, by the PDF.

p. **VCDP** means the Vulnerable Communities Development Plan for vulnerable groups including ethnic minorities and tribal groups, as well as other groups living below the poverty line, in the project impact area.

NEPAL
POWER DEVELOPMENT PROJECT

Policy Framework for Environmental Impact Assessment
for Projects under the Power Development Fund
(including Process Guidance)

1.1 Introduction: Projects eligible for funding from the Power Development Fund should be either: (i) a generation project in the range of 10 to 300 MW identified through the screening and ranking exercise under the Medium Hydropower Study¹ or by NEA or private promoters using screening criteria acceptable to IDA or (ii) a generation project below 10 MW identified by NEA or private promoters using screening criteria acceptable to IDA; or (iii) an isolated rural power system sub-project or, (iv) a transmission and distribution project. Each project will undergo an Environmental Impact Assessment (EIA) in compliance with Nepal's licensing requirements in accordance with the prevailing Environment Protection Act, 2053 (1997) and Environmental Protections Rules, 2054(1997) and if the (sub) project is to be funded from IDA resources it should also meet World Bank requirements² as stated in this process guidance. Transmission projects will be subject to similar EIA requirements. The purpose of the EIA is to identify environmental and social consequences of the proposed sub-projects, in order to :

- a) ensure the identification of potential environmental issues and social concerns early in the implementation of a proposed facility to incorporate necessary safeguards in project design, and determine appropriate mitigation and compensation measures;
- b) minimize risks to the proponent;
- c) avoid delays and extra costs which may subsequently arise due to unanticipated environmental and social problems;
- d) ensure that the concerns of residents and affected communities are addressed, and if required, plans are made for the resettlement and rehabilitation (R&R) of those residing in the selected sites for development; and
- e) identify the potential for maximizing environmental resources management and socio-economic benefits to local communities within the scope of the sub-project.

1.2 Coverage of EIA: The EIA should cover physical, biological, socio-economic and cultural issues that are likely to arise during construction and operation activities as appropriate and will include, but not be limited to, an assessment of the environmental impacts relating to the:

- a) Physical, geological stability and geographical suitability, and public acceptability of the proposed facility and associated supporting infrastructure;
- b) construction activities;

¹The Process carried out by the Medium Hydropower Study Project, implemented by the Nepal Electricity Authority under the World Bank financed Power Sector Efficiency Project. It covers the hydropower projects of capacity ranging from 10 to 300 MW nation-wide.

²Projects funded by other donors will be expected to comply with their respective requirements, as well as Nepal's.

- c) design, mitigation and compensation options to be employed;
- d) management control and operational practices to be employed;
- e) potential for accidents and failures to be foreseen and mitigated;
- f) monitoring and ensuring long term sustainability of sub-project;
- g) the socio-economic status of communities residing in the project affected area;
- h) land use and land tenure in the project affected area, including the barrage/dam site, reservoir, power station, access road, transmission and distribution network, and associated supporting infrastructure, as applicable;
- i) the human settlements in the project affected area;
- j) the livelihoods of persons affected by land acquisition and by the economic impact of the project on the surrounding area;
- k) mitigation measures to be employed to minimize losses and compensate, resettle and rehabilitate affected communities and restore livelihoods;
- l) the adverse social effects of a large influx of labor on local communities, particularly on women and disadvantaged people;
- m) the positive benefits which would accrue to local communities from the proposed development;
- n) the possible role of the local community participating in, and contributing to project sustainability; and
- o) Decommissioning and rehabilitation activities.

The Terms of Reference (ToR) for EIA, in accordance with the Environment Protection Regulations, 2054 (EPR97) will cover but not be limited to, the above listed concerns depending upon the nature of the project. Additional concern or issues may be added as appropriate.

1.2.1 The EIA report will contain an Environmental Management Plan (EMP) which will incorporate Acquisition Compensation Rehabilitation Plan (ACRP) as well as Resettlement Action Plan (RAP) or Vulnerable Community Development Plan (VCDP), where applicable.

Nepal's Legal Framework

1.3 Legal Framework for EIA: An umbrella national-level Environment Act, viz. Environment Protection Act, 2053 (EPA97), received parliamentary approval in September 1996 and was brought into force on June 24, 1997. The Act is under enforcement along with the Environment Protection Rules, 2054 (1997), which prescribe various legal measures against all potential sources of air, water and land degradation adversely impacting the natural and social environments. A legally mandatory Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA) of development proposals in all sectors including that of water resources is one of the highlights of this legislation. The Regulation also prescribes a schedule of development proposals, for all relevant sectors, under two categories, one clearly requiring an IEE and another requiring a full scale EIA. The legislation clearly mentions that any proposal may undergo the EIA process in case the IEE study recommends to do so. In addition, the legislation ensures public participation in different stages of the environmental assessment process. In view of these provision in the Regulation, the Ministry of Population and

Environment has started a process of setting up a Task Force to build upon the recently revised National EIA Guidelines 1993 (NEIAG93) and thereby to formulate in accord with the EPA97 and EPR97 a common guideline, which will basically cover the procedural aspects of carrying out an IEE or EIA. Once this common guidelines is approved by HMG/Nepal, it will supercede and replace all the sectoral EIA Guidelines, currently effective or under preparation.

The scope of EIA, as made mandatory by the legislation, also covers socio-economic and cultural aspect, as one of the major environmental components to address the pertinent social concerns on case by case approach.

1.4 Other provisions for environmental management of power projects in Nepal are currently set out in the following Acts and Regulations for the power sector:

- Hydropower Development Policy (1992)
- Water Resources Act (1992)
- Electricity Act (1992)
- Electricity Regulation (1993)
- Land Acquisition Act (1977)

Experience shows that the proposal to be operated in the forest and protected areas should duly consider the Forests Act, 1993 and the National Parks and Wildlife Conservation Act, 1973.

World Bank Requirements

1.5 Requirements for EIA: Projects financed with IDA resources normally need to comply with World Bank Operational Policies. World Bank OP 4.01 provides an indication of projects normally considered A and B. Thermal and Hydropower development and Dams and Reservoir projects are normally considered as Category "A" projects and as such require a full EA (EIA). Transmission projects can be Category A or B, depending on the anticipated severity of their impact. As an "A", transmission projects will require a full EIA. As a "B", they will only require a more moderate environmental analysis. The World Bank's OP and BP 17.5 mandates public information and consultation for such projects.

1.6 Other World Bank Policies and Guidelines that need to be specially considered for the EIA of projects under the PDF are:

- OP/BP/GP 4.01, Environmental Assessment³
- OP/BP/GP 4.02, Environmental Action Plans
- OP/BP/GP 4.04, Natural Habitats
- OP 4.07, Water Resource Management
- OP 4.37, Safety of Dams
- Operational policies on Involuntary Resettlement

³ In general HMG/N will follow the Bank's policies and procedures mentioned above. But in case of the International Water Ways where bilateral agreements and understandings exist HMG/N will deal this matter accordingly.

1.7 Requirements for Social Impact Assessment (SIA): Each sub-project financed with IDA resources under the PDF will undergo a EIA, comprised of a Social Baseline and detailed Social Impact Studies including a census of affected persons and inventory of affected properties. Where an Acquisition, Compensation and Rehabilitation Plan (ACRP) is required, specific provisions will be made for mitigating losses and restoring livelihoods, and for ensuring the establishment of an independent grievance mechanisms. Should the total number of SPAFs for a (sub) project be 25 or greater the ACRP (which the World Bank refer to as RAP) will need to be cleared by the World Bank. Should the number of SPAFs be lesser than the above threshold, the ACRP (RAP) may be cleared by the borrower following the principles laid down in the policy framework. In either event, the borrower shall be responsible to ensure that resettlement outcomes, i.e. satisfactory relocation and restoration of livelihoods, are attained. In all cases if vulnerable people are affected by the sub-project (including ethnic minorities, tribals, or other particularly vulnerable groups), a Vulnerable Communities Development Plan (VCDP) will need to be prepared and cleared by the Bank, in addition to the ACRP. The World Bank Policies and Guidelines that need to be complied with for the EIA of sub-projects under the PDF are :

- OD 4.20 Indigenous Peoples
- OD 4.30 Involuntary Resettlement

Compatibility of HMGN and World Bank Requirements

1.8 EIA: The screening criteria in EPR97 has made it mandatory for electricity generating schemes above 5 MW (thermal projects above 1 MW) to undergo a full EIA, whereas, the lesser capacity projects require an IEE only. Therefore, when these lesser capacity projects are submitted for PDF financing, these would need to undergo a full EIA only if the IEE identifies serious adverse impacts and recommends for EIA study.

In addition to land utilized for project construction activities, The Electricity Regulation 2033 B.S. (1993) prescribes a buffer zone around the transmission towers and transmission/distribution lines. The width of the buffer zone varies with the voltage but there being a prohibition on house construction and land utilization within the buffer zone, this land also has to be acquired for each sub project.

1.9 SIA: World Bank OD 4.30 is generally consistent with the basic objectives of Nepal's Land Acquisition Act, 2053 (1977). Several gaps in Nepal's overall policy framework for resettlement and rehabilitation however need to be addressed.. The ToR for EIA, as provided by the EPR97, will accommodate specific socio-economic issues in order to address the afore-mentioned gaps. The ToR will be based on the project location and the impacts on those local social, cultural and economic characteristics.

1.10 The IDA requirements will be covered under the EMP section of the EIA report following the format prescribed by the EPR97 and will incorporate, where necessary, a VCDP and an acceptable Resettlement and Rehabilitation Action Plan where involuntary resettlement of 25 or more families occurs.

PDF Process

1.11 **EIA Process**: The following process mentioned herein would meet both Nepal and IDA requirements. EDC is the licensing agency on behalf of HMGN's Ministry of Water Resources (MOWR). The project proponent is responsible for preparing the EIA and submitting it to EDC. The EDC through MOWR will forward EIA report to the Ministry of Population and Environment (MOPE), who on the basis of the EPA97 has responsibility for overseeing the EIA report including the process. The MOPE will provide both general and specific TOR and final clearances for the EIA reports with IDA approval if so required. Although measures may vary between projects, the five-step EIA process outlined below presupposes that the projects have undergone the Screening and Ranking (S&R) process to avoid projects with the most undesirable impacts.

The Five Steps of the EIA Process

Step 1: Scoping and Production of Terms of Reference

As per the provisions of the EPR 1997, and on information obtained through various sources including the Screening and Ranking process, the proponent shall translate the generic ToR for the EIA (see Attachment I) into a site specific one. A non-technical version, in Nepali and/or local language, should be disseminated and discussed with the local community representatives, including NGOs, and other relevant members of civil society. The proponent should conduct an assessment of environmental and social impacts using rapid appraisal techniques in consultation with them. Consultations with communities shall be guided by the Public Consultation Process outlined in paragraph 1.12 below. Following these discussions the proponent should revise the terms of reference and submit them to EDC. EDC will forward them to MOPE through MOWR for clearance. MOWR EDC will review and modify the ToR as required before recommending it to MOPE for approval.

Step 2: Conducting Study

The proponent should undertake the EIA study covering the issues spelt out in paragraph 1.2 above according to the approved ToR. Consultations with the communities will be guided by the Public Consultation Process outlined in paragraph 1.12 below.

Step 3: Compilation of Reports

Following the conclusion of the study, the proponent should prepare the report according to the agreed format (see paragraph 2.9) with due consideration on Schedule 6 of the EPR97. In general, the EIA report should include the Environmental Management Plan (EMP), which may include RAP or VCDP, as necessary, and other such specific plans. A draft report should be disseminated to the communities concerned as well as representative organizations and discussed with these groups; their concerns should be addressed when finalizing the report;

Step 4: Approval of Report

The final report will be submitted to EDC for review, who will forward it to MOPE through MOWR regarding clearance as per the provisions contained in the EPR.

In the course of evaluating the report, EDC/MOWR and MOPE may form a committee with representation of experts. The Committee or the experts may make field visits and hold public consultation, if required, to advise/make a decision on the EIA report. The MOPE could approve the report or seek additional information from the proponent and/or MOWR. The report will also be submitted to the World Bank for review and clearance if the preparation of an ACRP and or a VCDP is required for projects that are to be funded from IDA resources. Once the MOPE is satisfied with the EIA conclusions and recommendations, approval can be granted.

Step 5: Implementation

There will be continuous monitoring during (sub)project implementation and the operational phase by regulatory authorities or external monitors appointed and working on behalf of regulatory authorities. Participatory monitoring by community groups and appropriate representatives of civil society on common property resources will be seen as an integral part of the monitoring plan.

1.12 Public Consultation Process: A credible Public Consultation Process (PCP) is crucial during different stages of the study to the successful development of the project, including the preparation of an acceptable Environmental Management Plan (EMP) which will include, where necessary, an ACRP and a VCDP. The proponent should involve a Non Governmental Organization (NGO), if required, as part of the Consultant team to design and facilitate the implementation of a suitable consultation process. Based on this information the Proponent should continuously re-assess the PCP strategy as feedback is received from information dissemination and consultation. The Proponent by himself or through a consultant team should:

- a) identify the stakeholders - directly affected people, representative Community Based Organizations (CBOs) and NGOs, local media correspondents, traditional leaders, government agencies and local bodies, etc., and assemble them in a body that represents the stakeholders. The group should meet periodically during the process of the EIA study to discuss the emerging findings of the impact assessments;
- b) assist the representative group in preparing and disseminating public information in Nepali and/or a language that is understandable and accessible to the groups being consulted, including the types of impacts that may be anticipated, and the scope of the draft ToR for the EIA; *post study* on the summary of the draft EIA report, mitigation measures. Use may be made of non-technical brochures, local languages, leaflets, posters, briefings and presentations, public meetings (including visual aids), involvement of the media and provision of public access to the reports.
- c) assist the group in establishing mechanisms and conduits for consulting communities and representative NGOs when undertaking the steps and tasks described in the EIA ToR. These would include inputs into the scoping of the EIA ToR, conducting socio-economic and community opinion surveys, evaluating alternatives, formulating entitlement packages and drafting EMP (RAP/VCDP) for the final EIA report;
- d) keep a record of information and consultation activities - type of activity and mechanisms used, date and location, names of groups and individuals invited,

types of attendees, issues raised, responses given and the impact upon subsequent decisions; and

- e) track the progress of implementing EMP (RAP/VCDP) during facility development and operation through community monitoring activities.

1.13 Responsibility for EIA study: The responsibility for preparing the EIA report is that of the proponent. The proponent should hire required multi-disciplinary consultant teams to undertake necessary studies, consult with the community and compile the report. The reports will be submitted to MOPE for clearance through MOWR and, if considered for PDF financing, to IDA for review.

1.14 Monitoring: Monitoring of the implementation of the EIA recommendations will be carried out by MOWR. In addition, Environment Protection Act and Environment Protection Regulations makes the provision of Environment Inspector for compliance monitoring purposes which will be carried out by MOPE.

GENERIC TERMS OF REFERENCE FOR EIA

EPR97 contains a guide to formulate the Terms of Reference. The following information may also be helpful while developing the TOR for a specific proposal.

2.1 Name and address of the person/institution responsible for the preparation of the EIA report.

2.2 Introduction: State the purpose of the terms of reference, identify the project to be assessed, and explain the executing arrangements and responsibilities for the environmental impact assessment. Identify the sub-project with name and location/area to be assessed.

2.3 Scoping results of the scoping exercise carried out for the EIA study.

2.4 Background: This section would provide brief but pertinent background for the licensee's study team who will conduct the environmental assessment. This would typically include a brief description of the major physical components of the proposed project, the project activities and schedule, a statement on the need for it and the objectives it is intended to meet, the implementing agency, a brief history of the project (including alternatives considered), its current status and timetable, and the identities of any associated projects. If there are other significant projects HMGN or the private sector has in progress, or has planned within the region which may compete for the same resources, or projects that have parallel or overlapping impacts in the same ecosystem or watershed, they should also be identified here.

2.5 Objectives: This section will summarize the general scope of the environmental impact assessment and discuss its timing in relation to the processes of project preparation, design and construction.

2.6 Environmental Impact Assessment Requirements: This section should identify any regulations, quantitative or qualitative standards, or general guidelines which will govern the conduct of the EIA or influence the content of the report. They may include any or all of the following:

- Relevant HMGN laws and/or regulations
- HMGN standards for pollution control or abatement;
- Regional, district or municipal/village level environmental impact assessment regulations or other rules, if any, covering the implementation of mitigation programs that may be sectoral in nature and/or require the participation of such agencies or organizations; and

- Environmental impact assessment regulations of any other financing organizations involved in the project, e.g., IFC or World Bank Operational Directives

2.7. Study Area: This section would specify the boundaries of the study area for the assessment (e.g., the basin or river system and primary and secondary project impact areas). Maps should be provided and referred to in the Appendixes to the ToR. (For transmission projects specify the right-of-way (ROW) width and alignment of the corridor, and location of transmission substations, as well as support roads).

2.8. Scope of Work: In some cases, the tasks to be carried out by the EIA team will be known with sufficient certainty to be specified completely in the ToR. In other cases, information deficiencies need to be alleviated or specialized field studies or modeling activities performed first to assess impacts, in which case the EIA study team may be asked to define particular tasks in more detail and submit this to the licensee, who will arrange their review and approval. Otherwise the main tasks would include:

Task 1: Description of the Proposed Project

Provide a description of the relevant parts of the project, using maps (at appropriate scale) where necessary, and including the following information: location, general layout, size, capacity, etc.; pre-construction activities; construction activities; schedule; staffing and support; facilities and services; operation and maintenance activities; required off-site investments; and life-span.

(Note: if there are particular types of information appropriate in the description of the project category they would be specified here.)

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.

(Annotate or modify the lists below to show the critical information for this project category, or that which is irrelevant to it.)

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

(ii) 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.

(iii) Socio-cultural environment: population, Ethnic Vulnerable Group, Cropping Pattern and Major Crops, Religious and historical places, land acquisition and compensation.

Task 3: Legislative and Regulatory Considerations

Describe the pertinent regulations and standards governing environmental quality, health and safety, water resources strategy objectives; protection of sensitive areas, protection of endangered species, siting, land use control, etc. at international, national, regional, district, VDC and Ward levels.

(The ToR should specify those that are known and require the consultant to investigate for others. For example if the project impacts an area covered by an international convention, this should be indicated.)

Task 4: Determination of the Potential Impacts of the Proposed Project

In this analysis, distinguish between significant positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts. Identify impacts which are unavoidable or irreversible. Wherever possible, describe impacts quantitatively, in terms of environmental costs and benefits. Assign economic values when feasible. Characterize the extent and quality of available data, explaining significant information deficiencies and any uncertainties associated with predictions of impact. If possible, give the ToR for studies to obtain the missing information. (Identify the types of special studies likely to be needed for this project category.)

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 for the sectoral level, where applicable, reference should be made to HMGN's Screening and Ranking of hydropower projects, encompassing a sectoral EA. The concept of project-specific 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 an Environmental Management Plan.

Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Estimate the impacts and costs of those measures, and of the institutional and training requirements to implement them. Consider compensation to affected parties for impacts which cannot be mitigated. Prepare a management plan including proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures.

Mitigation actions would typically be presented in relation to four categories as follows:

Chart I: Environmental Impact Mitigation Actions

Type of Action	Description
Avoidance and Prevention	measures to redesign or relocate facilities, or planning project activities (scheduling, alternative construction methods, etc.) to avoid potentially significant adverse effects; and for prevention, adoption of health programs, public awareness, etc.
Mitigation	measures to reverse adverse impacts to accepted levels
Compensation	measures to compensate for unavoidable adverse environmental impacts which generally refer to monetary compensation for adverse impact on private property (to be covered in much greater detail by the EIA)
Residual Impacts	proposal and possible adoption of actions to further alleviate what are otherwise acceptable impacts (e.g., impacts that have already been mitigated to meet standards)

Task 7: Identification of Institutional Needs to Implement Environmental Impact Assessment Recommendations

Review the authority and capability of institutions at local, regional, and national levels and recommend steps to strengthen or expand them so that the management and monitoring plans in the environmental impact 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.

The ToR can be specific as to what is required for recommendations at the local, district and/or regional levels.

Task 8: Development of a Monitoring Plan

Prepare a detailed plan to monitor the 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 9: Assist in Inter-Agency Coordination and Public/NGO Participation

Assist in coordinating the environmental assessment with other government agencies, in obtaining the views of local NGOs and affected groups, and in keeping records of meetings and other activities, communications, and comments and their disposition. (The ToR should specify the types of activities; e.g., interagency scoping session, environmental briefings for project staff and interagency committees, support to environmental advisory panels, public forum.)

2.9. Report and Deliverables : The environmental impact assessment report should be concise and limited to significant environmental issues. The main text should focus on findings, conclusions and recommended actions, supported by summaries of the data collected and citations for any references used in interpreting those data. Detailed or un-interpreted data are not appropriate in the main text and should be presented in appendices or a separate volume. Unpublished documents used in the assessment may not be readily available and should also be assembled in an appendix. Organize the Environmental Impact Assessment report according to the Schedule 6 of the EPR97 incorporating the information given below:

- Executive Summary
- Introduction / Background
- Policy, Legal and Administrative Framework
- Description of the Proposed Project
- Description of the Environment: Baseline Information
- Significant Environmental Impacts
- Analysis of Alternatives
- Mitigation Measures
- Environment Management Plan
- Environmental Management and Training
- Monitoring Plan
- Auditing
- Conclusions and Recommendations
- List of References
- Appendices: In addition to the information as required under EPR, following information may also be included in the appendices:
 - Inter-Agency and Public/NGO Involvement
 - List of the people preparing the Environmental Assessment
 - Records of Inter-Agency and Public/NGO Communications
 - Maps, Data and Detailed Sheets
 - Field Questionnaires, Analysis results and Check lists
 - Unpublished Reference Documents
 - Relevant Photos

The ToR should specify the hard copy and electronic copy of all reports, appendixes maps, records, etc. be provided to EDC and the MOPE.

2.10. Study Team: Environmental assessment requires interdisciplinary analysis. Identify in this paragraph which specializations ought to be included in the team for the particular project category. This section would indicate how long each professional would be involved and which tasks they would provide input to.

2.11. Schedule: Specify dates for progress reviews, interim and final reports, and other significant events. Also specify an estimate of the cost of conducting the study.

2.12. Other Information: Include here lists of data sources, project background reports and studies, relevant publications, and other items to which the consultant's attention should be directed. Include a sample Table of Contents.

Terms of Reference for:
Environmental Review
for Planning, Construction and Maintenance
of Transmission Lines

Introduction:

1. Environmental reviews will be required for transmission line projects, in the form of detailed environmental screening criteria for route selection, assessment of general environmental issues, analysis of alternatives and techniques to mitigate the typical impacts expected along the routes. These analyses and conclusions will be reported in the project Environmental Impact Assessment (EIA). Local impacts that cannot be determined prior to the time of project preparation will be addressed in the EIA, outlining the actions to be taken during the survey, construction and operation phases. The decisions regarding final routing will be taken during the detailed engineering stage.

Reference documents:

2. Guidelines for mitigative strategies, and World Bank directives are given in the following documents:

- Electric power transmission systems, Environmental Sourcebook, World Bank Technical Paper No. 154;
- In case land is acquired, or is under dispute, relevant World Bank Operational Policies and HMG/N regulations would be followed.

Contents:

3. The Environmental review for Planning, Construction and Maintenance of Transmission Lines should include chapters as outlined below. No partial presentation or division into sub reports is acceptable.

Project Description
Policy, Legal and Administration
Environmental Issues
Alternatives
Route Selection Criteria and Mitigation Strategies
Disposal of Polychlorinated Biphenyls (PCB's)
Monitoring
Management and Training

Project description:

4. The project description should include maps and graphic presentations which display power line routing. The maps and graphic presentations should be of a quality to enable easy identification of potential impact areas.

Legal and administration:

5. The review should give a summary of the national, and local regulatory framework, and the relevant environmental standards (see references a through c). The status of the project's environmental clearances from HMG/N regulatory agencies should be presented, with corroborative documentation.

Environmental issues:

6. This section details the range of environmental impacts associated with transmission systems, switchyards, substations, rights of way, access roads, construction, operation and maintenance activities. All of these issues will be addressed during the conceptual design, and some (i through vi listed below) will be reassessed during detailed design and final route selection:

- i) transmission line rights of way and substation site impacts on land use: agricultural, forest areas, wetlands, wildlands;
- ii) habitat fragmentation and invasion of exotic vegetation species;
- iii) access roads in remote areas, increase in hunting, exploitation of forest resources, induced development due to new access corridors, human settlement and more extensive clearing;
- iv) clearing (erosion, loss of habitat) and control of vegetation in rights of ways, including mechanical and chemical (herbicide) clearing operations, (chemical contamination of site and rainfall runoff);
- v) impaired cultural or aesthetic resources because of visual impacts;
- vi) erosion during construction, and along access roads, substation and transmission tower sites;

Issues typically addressed during conceptual design only:

concurrency

- vii) potential electromagnetic frequency (EMF) radiation effects, radio noise and television interference, and audible noise along transmission line routes, exposure of substation operations personnel to potential EMF hazards;
- viii) aircraft hazards from transmission lines and towers;

- ix) public access to substations, towers and electrocution hazards.

Alternatives:

7. One of the most important considerations for reduction of negative environmental impacts is the evaluation of alternative routes and substation sites. This section will describe the route selection criteria to be used to avoid negative environmental impacts. Alternatives should be considered for mitigation of negative environmental impacts. A number of alternatives should be considered during project planning, and rationales discussed for selection of alternatives, including:

- no action
- careful selection of alternative routes and substation sites;
- alternative voltages;
- DC transmission lines (narrower rights of way);
- energy and load management plans to reduce the need for additional power;
- upgrading of existing facilities;
- alternative methods of construction;
- alternative transmission tower design and materials;
- alternative maintenance techniques and access road designs;

Mitigation strategies:

8. Other types of mitigation strategies to address the environmental issues listed above should be detailed:

- erosion control techniques for construction activities, maintenance of access roads, tower and substation sites; (Typical, conceptual engineering solutions should be included in the report ,suitable for the terrain crossed)
- revegetation for erosion control and restoration of resource values;
- restriction of public access, fencing and security of substations and towers, discontinuous right of way access roads;
- minimum clearances for mitigation of potential EMF effects, radio noise and television interference, and audible noise;

Disposal of Polychlorinated Biphenyls (PCB's):

9. The use of PCB's in electrical equipment was discontinued (in most countries) fairly recently, some of the existing power system electrical equipment may still contain PCBs. For any such component that have to be replaced, or incorporated as a component of the new project the following procedures should be followed:

- i) Review HMG/N (or international) regulations concerning the use, retrofitting, storage and disposal practices for PCB's and PCB electrical equipment.
- ii) State which of the existing system electrical equipment would be replaced, and if any of this equipment has been tested for PCB's.
- iii) Detail how PCB electrical equipment and PCB's would be tested or otherwise identified.
- iv) The report should detail an environmentally sound PCB management plan for safe storage and/or disposal of PCB electrical equipment. The PCB management plan should include specifications for safe handling practices, including personnel protective equipment and clothing, and the environmental guidelines should provide details of safe transfer and secure storage areas.

Monitoring:

10. A monitoring plan should be formulated to track the effectiveness of mitigation techniques, and address recognized problems in an appropriate and timely manner. This regular scheduled monitoring program would consist chiefly of visual inspections during construction and operation for:

- erosion along access roads, substation and transmission tower foundations;
- encroachment of settlements within rights of ways, encroachment of settlements within protected areas via transmission line access roads, exploitation of forest resources in protected areas via access roads;
- vegetation clearances below transmission lines, and invasion of exotic species along right of ways;
- transformer fluid leakage and spills;
- safe storage and disposal of PCB's

Management and training:

11. The EIA should discuss needs for institutional strengthening, such as additional staff and/or training in environmental issues.

12. Training should be carried out prior to the implementation phase of the project. Staff workers should have an understanding of the rationale for the mitigation and monitoring they would be implementing.

SOCIO-ECONOMIC AND CULTURAL COMPONENTS OF THE EIA PROCESS

A. Socio-Economic Baseline

3.1 Each sub-project being considered for PDF financing will conduct a systematic Socio-Economic Baseline study consisting of the following components:

- **socio-economic survey** of sample households to determine asset ownership and occupation patterns, pre-project incomes and living standards, livelihood strategies, and access to support services and production inputs (the socio-economic survey should cover a statistically relevant sample of households but should include all households whose houses are being acquired by the project);
- **land use survey**, including formal and informal tenure systems, ownership and use-rights, and management of common property resources, to determine access of different social strata to land and other productive resources;
- **community studies** describing social structure and social relations in project affected area, including inherent power relations, prevalent forms of social capital, caste and class structures, and access of special interest groups such as the poor, women, and other vulnerable groups to resources and social services;
- **institutional analysis** of formal and informal community organizations for resource management, conflict resolution and maintenance of social norms; and of local government institutions or other local organizations established by other agencies for resource management or development activities;
- **beneficiary consultations and focus group meetings** to determine local perceptions about the project and to ascertain local development needs and potentials;
- **rapid assessment of project impacts** to determine the extent and types of positive and negative impacts the sub-project is likely to have on the project affected area; this information will provide the basis for determining the need for a ACRP/VCDP or other SD measures;

3.2 These tools and methodologies help to develop a community profile and to understand the social context in the project affected area so as to be able to develop realistic, sustainable management plans which are acceptable to the local community. It is

recommended that wherever possible, socio-economic baseline studies employ participatory techniques to involve the affected community and local NGOs for data collection and analysis.

B. Social Impact Studies

3.3 The Socio-economic Baseline is followed by detailed social impact studies whose primary purpose is to quantify the type and extent of project impacts in order to prepare realistic socio-economic operational plans.

3.4 In practice, the census and inventory should be carried out simultaneously. In sub-projects where the number of PAFs is less than 200, or the number of SPAFs is less than 25, the census and inventory may even be combined with the collection of household socio-economic data for the social base line. The census and inventory should include at a minimum: (a) number of persons, main occupation and level of income; (b) number, type, and dimension of the houses; (c) number, quality, and area of all the residential plots; (d) number, category, type, and area of agricultural land held and to be lost by each PAF; (e) tenure status of agricultural land and, amount of rent paid by tenant/lessee, where applicable; (f) quantity, category, and dimension of all other fixed assets adversely affected; (g) productive assets lost as a percentage of total productive assets; (h) temporary damage to productive assets; (i) quantity, category, and quality of non-agricultural livelihood adversely affected; (j) quantity, type, and quality of community resources to be acquired.

C. Operationalizing Socio-Economic Development

3.5 Operational plans for SD should be based on the socio-economic baseline and the EIA studies and should include the participation strategies proposed for project implementation. The promoter will be responsible for preparation of an operational ACRP and VCDP. The ACRP will document implementation arrangements for resettlement including asset acquisition, compensation, relocation and rehabilitation of persons affected by loss of dwelling, land and other assets or livelihood. The VCDP will ensure that vulnerable communities residing in the project affected area and affected directly or indirectly by the project, are protected and provided development assistance in accordance with their own priorities.

3.6 If the sub-projects involve physical relocation of PAFs, or provision of replacement land, each sub-project will provide data on the location, area, type, and category of the replacement land available for residential and/or agricultural purposes. Care will be taken to ensure that the relocation site or replacement land as far as possible is in the vicinity of the PAF's previous location to avoid social dislocation and unrealistic division of the PAF's economic livelihood.

D. Implementation Arrangements

3.7 Schedule: In each sub-project, resettlement schedules will be coordinated with construction schedules. All resettlement activities arising out of the works to be implemented in a given year will be completed prior to the scheduled start-up date of those works on the respective sub-project, and prior to disbursements out of the proceeds of the Loan for activities related to the respective sub-project.

3.8 Complaints and Grievances: HMGN will create a Grievance Redress Committee at the sub-project level to address complaints and grievances pertaining to resettlement and social development and to pre-empt all disagreements being referred to the court. The Committee will involve administrative officers and representatives of local communities affected by the sub-project. Grievances related to any aspect of a sub-project will be handled through negotiations aimed at achieving consensus.

3.9 Amicable settlement between the PAF and the promoter will be first attempted at the sub-project level. If this first conciliation attempt fails, the case may be brought by either party to MOWR and then to MOPE, if necessary. If no resolution is arrived at, the PAFs or the promoter may involve elected representatives at the local and/or Provincial level to attempt conciliation.

3.10 If the case is not resolved at this level, the case may be submitted by either party to the civil court. The decision of the civil court will be binding to either parties.

E. Supervision and Monitoring

3.11 Resettlement activities in all sub-projects will be regularly supervised and monitored by MOWR. Internal monitoring will be carried out quarterly. An agency, recruited by MOWR for this purpose, will periodically carry out external monitoring and evaluation of resettlement and other SD activities in the sub-project. External monitoring will be done by an organization such as an academic or research institution, an NGO, or an independent consulting firm (see further paragraph 3.13). Funds for external monitoring will be provided under the Project. They will be identified and recruited by MOWR during the first year of Project implementation. Reports of the external monitor will be submitted to MOWR, MOPE and to the World Bank.

3.12 Internal monitoring and supervision will:

- a) verify that there are no outstanding or unresolved disputes in the area affected by sub-projects included within the Project, and that property valuation and resettlement has been carried out in accordance with the provisions of the Policy Framework;
- b) oversee that resettlement and other Socio-Economic measures are implemented as approved; and
- c) verify that funds for implementing resettlement and development activities are provided in a timely manner, are sufficient for their purposes, and are spent in accordance with the provisions of the Policy Framework.

3.13 External Monitoring: In addition to verifying the reports generated by internal monitoring, the external monitoring agency will carry out the following tasks:

- a) Evaluate the social and economic impact of resettlement and other socio-economic activities on the PAFs;
- b) verify if the objective of enhancement or at least restoration of income levels and standards of living of the PAFs have been met; and
- c) suggest modifications in implementation, where necessary, to achieve the principles and objectives of the Policy Framework.

3.14 EIA Policy Framework regarding socio-economic aspects: Affected persons will be entitled to compensation based on the status in their occupation of the affected areas. Entitlement categories within the project affected areas include absent landowners, owner-operators, lessees and tenants in the agricultural sector. In addition, they might include those running private commercial establishments. Owners or occupants of the few houses falling within the area to be acquired will be considered SPAFs eligible for resettlement. Should any of the resources being adversely affected be owned or managed as common property, all those with an interest in those resources will be entitled to compensation and rehabilitation benefits

Resettlement and Rehabilitation Policy Framework Principles and Objectives

The principles and the resettlement measures stemming from the Policy framework will apply to all sub-projects of the PDF, whether or not the scale and complexity of resettlement issues require preparation of a RAP.

- a) Resettlement and land acquisition will be minimized as much as possible by selecting optimal locations and exploring alternative projects. Where land acquisition is unavoidable, the project will be designed to minimize adverse impact on the poorest (those holding less than 0.5 ha of land) and will be planned and implemented in such a way as to cause the least possible amount of social, cultural and economic disruption.
- b) PAFs will be compensated, relocated and rehabilitated, if required, so as to improve their standard of living, income earning capacity and production capacity, or at least to restore them to a living standard they are likely to have achieved if the project had not taken place.
- c) Special measures will be taken to protect socially and economically vulnerable groups such as female headed families, children and aged people without support structures, ethnically or tribally disadvantaged social groups, and people living in extreme poverty.
- d) All PAFs residing in, or cultivating land, or having rights over resources within the Project area as of the date of the census survey are entitled to compensation for their losses and/or income rehabilitation. Lack of legal rights or title to the asset(s) taken for the Project will not bar PAFs from receiving compensation, rehabilitation and relocation measures.
- e) The means of resettlement are: compensation at full replacement value for houses and other structures; agricultural land of equal productive capacity; replacement of residential land at least of equal size; dislocation allowance and transition subsidies; full compensation for crops, trees and other similar agricultural products at market value, and other assets; and appropriate rehabilitation measures to compensate for loss of livelihood.
- f) PAFs forced to relocate due to their house being acquired will be provided full assistance for transportation and re-establishment of their homes and will be provided a Dislocation Allowance, in addition to provision of residential land and the replacement cost of their home.
- g) Replacement residential and agricultural land will be as close as possible to the land that was lost, and acceptable to the PAF.
- h) Where the PAF prefers to receive compensation in cash, or where replacement land is not available, cash compensation may be paid in lieu of land-for-land compensation provided that:

- the PAF receives full replacement value for the land and all assets on it, without any deductions for depreciation;
 - prior agreement has been reached on acquisition of land at a rate determined by the Compensation, Fixation and Rehabilitation Management Committee (CFRM Committee) with full consultation of the SPAF, PAF or their representatives;
 - the PAF stands to benefit directly from the project through an increase of production, project-sponsored employment, or other source of income arranged by the project; and
 - cash compensation is accompanied by appropriate rehabilitation measures which together with project benefits result in restoration of PAF incomes to at least pre-project levels.
- i) PAFs will not be dispossessed of their property nor displaced from their place of residence or employment without payment of full compensation and/or without making arrangements for relocation and rehabilitation. The construction schedules at any given site will be synchronized with the land acquisition and R&R schedules, to ensure that all land acquisition activities are completed prior to the commencement of construction at that site.
 - j) The previous level of community services and access to resources will be maintained or improved after resettlement.
 - k) Resettlement and other SD plans will be implemented following consultations with the PAFs, and will have the endorsement of the PAFs.
 - l) Any acquisition of, or restriction on, access to resources owned or managed by PAFs as common property will be mitigated by arrangements ensuring access of those PAFs to equivalent resources on a continuing basis.
 - m) The entire cost of the resettlement and other SD programs will be considered an integral part of the sub-project cost and accordingly will be budgeted in annual and overall implementation plans of the sub-project. Costs will be annually adjusted for inflation and cost overruns, and increases in costs would be the responsibility of the promoter. Safeguards in this respect would be incorporated in the loan agreement between the promoters and PDF administrator.
 - n) Adequate institutional arrangements will be made to ensure effective and timely design, planning and implementation of all SD programs, including resettlement.
 - o) Adequate arrangements will be made for effective and timely internal and external monitoring of all SD measures, including resettlement.

The project will establish effective mechanisms for hearing and resolving grievances during the implementation of resettlement and other SD programs.

Resettlement and Rehabilitation Policy Framework Entitlement Policy

A. Eligibility Criteria

Persons in the following two groups are entitled to compensation for loss of land or water resources taken for project purposes:

- a) those who have formal legal rights to land or water resources (including customary and traditional rights recognized under the laws of Nepal); and
- b) those who do not have formal legal rights to land or water resources at the time the census begins but have a claim to such legal rights - e.g. rights derived from adverse possession, from continued possession of public lands without official action for eviction or from customary and traditional law and usage - provided that such claims become recognized under the laws of Nepal through an appropriate process.

Displaced persons in these two groups are also entitled to compensation for loss of other assets, in particular structures and crops. The absence of legal title to land or water resources is not, in itself, a bar to compensation for lost assets or other resettlement assistance.

A third group of displaced persons - those who are occupying land in violation of the laws of Nepal and who do not fall within the category described above - is not entitled to compensation for loss of land under this policy. However, if such persons have uninterrupted possession of the land for at least one year prior to the census, they are entitled to resettlement assistance in lieu of compensation for land. All displaced persons occupying the land on the date the census begins are entitled to compensation for loss of assets other than land, in particular, structures and crops.

B. Resettlement Entitlements

1. The entitlement policy is designed to enable PAFs to replace the assets they have lost on account of the project, to recover and to improve upon their pre-project living standards within the shortest possible time. In general, the R&R package would consist of (a) provision for replacement assets or its cash equivalent, where replacement is not feasible; (b) rehabilitation grants to compensate for temporary disruption in life and economic activities; (c) either employment or training, capital and enterprise support for income restoration in case of loss of livelihoods; and (d) provision for replacement of community facilities and services for affected communities.
2. The entitlement policy described here is of a general nature. The entitlements described below cover only broad categories and common situations. Sub-project

RAPs will be required to translate these into sub-project specific entitlement packages according to the nature of R&R issues at the sub-project location. The unit of entitlements for compensation of assets acquired shall be the project affected family (PAF), consisting of the owner/occupier of the property being affected and his/her immediate family (spouse, minor children and aged dependents without independent means of livelihood). Adult children shall not be paid separate compensation for joint property holdings if the property has not been transferred to the children.

3. The specific entitlements for R&R shall be laid out in an Entitlement Matrix for each sub project which accommodates provisions of this policy framework and is operable within existing laws and regulations of Nepal. As per Nepali law, HMGN will establish a CFRM Committee with the participation of the PAFs for each project where property is to be acquired. The CFRM Committee will determine market cost and values for the property and assets to be acquired.
4. As a general rule, PAFs losing agricultural land will be compensated through "land for land" arrangements of equal productive capacity, satisfactory to them. If such land is not available in the vicinity or if the land available is unacceptable to PAFs, compensation in cash, at full replacement value, will be provided to farmers. In addition, PAFs who are forced to relocate or lose agricultural land will be compensated for the loss of standing crops, fruit trees or other trees at full market value, as provided in the sub-project Entitlement Matrix.
5. Rehabilitation measures for SPAFs losing agricultural land will, at a minimum, consist of preferential employment on construction work in the sub-project, provision of agricultural inputs and/or livestock to help restore production levels, and additional measures as may be appropriate depending on the severity of adverse impact on the SPAFs.
6. PAFs whose houses are affected by the Project will be provided with (a) replacement of residential land of equivalent size (minimum 200 sq m in rural areas) as close to the original location as possible, (b) cash compensation reflecting the full replacement value of the structure without depreciation, and (c) Dislocation Allowance equivalent to two months average agricultural income in the sub-project area. If the residential land and/or structure is only partially affected by the Project, the promoter may, if it is acceptable to the PAF, acquire the entire structure with full compensation, as stated above, or provide cash compensation for the portion affected as mutually agreed between the PAF and the promoter.
7. Lessees/tenants and squatters who have built their own house but do not own the residential land will be assisted in finding an alternate living site, compensated in full for their house structure, provided assistance to rebuild their home, and paid the Dislocation Allowance. Those who do not own the residential premises will be provided with cash compensation at the replacement value for any structure they have erected and a cash grant of six months' rental fee and will be assisted in finding alternative accommodations. PAFs will also be provided compensation at

full replacement cost, without any deduction for depreciation, for any other fixed assets affected in part or in full by the Project.

8. Project affected persons running a small business establishment on property to be acquired are entitled for an alternative location in vicinity with equivalent land area to reestablish business; compensation for loss of income during transition period (but not less than two months income); and replacement value for lost structures and transportation costs.
9. Farmers or workers (all affected persons, including adult children over 18 years) losing his/ her previous occupation are eligible for rehabilitation and support to ensure restoration of income; training; income restoration grant; job placement or institutional support for self employment; and micro enterprise establishment.
10. In accordance with current practice in Nepal, tenants and lessees will be paid 50 percent of the land compensation as their share for the loss of livelihood due to land acquisition.
11. In cases where community infrastructure such as schools, factories, water sources, roads, sewage systems, electrical supply, or other community resources such as a woodlot or pasture is lost, their replacement will be at no cost to the community.
12. For transmission and distribution lines, the land within the buffer zone prescribed in Electricity Regulations (1993) will be acquired and affected persons will be provided compensation at replacement costs.

C. People's Participation

1. The PAFs will participate throughout the various stages of the resettlement activities and in the land acquisition process. They will be consulted by the competent authorities and will be invited to participate in public meetings held by the respective promoter and/or by the consultants carrying out the SIA. These meetings will be an occasion to discuss project impacts and development needs and potentials and will provide a forum for the PAFs to express opinions and offer their suggestions.
2. The PAF's will be publicly informed by the relevant authorities about the details of resettlement and SD activities for the respective sub-projects. So as to enhance the transparency of operations the information made public and accessible to each household will include cut-off dates for each sub-projects, entitlements, eligibility criteria, modes of compensation, complaints and grievances redress procedures.

Outline of Resettlement Action Plan (RAP)

1. Project Description

- Physical, social and economic characteristics of the project area, with maps;
- Major features of the proposed project;
- Summary description of the extent of land acquisition needed for the project, and its expected adverse social impact;
- Analysis of major social groups likely to be adversely affected, and their special characteristics in relation to the project;
- Impact on archaeological sites and cultural property;
- Identification of the principal stakeholders in the project;
- Overview of the resettlement steps envisaged within the project.

2. The RAP Preparation Process

- The preparatory process for the RAP;
- Principal agencies and personnel responsible for the preparation and appraisal of the components of the RAP;
- Consultation process with different stakeholders e.g., government agencies, potential user groups, PAFs and NGOs, during the preparatory process.

3. Census Data and Socio-Economic Assessment

Socio-economic data of project area and expected social impact of the proposed project based on the census and socio-economic survey:

- Details of land and other assets to be acquired by project on a temporary or permanent basis;
- Occupation and income levels of PAFs;
- Access to benefits, and negative consequences on different social groups -- landowners vs. tenants/landless laborers, large farmers vs. small owner-operators, owners vs. squatters, males vs. females, local vs. regional/national beneficiaries -- equity issues;
- Changes in tenure and patterns of resource use by different groups as a result of the project;
- Extent of relocation of PAFs under the sub-project;
- Data on the proposed resettlement site(s) and host population(s), including existing pattern of land use, existing infrastructure and services, and economic opportunities for the additional population at the resettlement site(s) (applicable only for cases where relocation to a new site is involved);
- Access to social services prior to, and after, completion of the project;

4. Policy of Entitlements

- National, state, and local Laws and Rules on land acquisition and resettlement applicable and relevant to this project;
- Eligibility policy for PAFs, criteria for different categories of PAFs, cut-off dates for eligibility;
- Development of Entitlement Matrix from Policy Framework, retaining the different types of loss/impacts applicable to the sub-project (see the following format)

ENTITLEMENT MATRIX

(Applicable to Sub-Project)

Type of loss / impacts	Definition of entitlement	Definition of entitled person/unit	Application guidelines	Organization(s) responsible

5. Participation

- Identification of sub-project stakeholders;
- Previous experience of the local population (particularly negative experiences) with development projects and resettlement;
- Role of stakeholders at different stages of the resettlement project cycle -- consultations, implementation, and monitoring;
- Institutional mechanisms to facilitate participation;
- Expected outputs of participation by stage of project cycle.

6. Consultation and Grievance Procedures

- Major resettlement issues to be discussed with PAFs and other stakeholders;
- Process and time table proposed for consultation with PAFs;
- Public information, and information dissemination program on project implementation and resettlement issues, on a continuing basis;
- Mechanisms established for redress of grievances.

7. Implementation Mechanisms and Due Process

Implementation procedures proposed for delivery of key entitlements and the process for establishment of adequate replacement value:

- Land-for-land provisions, including the location, quality, and present economic use of the land to be provided as replacement for acquired land;
- Additional incentives to be provided to supplement land-for-land provisions, including cost of relocation, subsidy for inputs, service network;
- Determination of replacement value, and modalities of payment;
- Provisions to compensate tenants/share-croppers, squatters and others with temporary tenure or lien on property being acquired;
- Process of relocation, including development of resettlement sites, transitional arrangements, housing, etc.;
- Acquisition of resources managed as common property (CPRs):
 - replacement value of CPRs
 - compensation for CPRs among its multiple owners/users
 - access to CPRs after project completion or alternative arrangements to access equivalent resources;
- Measures proposed to provide additional rehabilitation to SPAFs (e.g., access to project related services, employment opportunities, or public social services) in lieu of the personal loss they are incurring for a public good.

8. Analysis of Alternatives and Assessment of Resettlement Sites

- Alternatives to project design identified during RAP preparation, particularly those alternatives where minor modification to the project may reduce adverse effects, resulting in significant resettlement benefits;
- Assessment of proposed rural resettlement sites or urban housing schemes in terms of existing services, capacity to absorb additional population, prospects for assimilation within, or conflicts with the host population;
- Assessment of measures proposed to improve infrastructure and services at the resettlement sites to ensure that the quality of life of the resettled population is at least as good at the resettlement location as in their original habitat;
- Provision of improved services to the host population (to avoid future conflicts with the resettled population).

9. Income Restoration (IR) Programs

- Existing skills and employment pattern of PAFs;
- Adverse impacts on employment pattern due to acquisition of land or other assets, or due to relocation;
- Feasibility analysis of income generation programs at the resettlement site(s) or at the existing location during the life of the project, and in the post-project period;
- Training for employment promotion;
- Access to credit and micro-enterprise support for affected persons;

- Institutional arrangements to manage IR programs on a sustained basis -- initiation, implementation, handing over, sustainability.

10. Institutional Capacity and Responsibility

- Agency responsible for implementation of resettlement activities;
- Previous experience of the agency in undertaking resettlement (the previous experience should be described and evaluated);
- Organizational structure to manage resettlement activities for the project;
- Resources available for resettlement, including staffing, financial resources and other facilities;
- Budget for resettlement agency, including extent of financial authority;
- Capacity, experience, and resources of community organizations within the project area;
- Capacity, experience, and resources of NGOs active within the project area;
- Coordination mechanisms between resettlement agency, local administration, line administration, PAFs, and NGOs;
- Technical Assistance needs and plans for staff capacity building.

11. Budget for Resettlement Operations

- Assumptions underlying the budget and Total Estimated Cost of resettlement:
 - estimated cost of acquisition of land and other assets and resettlement under the project;
 - initial capital investment for rehabilitation activities;
 - recurring costs for continued provision of rehabilitation services and mitigation measures;
 - cost of administrative overheads/implementation management;
 - allocation for contingencies;
- Detailed costs with identification of all major cost items for expenditure during the first phase of implementation (minimum two years);
- Sources of funding, and financing responsibility by component;
- Budgetary process and timing of expenditure;
- Authorization process regarding spending, and devolution of financial powers for resettlement to the field level;
- Financial accountability process -- the audit mechanism.

12. Monitoring & Evaluation (M&E)

- Procedures and organizational set-up for internal monitoring of progress in resettlement operations -- M&E structure within implementing agency;
- Monitoring and reporting procedures and formats to be followed for reporting progress with resettlement;
- Participatory monitoring -- monitoring responsibilities of NGO and community representatives;

- Provision for external, independent monitoring mechanism of resettlement;
- Funding sources for M&E.

13. Action Plan for Implementation

Prepare an Action Plan with a time line for resettlement implementation, coordinated with the proposed time table for project activities, beginning with a start date well enough in advance to make the land available for project construction when it is needed:

- Summarize coverage of the plan (time period, location of sites);
- Draw up a list of key tasks to be performed to deliver the entitlements provided in the RAP (use the Entitlement Matrix as a checklist for activity list); ensure that all activities related to the following are included:
 - acquisition of land and other assets
 - relocation
 - compensation
 - rehabilitation
 - IR programs
 - consultation processes
 - monitoring of resettlement impacts.
- Incorporate critical activities/events related to project construction/implementation which will have a bearing on the time frame;
- Prepare a Plan of Operations for resettlement activities. for the first phase (minimum 24 months) using the following format:

Activities	Responsibility	Monitoring Indicator	Time Frame												

Outline
of
VULNERABLE COMMUNITIES DEVELOPMENT PLAN

Executive summary

Part 1. The Background

Chapter 1. INTRODUCTION

1. Overall description of the project affected area with map, indicating all habitations
2. Vulnerable Communities and Land use prior to the project

Chapter 2. VULNERABLE COMMUNITIES AND THE PROJECT

1. The area and the location of the sub-project.
2. Vulnerable communities (ethnic minorities and tribal groups) in the project affected area, their economy and land tenure.
3. The effects of the sub-project on Vulnerable communities:
 - influx of outsiders: Officers/skilled labor/contractors/businesses
 - employment creation for local population
 - the break-up of social ties: communities/joint families
 - the change in gender roles (men/women)
 - the changing economy (from subsistence to money economy)
 - from agriculture to wage labor
 - Change in nutrition/health and the role of education
 - Other social groupings present in the project affected area (stakeholders), their economy and land tenure.
 - Previous community assistance by the Project in the area

Chapter 3. SOCIAL DEVELOPMENT AND ENVIRONMENT

1. The environment and community welfare (quality of life)
2. Resettlement based on material losses of individuals/households,
3. Community based groups with a common development purpose (CBOs)

Part 2. The Vulnerable Communities Development Plan

Chapter 4. THE PRESENT SITUATION - BASELINE INFORMATION (VILLAGE WISE)

1. Based on secondary sources, observations, key informants, and focus group discussion
2. Characteristics of communities in the village (population)
3. Map of each village with physical infrastructure and communities living area
4. A list of Community facilities (infrastructure)
5. Assessment of Institutions/organizations/clubs/groups and Social Services in the locality
6. Status of Health and Literacy
7. Occupational structure and Poverty level

Chapter 5. FELT NEEDS - COMPONENTS OF COMMUNITY-BASED SOCIAL DEVELOPMENT

1. Based on focus group discussions and independent assessment
2. Infrastructure support
3. Economic support
4. Social support
5. Cultural support

Chapter 6. INSTITUTIONAL ARRANGEMENTS FOR SOCIAL DEVELOPMENT

1. Existing institutional capacity:
 - in the communities
 - in the promoting agency
 - in the Government
 - in NGOs
2. Strengthening institutional capacity for desirable role in the project:
 - local government
 - the promoting agency
 - Non Governmental Organizations
 - Community Based Organizations
 - Village Level Voluntary Working Groups/village meetings

Chapter 7. PARTICIPATORY PLANNING AND IMPLEMENTATION

1. Strategy for community participation in planning and implementation

2. Community participation in formulation of this plan (focus group discussions)
3. Contribution of the communities via voluntary village working groups (Operation and maintenance)
4. Contribution of the promoting agency (financial/services)

Chapter 8. ISSUES IN IMPLEMENTATION

1. Flow of funds
2. Criteria and process for selection of Facilitating NGO
3. Criteria and process for selection of specific Social Development activities

Chapter 9. MONITORING AND EVALUATION

1. Reporting and internal monitoring by promoting agency
2. Participatory Monitoring and Evaluation
3. External supervision and evaluation

Chapter 10. COSTS ESTIMATES, FUNDING AND FINANCING

ANNEXES:

- a) Map of area
- b) Map of the villages
- c) Tribal Rights and Legal framework
- d) Methodological issues in the preparation of the VCDP: Experiences from field work and listening to, and planning with communities

TOOLS FOR PUBLIC INFORMATION AND CONSULTATION

Rationale

The *menu of tools* for information dissemination and consultation offered below should be seen as a range of options. From which, the most appropriate tools can be chosen best reflecting the needs of the facility and the locality at hand. It is recommended that, in all instances, the consultation process start with the stakeholder analysis; to identify key stakeholders who will need to be involved in order to assure project success; and to plan the timing and level of intensity of their involvement.

The tools are based on the understanding that *information dissemination* will take place first followed by *consultation*. Information dissemination refers to one way communication; consultation is understood to go further, and involves two way communication/listening. This would ensure that information of the project attributes and issues are shared with the community and project affected people, and their opinions and feedback are received and considered in project design.

The outline of this document is as follows:

- 1) Section A discusses *Stakeholder Analysis* as a preliminary necessary first step to executing a consultation process;
- 2) Section B describes *tools* to be used for *public information dissemination*, and approaches recommended;
- 3) Section C deals with *tools for social impact appraisal* to survey the potential social impact of the power facility siting for communities in the environment of the site; and
- 4) Section D suggests *tools for direct consultation of potentially affected communities*.

Section A

Stakeholder Analysis: a preliminary necessary step for any consultation strategy

As a basic step for initiating a consultation process, it is essential to undertake a stakeholder analysis of groups to be targeted by the public information and consultation strategy. This implies undertaking a systematic analysis of interests of each key stakeholder in the proposed project, the likely effect of the project on those interests (positive, negative, neutral), the potential influence that stakeholders can have on the success of the project, and planning of timing and level of involvement/consultation of key stakeholders.

Section B

Tools for public information dissemination

The following tools for public information dissemination are suggested as ways to ensure full community awareness:

- a. use of public meetings, town meetings and hearing (which serve both the purpose of information dissemination, as well as consultation of affected groups - see below)
- b. use of media: radio, local newspapers and local television:
 - aim for newspaper articles and media programs on the technical and socio-political issues in the project; and
 - establish intensive interpersonal relations with the press.
- c. use of non-technical written materials, folders, posters and leaflets in the local language(s):
 - to be displayed at public locations, such as market places, community or town halls, police stations, public transport places, mosques, temples, etc.
- d. use of visual representations, videos, scale models (e.g., at public meetings)
- e. explore the option of organizing a study tour -- for the Proponent, local government officials, and possibly community leaders to projects of a similar nature in other localities/states, highlighting the consultation strategies used, involvement of media, NGOs and community organizations.

Approaches suggested when using the tools

In using the public information tools above, the following approach is suggested:

- collaborate with environmental NGOs, press, community organizations, medical professionals and the school system, whenever possible, on the public information campaign
- work through local traditional decision making bodies and leaders, whenever possible
- the topics to be addressed in the public information campaign may include:
 - (a) how power projects are an integral part of the development process;
 - (b) how a power facility, transmission and distribution system works, what local impacts can be expected and *which can not*;

- (c) the benefits that should accrue to the local population associated with the project;
- (d) the role of the proponent in providing the benefits and mitigating negative impacts;
- (e) the role of the proponent, government and WB respectively in the preparation and implementation of the project;
- (f) the process of site selection and EA (EIA), who are involved and how the findings will be disseminated and feedback; and
- (g) the range of feasible mitigation alternatives, if relevant (including when and how implemented).

Section C

Tools for social impact appraisal

The social impact appraisal consists of two major components, both of which are essential for social development planning. The major tools and methodologies associated with the two components are:

- a) **Social Baseline:** these tools and methodologies help to develop a community profile and to understand the social context in the project affected area so as to be able to develop realistic, sustainable management plans which are acceptable to the local community. It is recommended that wherever possible, social baseline studies employ participatory techniques to involve the affected community, and utilize local NGOs for data collection and analysis. The basic tools consist of:
 - **socio-economic survey** of sample households to determine livelihood systems and current living standards
 - **land use survey**, including formal and informal tenure systems, ownership and use-rights, and management of common property resources, to determine access of different social strata to land and other productive resources
 - **community studies** describing social structure and social relations in project affected area, including inherent power relations, caste and class structures, and the status of women, ethnic minorities/tribals, and other vulnerable groups
 - **institutional analysis** of formal and informal community organizations for resource management, conflict resolution and maintenance of social norms; and of local government institutions or other local organizations established by other agencies for resource management or development activities

- **beneficiary consultations and focus group meetings** to determine local perceptions about the project and to ascertain local development needs and potentials
 - **rapid assessment of project impacts** to determine the extent and types of positive and negative impacts the sub-project is likely to have in the project affected area; this information will provide the basis for determining the need for resettlement action plan (RAP) and Vulnerable Communities Development Plan (VCDP)
- b) **Social Impact Studies:** the objective is to assemble detailed site specific information of project impacts building on the information provided by the Social Baseline for SD planning. The tools consist of:
- **Site-specific Entitlement matrix** prepared by applying the generic policy of entitlements to the specific conditions of the sub-project clearly identifying expected impacts, eligibility criteria and entitlements
 - Detailed **census** of affected persons and livelihoods affected providing demographic data of all persons who will be eligible for some form of compensation or rehabilitation
 - **Inventory** of land and other assets being acquired under eminent domain for the sub-project

In practice, the census and inventory are usually carried out simultaneously. In sub-projects where the number of PAPs is less than 200, or the number of SPAFs is less than 25, the census and inventory may even be combined with the collection of household socio-economic data for the social baseline.

SD plans should be derived from the social baseline and the social impact studies and should include the participation strategies proposed for project implementation. For sub-projects where the number of SPAFs exceed 25, the promoter will prepare an operational Resettlement Action Plan (RAP) documenting the implementation arrangements for resettlement, including asset acquisition, compensation, relocation and rehabilitation in detail. The presence of ethnic minorities or tribals in the project affected area for any sub-project would require the preparation of a separate Vulnerable Communities Development Plan (VCDP) to ensure that the ethnic minorities/tribals are protected and provided development assistance in accordance with their own priorities. Even when affected persons are not deemed to be ethnic minorities or tribals, if their support is critical to project success, preparation of a regional development plan in consultation with them to maximize their benefits from the sub-project is considered best practice. Alternatively, SD measures relevant to project success can be integrated within the design of the sub-project itself.

Section D

Tools for direct consultation with potentially affected communities

The main vehicle for consultation with potentially affected communities and other stakeholders in the EIA process and beyond will be a group meeting with the major stakeholders. Other means through which communities can be directly consulted include:

- a. organizing *workshops* involving government officials, NGO and community representatives, local academics and professional interest group representatives: e.g., on a scoping work
- b. holding *public meetings and hearings*, at which local government officials and the proponent explain the objectives of the project, listen to and document community concerns, answer questions and request feedback from affected groups during the study-- public meetings generally require a strong but accommodating chair, somebody seen as more or less neutral, and able to deal with strong opinions. It is also recommended to use visual tools, such as video, photographs, slides and maps:
- c. establishing a *citizen liaison or advisory committee*, providing a two way communication between the Proponent and the community. Membership would represent a cross-section of community interests; the committee would have a certain level of access to the facility and members would be 'educated' by receiving tours around the facility as well as expert advice. The citizen committee may also be invited, among others, to play an important role in monitoring the operation of the facility once it has been constructed; and
- d. *participatory monitoring* by community members, particularly for those components of the project which directly affect them.