

ASIAN DEVELOPMENT BANK

**HIMACHAL PRADESH CLEAN ENERGY DEVELOPMENT INVESTMENT PROGRAM
IN
INDIA**

Supplementary Appendix to RRP

Environmental Assessment and Review Framework

April 2008

A. Introduction

1. The Government of Himachal Pradesh (GOHP) through the Government of India (GOI) has requested Asian Development Bank (ADB) to provide a multi-tranche financing facility (MFF) to partly fund the Himachal Pradesh Clean Energy Development Investment Program (HPCEDIP) in the State of Himachal Pradesh. The Himachal HPCEDIP will provide financing for two major areas of investment:

- (i) **Hydropower capacity additions.** Construction of physical infrastructure built for hydropower generation, including underground power houses, associated civil works, tunnels, river diversion and power evacuation systems. Specific subprojects have been earmarked for the 1st and 2nd tranches and include the Sawra Kuddu Hydroelectric Project (111 MW) and the Integrated Kashang Hydroelectric Project, Stages I, II and III (195 MW). Subprojects identified for future development include the Sainj (100 MW) and Shongtong-Karcham (402 MW) Hydroelectric Projects, although others from the state's investment plan may be substituted in future tranches provided they meet the ADB eligibility criteria. All hydropower projects proposed for HPCEDP will be run-of-the-river design, with no or small reservoirs.
- (ii) **Capacity Development.** This activity will provide support for developing various departments of the Executing Agency, Himachal Pradesh Power Corporation Limited (HPPCL). The main focus is on effective project preparation, implementation and management, including planning, construction supervision, contract management, procurement, disbursements, safeguards compliance and monitoring and reporting systems, particularly in regard to compliance with ADB policies and procedures. Support will be given for (i) helping the Executing Agency prepare future projects, (ii) implement and administer approved projects, and (iii) monitor, review, evaluate and report on program and project implementation. Financial management and accountability is a second major focus, including incorporating adequate financial management safeguards to ensure fiduciary oversight of disbursed funds, and an improved accounting and auditing systems (which becomes most relevant in 2011 when they begin generating revenues). In addition to project oriented capacity development, the capacity development component will include corporate development assistance to HPPCL, as well as developing in-house capacity in private sector participation modalities, in CDM procedures, and in power trading in order to broaden HPPCL's functional expertise as the state's power generating company. This component totals \$12 million and will be implemented over a period of five years.

2. The MFF selected projects will come from the state's portion of the overall hydropower development plan and are expected to total about 808 MW. The estimated cost of these selected projects is about \$1.4 billion. The Government has requested financing up to the equivalent of \$800 million¹ from ADB's ordinary capital resources, and both the Government and GOHP have asked ADB to extend this financing in the form of an MFF. The GOHP will finance \$420 million (30%) and the remaining \$180 million (13%) will be financed from Power Finance Corporation Ltd. (PFC)² or from other Indian financial institutions. Funding for Tranches 1 & 2 will come from ADB and GOHP only. GOHP has already

¹ Country Operations Business Plan lists only \$300 million, but \$800 million approved by the Vice President, Operations 1 in November 2007.

² Power Finance Corporation Ltd. is an Indian public financial institution dedicated to power sector financing and committed to the integrated development of the power and associated sectors.

released sufficient equity funds to Himachal Pradesh Power Corporation Limited (HPPCL) for 2008 and has provisioned for required funds for the following year. PFC and/or Indian financial institution financing would only be contemplated for later tranches. The total proposed amounts are shown in Table 1 below.

Table 1: Financing Plan for the MFF

(\$ million)

Source	Total	%
Asian Development Bank	800.0	57.1
PFC and/or other Indian Lenders	180.0	12.9
Government	<u>420.0</u>	30.0
Total	1,400.0	100.0

Source: Asian Development Bank estimates

3. The investments to be supported by ADB will contribute to economic development in Himachal Pradesh through expanded power supplies from clean energy sources, and from a sustainable state electricity sector. The HPCEDIP will produce the following outcomes: (i) increased production and use of clean energy in a financially sustainable manner through run-of-the-river hydropower schemes, (ii) improved state finances and power sector financial viability from sales revenue earned from power exports, (iii) improved sector governance, and (iv) improved capacity in HPPCL for better planning, implementation and management of hydropower plants, as well as implementing CDM initiatives and energy efficiency through a power trading program. With ADB support the proposed program will sustain the energy sector reform agenda, and is expected to help to attract other long-term financiers to the sector.

4. This Environmental Assessment and Review Framework (EARF) is applicable to all investments funded by the MFF, and particularly to projects included in subsequent tranches which have not yet been fully defined. The EARF outlines the policy, procedures, and institutional requirements for preparing subsequent projects. The Executing Agency is (EA) is Department of Power, Government of Himachal, responsible for preparing the required environmental assessments and obtaining ADB concurrence prior to implementation. These approvals must be in place prior to finalization of contracts and commencement of work. The implementing agency (IA) will be the Himachal Pradesh Power Corporation Limited (HPPCL).

B. Environmental Regulatory and Policy Framework for Subproject Selection

5. GOI and ADB environment policies and procedures apply to all projects/subprojects funded by the MFF. The environmental regulations of the Ministry of Environment and Forests (MOEF) categorizes industrial projects into red, orange and green categories according to their anticipated potential environmental impact.

6. The GOI Environmental Impact Assessment Notification of 2006 (replacing the EIA Notification of 1994), sets out the requirements for environmental assessment studies. The Notification states that Environmental Clearances (ECs) are required for specified activities/projects, and must be obtained before any construction work or land preparation (except land acquisition) may commence. Projects are categorized as A or B depending on the scale of the project and the nature of its impacts.

7. Category A projects require EC from the national Ministry of Environment and Forests (MoEF). The proponent is required to provide preliminary details of the project in the form of a Notification, after which an Expert Appraisal Committee (EAC) of the MoEF prepare comprehensive Terms of Reference (ToR) for the EIA study, which are finalized within 60 days. On completion of the study and review of the report by the EAC, the MoEF considers the recommendation of the EAC and provides the EC if appropriate.

8. Category B projects require environmental clearance from the State Environment Impact Assessment Authority (SEIAA). The State level EAC categorizes projects as either B1 (requiring EIA study) or B2 (no EIA study), and prepares a ToR for B1 projects within 60 days. On completion of the study and review of the report by the EAC, the SEIAA issues the EC based on the EAC recommendation. The Notification also provides that any project or activity classified as category B will be treated as category A if it is located in whole or in part within 10 km from the boundary of protected areas, notified areas or inter-state or international boundaries.

9. Under the GOI regulations transmission and distribution projects are exempted from the list of projects that require environmental impact assessment and environmental clearances from MOEF. As a general rule generation projects require EIA and environmental clearance from MOEF.

10. Power generation projects are classified by as either Category A, B-sensitive or B depending on whether the projects will be located in environmentally sensitive areas³ or have adverse and irreversible environmental impacts. Transmission and distribution (T&D) projects normally are classified by ADB as Category B. Category B-sensitive or Category A may apply to T&D projects located in environmentally sensitive areas. For each projects included into Periodic Financing Requests (PFRs) for subsequent Tranches of the subject MFF, environmental impact assessments or initial environmental examinations (IEE) will be prepared following the ADB's *Environment Policy, 2002* and *Environmental Assessment Guidelines, 2003* and National⁴ environmental assessment regulations and guidelines. The EIAs and IEEs will include an environmental management plan (EMP) with the implementation budget.

C. Environmental criteria for additional subproject selection

11. Specific environmental criteria for project/subproject selection are:

- (i) Projects/subprojects will not be located within national parks, wildlife sanctuaries and nature reserves, or wetlands, unless unavoidable for technical reasons.
- (ii) Monuments of cultural or historical importance will be avoided.
- (iii) An environmental management plan (EMP) with adequate budget will be developed for each project/subproject.
- (iv) Environment Category A and B-sensitive subprojects must comply with ADB's 120-day disclosure policy where EIAs and EMPs will be translated into the local language and made available at offices of the: (i) Project Site office; (ii) relevant local government line agencies; and (iii) PMU and PIUs before a PFR is submitted to ADB for MFF.

³ National Parks, Wildlife Sanctuaries, Bio-reserve zones, nature reserves, or wetlands are designated by MoEF as protected areas and heritage sites.

⁴ Ministry of Environment and Forests, GOI's Environmental Assessment Notifications 2006 and Guidelines for Environmental Impact Assessment for River Valley / Power Projects

- (v) Potential environmental impacts will be minimized by appropriate mitigation measures and siting to avoid sensitive areas. Re-alignment or selection of alternative sites may be required
- (vi) Clearing of any existing forest resources will be avoided if possible, and where unavoidable will be minimized and compensated as per GOI regulatory criteria.
- (vii) New equipment / facilities specifications shall follow international standards and best practices to avoid generation of GOI regulated pollutants (Total Suspended Particles, TPS). International Guidelines will be applied for those pollutant categories that are not subject to regulation by GOI (e.g. SO₂, NO_x or greenhouse gas (GHG) emissions. All equipment procured shall be free from polychlorinated biphenyl (PCBs) internationally recognized as a carcinogenic agent. In determining appropriate environmental standards for ADB projects, ADB ⁵follows the standards and approaches laid out in the World Bank's *Pollution Prevention and Abatement Handbook* which describes generally acceptable pollution prevention and abatement measures and emission levels.⁶

D. Environmental assessment and review procedures of additional subprojects

1. Application of selection criteria

12. Proposed projects/subprojects will be screened for compliance with selection criteria listed above prior to additional analysis. Environmental categories will be assigned using the rapid environmental assessment checklist (as described in ADB *Environmental Assessment Guidelines 2003*). Design changes may be suggested or required by ADB and GOI for proposed projects that initially do not meet the selection criteria, and environment categories will be changed as necessary.

2. Preparation of EIAs and IEEs

13. After categorization, an EIA or IEE including an EMP with implementation budget will be prepared for each component. Public consultation will be conducted with local community and potentially affected people as early as possible for each project/subproject. For Category A projects/subprojects, public consultations will be conducted at least twice: (i) once during early stage of EIA field work, and (ii) once with the draft EIA report is available, and before submission of the relevant PFR. EIAs and IEEs will be reviewed and approved by ADB and GOI before commencement of detailed design, and EIA and IEE details and results will be communicated to the local community before commencement of construction. Summary IEEs and summary EIAs will be prepared and disclosed in accordance with ADB's *Public Communication Policy 2005*. For Category A and B-sensitive projects, the a summary EIA shall be made available to general public at least 120 days before the subproject approval by ADB before a PFR is submitted for the MFF.

3. Responsibilities /Authorities of various agencies

14. The IA (HPPCL for Tranche 1) will be solely responsible for the implementation of the entire environmental assessment and review procedures. This include, among others,

⁵ As referred in ADB's Environmental Policy and Operations Manual F1

⁶ World Bank. 1999. *Pollution Prevention and Abatement Handbook: Toward Cleaner Production*. Washington, DC.

ensuring that proposed projects strictly adhere to the selection criteria, the preparation of EIAs/SEIAs and IEE/SIEEs are done in a timely and adequate manner, environmental monitoring and institutional requirements are fully met while public consultations be carried out satisfactorily. The EA will submit the categorization checklist, EIAs/SEIAs, IEE/SIEEs and monitoring reports to ADB for review.

15. The EA will also be responsible for obtaining regulatory approvals from relevant regional environmental authorities as per the regulatory requirements of the GOI.

16. ADB will be responsible for regular review and timely approval of checklists, IEE/SIEEs and EIA/SEIAs. Technical guidance will be provided by ADB to EA as needed. ADB will also be responsible for reviewing regular monitoring reports and officially disclosing SEIAs (for Category A components/subprojects) and SIEEs (for Category B-sensitive components/subprojects) on its website.

4. Preparation of detailed design

17. Detailed design work for each additional subproject will follow the recommendations of the EIA or IEE. The IAs will review detailed designs before contracts are finalized and modifications are incorporated if considered necessary. Certification to ADB that the detailed designs comply with EIA and/or IEE (including EMP) recommendations will be required before contracts can be made effective. A tentative list of project activities under the proposed MFF is presented in Table 2.

Table 2: Subprojects and Components Proposed in HPCEDIP

Subprojects	Main Components	Infrastructure
Hydropower Projects i. Sawra Kuddu ii. Kashang I iii. Kashang II & III iv. Sainj v. Shontong Kurcham	Electrical and Mechanical Equipment	Buildings, power houses
		Equipment, housing facilities
	Tunnels	Diversion structures from intake sites
		Storage reservoirs/impoundments
		Desilting tanks/reservoirs
		Access Roads
		Muck Dumping sites
	Civil Works	Buildings
		Barrages, gates
		Construction workers temporary camps
		Staff housing quarters
		Access roads
	Power Evacuation	Switchyards
		Transmission line to pooling points

5. Preparation of construction contracts

18. Early in the implementation period, model construction contracts will be prepared incorporating general environmental safeguards and practices. Specific, individual contracts will be based on the model contracts, but vetted by the IAs to ensure that EMP requirements are covered within the contract.

6. Monitoring during the construction period

19. Monitoring during construction will be IA's responsibility. Monitoring will be sufficient to comply with construction contracts, determine the current status of affected environmental resources, and determine the effectiveness of mitigation measures. Reporting will be to ADB and to relevant national and HP environmental agencies (forest department, pollution control board, MoEF etc.) on a regular basis. For Category A and B-sensitive projects, the EA will submit semi-annual reports on EMP implementation to ADB.

7. Monitoring of subproject operations

20. EMP should be formulated to minimize recurrent responsibilities and costs. However, for certain projects continuous monitoring may be required (e.g., hydro power generation).

E. Environmental Management Plan

21. A general environmental management plan that will apply to additional subprojects of the MFF investment is presented in a matrix form in the SEIA document for Tranche 1. Table 3 gives a summary Environmental Monitoring Plan. The summary is developed on the basis of environmental analysis of the proposed First Tranche components and subprojects,⁷ and review of environmental impacts of typical hydropower generation projects under the subject MFF. The mitigation measures for additional subprojects will be developed in line with the principles agreed upon in this EARF. Any unanticipated consequence of the project will be documented.

22. Environmental monitoring will consist of routine systematic checking that the above environmental management measures have been implemented effectively during each stage of the project. Table 3 (below) presents the summary monitoring plan for projects to be funded by the MFF. Tables 4 and 5 present the indicative estimated costs for EMP implementation of the First Tranche projects. EMP budgets for subsequent Tranches will be developed during the preparation of respective EIAs or/and IEEs.

Table 3: Summary Environmental Monitoring Plan

Environmental Monitoring Tasks⁸	Implementation Responsibility	Implementation Schedule
Pre Construction Phase		
Audit project bidding documents to ensure EMP is included.	EA through project implementation unit	Prior to issue of bidding documents.
Monitor contractor's detailed alignment survey to ensure relevant environmental mitigation measures in EMP have been included.	EAs with assistance of project implementation unit	Prior to EA approval of contractor's detailed alignment survey.
Audit detailed designs of Facilities to ensure standard environmental safeguards/mitigation measures (as	EAs with assistance of project implementation unit	Prior to EA approval of contractor's detailed designs.

⁷ A SEIA with EMP has been prepared for the Tranche 1. The SEIA has been posted on the ADB website as well as one of the appendices to the RRP.

⁸ Monitoring of issues related to compensation of landowners for land acquisition and loss of production, etc. are addressed in the Resettlement Action Plan.

Environmental Monitoring Tasks⁸	Implementation Responsibility	Implementation Schedule
identified in EMP) have been included.		
Construction Phase		
Regular monitoring and reporting of contractor's compliance with contractual environmental mitigation measures.	EA with assistance of project implementation unit	Continuous throughout the construction period.
Operation and Maintenance Phase		
Observations during routine maintenance inspections of hydropower generation facilities and transmission lines RoWs. Inspections will include monitoring implementation status of mitigation measures specified in EMP.	IAs	As per IAs inspection schedules

**Table 4: Summary of Estimated Costs for EMP Implementation
(Sawra Kuddu, Tranche 1)**

Item	Cost (Rs. Million)
Installation of sewage systems	2.400
Solid waste collection and disposal system*	2.340
Sewage disposal for labour camps	1.500
Cost of substitution of fuel wood for workforce	1.580
Muck management and rehabilitation of disposal sites	33.74
Mining area rehabilitation including maintenance for 7 years	4.03
Compensatory afforestation including maintenance for 7 years	4.265
Health Delivery System*	1.200
Control of Air Pollution	1.500
Environmental measures in project's transport lines**	1.000
Noise control measures	0.200
Development of fisheries including O&M*	13.000
Greenbelt development	1.300
Management of dust from transport activities	2.000
Road side plantation	2.000
Cost of implementing CAT Plan i/c maintenance for 7 years	73.108
NPV paid to ameliorate environment	36.715
Impact mitigation on cultural sites	0.300
Cost of Environment Monitoring Program	7.182
O &M Cost	4.223
Total	193.583

**Table 5: Summary of Estimated Costs for EMP Implementation
(Kashang I, Tranche 1)**

Item	Cost (Rs. Million)
Compensatory afforestation (Inclusive of maintenance)	3.367
Cost of health facilities*	2.2
Cost of reclamation and plantation (i.e. greenbelt, fuel wood etc.)	4.03
Cost of Catchment Area Treatment	30.37
Quarry site reclamation plan	0.48
Cost of environment monitoring cell (for monitoring environment	1.72

safeguards	
Total	42.17

*Funds for some of the items like fisheries and health facilities will be provided through the Local Area Development Committee (LADC). LADC's related expenditure will account for about 1.5% of the total EMP cost, but should be allocated only to those components that are planned in each specific EMP.

**Power evacuation lines are not included into the current investment scope. However, the EA has included this component into the EMP since the evacuation lines will be most likely proposed as additional projects in Tranche 1.

F. Institutional Arrangements

23. As it was stated earlier the Department of Power will function as the Executing Agency (EA) and HPPCL will function as the implementing agency (IA) for the proposed First Tranche investment project and potentially for the entire MFF. Each of the subprojects will have a separate field office to facilitate the implementation its smooth functioning. These field offices will function as project management units (PMUs) at the field level, performing project site-specific environmental monitoring, construction supervision and reporting. There will be a central PMU within the HPPCL's head office covering the overall MFF and performing centralized environmental and financial reporting management functions.

24. It is proposed that an Environment Management Cell (EMC) and Social/R&R Cell (R&RC) will be set up within the PMU along with other engineering units to address environmental and social issues of the HCEIDP, and will be staffed by Chief Environmental Specialist and Chief Resettlement Specialist respectively. The EMC will be assisted by the one Head of Project and one Dy Manager at each PIU level to assist the Chief Specialist. For each subproject EMPs, PMU will do the overall coordination, preparation, planning, implementation, and financing. The EA will ensure that key institutions including local governments are involved in EMP updation and implementation. Further details on agencies responsible for EMP activities are presented in Table 6 below.

Table 6: Institutional Roles and Responsibilities for EMP Implementation

Activity	Responsible Agency
Project Initiation Stage	
Setting up of ESMU and staff	HPPCL
Disclosure of project EMP details by issuing Public Notice	PMU/EMC
Meetings with communities and affected households and people	EMC/PMU
Revisions of EMPs based on feedback from stakeholders and affected communities	PMU/EMC
EMP Implementation Stage	
Implementation of the proposed EMP mitigation measures	PMU/EMC
Consultations with communities during EMP implementation	PMU/EMC
Internal monitoring	PMU/EMC
External monitoring (if needed and requested by ADB)	External Agency (to be determined)

ADB-Asian Development Bank, EA-Executing Agency, EMC-Environment Management Cell, R&R/Social Cell (R&RC- R&R and Social Cell Unit, EMP – Environmental Management Plan, HPPCL- Himachal Pradesh Power Corporation Limited.

G. Disclosure, Consultation and Grievances

25. EIAs/SEIAs and IEEs/SIEEs prepared for additional sub projects will be translated into local language(s) and made available to the public. Comments and feedback on the disclosed EIAs and IEEs will be collected by PMU and properly and timely addressed by the EA. A Grievance Redressal Committee (GRC) will be set up in each of the subproject location to address all concerns and grievances of the local communities and affected parties. The GRC will comprise of representatives from local authorities, affected parties, and well-reputed persons from health, education sectors, as it will be mutually agreed with the local authorities and affected communities. This committee will address the Project related grievances of the affected parties and will provide them a public forum to raise their concern or objections. A senior official from region/corporate office will represent the EA. The GRC will be set up locally to ensure easy access to communities and affected parties. The EA will be responsible dissemination of information about the functional norms of the GRC. The committee will meet at least twice in a year or as and when required.

H. Monitoring and Evaluation

26. The EMP will have internal monitoring. The EMC at the local level will be responsible for internal monitoring of the EMP implementation, and will forward quarterly progress reports to the EA with details of activities and progress made during EMP implementation. The EA will submit semi-annual monitoring reports to ADB. If required and upon ADB concurrence, an independent monitoring agency will be hired by the EA (potentially an NGO). The independent monitoring agency will conduct external monitoring of the all projects funded by the MFF. The external monitoring agency will be reporting on a semi-annual basis directly to ADB to verify whether sound environmental management practices are applied, and the set environments targets are achieved. In case the implementation of EMP measures is not satisfactory, the external monitoring agency will recommend actions to enhance environmental compliance.

APPENDIX 1

NATIONAL ENVIRONMENTAL LAWS APPLICABLE TO INFRASTRUCTURE DEVELOPMENT

The Environmental regulations, legislation, policy guidelines and control that may impact this project, are the responsibility of a variety of government agencies. The principal Environment Regulatory Agency in India is the Ministry of Environment and Forests (MoEF). MoEF formulates environmental policies and accords environmental clearances for different projects.

The Important environmental legislations in India are given below in Table:

- (i) The Water (Prevention and Control of Pollution) Act, 1974, amended 1988
- (ii) The Water (Prevention and Control of Pollution) Rules, 1975
- (iii) The Air (Prevention and Control of Pollution) Act 1981, amended 1987
- (iv) The Air (Prevention and Control of Pollution) Rules, 1982
- (v) The Environment (Protection) Act, 1986, amended 1991 and including the following Rules/Notification issued under this Act.
 - The Environment (Protection) Rules, 1986, including amendments
 - The Municipal Solid Wastes (Management and Handling) Rules, 2000
 - The Hazardous Wastes (Management and Handling) Rules, 1989
 - The Bio-Medical Waste (Management and Handling) Rules, 1998
 - Noise Pollution (Regulation and Control) Rules, 2000,
 - Wild Life (Protection) Amendment Act, 2002
 - Eco Sensitive Zone Notification: Restricting location of industries, mining & other activities in Doon Valley (UP)
 - Ministry of Environment and Forest, Guidelines for EIA for River Valley Projects.
 - The Environmental Clearance Notification, 1994
 - Environmental Impact Assessment Notification-2006
 - Environmental Standards of CPCB
- (vi) Noise Pollution (Regulation and Control) Rules, 2000
- (vii) National policy on Resettlement and Rehabilitation for Project Affected Families 2003, MORD (2004)
- (viii) The Indian Wildlife (Protection) Act, 1972, amended 1993
- (ix) The Wildlife (Protection) Rules, 1995
- (x) The Indian Forest Act, 1927
- (xi) Forest (Conservation) Act, 1980, amended 1988 (National Forest Policy, 1988)
 - Forest (Conservation) Rules, 1981 amended 1992 & 2003
 - Guidelines for diversion of forest lands for non-forest purpose under the Forest (Conservation) Act, 1980
- (xii) The National Environmental Appellate Authority Act, 1997

Key Environmental Legislations

Name	Scope and Objective	Key Areas	Operational Agencies/Key Players
Water (Prevention and Control of Pollution Act, 1974)	To provide for the prevention and control of water pollution and enhancing the quality of water	Controls sewage and industrial effluent discharges	Central and State Pollution Control Board
Air (Prevention and Control of Pollution Act - 1981)	To provide for the prevention and control of air pollution	Controls emissions of air pollutants	Central and State Pollution Control Boards
Forest Act, 1927	To consolidate acquisition of common property such as forests	Regulates access to natural resources, state has a monopoly right over land, categories forests	State government, forest settlement officers
Forest Conservation Act, 1980	To halt India's rapid deforestation and resulting Environmental degradation	Restriction on de-reservation and using forest for non-forest purpose	Central Government
Wildlife Protection Act, 1980	To protect wildlife	Creates protected areas (national parks, sanctuaries) categories of wildlife which are protected	Wildlife Advisory Boards; Central Zoo Authorities
Environment Protection Act, 1986 Environmental Impact Assessment Notifications 1994	To provide for the protection and improvement of Environment	An umbrella legislation; supplement laws	Central government nodal agency MoEF; can deplete powers to state department of Environment
National Policy on Hydro Power Development			

RELEVANT SECTIONS OF APPENDIX 1 OF THE EIA NOTIFICATION

1. The required construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to this notification entailing capacity addition with change in process and or technology shall be undertaken in any part of India only after the prior environmental clearance from the Central Government or as the case may be, by the State Level Environment Impact Assessment Authority, duly constituted by the Central Government under subsection (3) of section 3 of the said Act, in accordance with the procedure specified hereinafter in this notification.

2. Requirements of prior Environmental Clearance (EC):- The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

- (i) All new projects or activities listed in the Schedule to this notification;
- (ii) Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization;
- (iii) Any change in product - mix in an existing manufacturing unit included in Schedule beyond the specified range.

3. State Level Environment Impact Assessment Authority:- (1) A State Level Environment Impact Assessment Authority hereinafter referred to as the SEIAA shall be constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of three Members including a Chairman and a Member Secretary to be nominated by the State Government or the Union territory Administration concerned.

4. Categorization of Projects and Activities:-

- (i) All projects and activities are broadly categorized in to two categories - Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man made resources.
- (ii) All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, shall require prior environmental clearance from the Central Government in the Ministry of Environment and Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification;
- (iii) All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfill the General Conditions (GC) stipulated in the Schedule, will require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its

decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In the absence of a duly constituted SEIAA or SEAC, a Category 'B' project shall be treated as a Category 'A' project.

5. Screening, Scoping and Appraisal Committees:-

The same Expert Appraisal Committees (EACs) at the Central Government and SEACs (hereinafter referred to as the (EAC) and (SEAC) at the State or the Union territory level shall screen, scope and appraise projects or activities in Category 'A' and Category 'B' respectively.

6. Application for Prior Environmental Clearance (EC):-

An application seeking prior environmental clearance in all cases shall be made in the prescribed Form 1 annexed herewith and Supplementary Form 1A, if applicable, as given in Appendix II, after the identification of prospective site(s) for the project and/or activities to which the application relates, before commencing any construction activity, or preparation of land, at the site by the applicant. The applicant shall furnish, along with the application, a copy of the pre-feasibility project report except that, in case of construction projects or activities (item 8 of the Schedule) in addition to Form 1 and the Supplementary Form 1A, a copy of the conceptual plan shall be provided, instead of the pre-feasibility report.

7. Stages in the Prior Environmental Clearance (EC) Process for New Projects:-

7(i) The environmental clearance process for new projects will comprise of a maximum of four stages, all of which may not apply to particular cases as set forth below in this notification. These four stages in sequential order are:-Stage (1) Screening (Only for Category 'B' projects and activities) Stage (2) Scoping Stage (3) Public Consultation Stage (4) Appraisal

I. Stage (1) - Screening:

In case of Category 'B' projects or activities, this stage will entail the scrutiny of an application seeking prior environmental clearance made in Form 1 by the concerned State level Expert Appraisal Committee (SEAC) for determining whether or not the project or activity requires further environmental studies for preparation of an Environmental Impact Assessment (EIA) for its appraisal prior to the grant of environmental clearance depending up on the nature and location specificity of the project . The projects requiring an Environmental Impact Assessment report shall be termed Category 'B1' and remaining projects shall be termed Category 'B2' and will not require an Environment Impact Assessment report. For categorization of projects into B1 or B2 except item 8 (b), the Ministry of Environment and Forests shall issue appropriate guidelines from time to time.

II. Stage (2) - Scoping:

(i) Scoping: refers to the process by which the Expert Appraisal Committee in the case of Category 'A' projects or activities, and State level Expert Appraisal Committee in the case of Category 'B1' projects or activities, including applications for expansion and/or modernization and/or change in product mix of existing projects or activities, determine detailed and comprehensive Terms Of Reference (TOR) addressing all relevant environmental concerns for the preparation of an Environment Impact Assessment (EIA) Report in respect of the project or activity for which prior environmental clearance is sought.

(ii) The Terms of Reference (TOR) shall be conveyed to the applicant by the Expert Appraisal Committee or State Level Expert Appraisal Committee as concerned within sixty days of the receipt of Form 1

III. Stage (3) - Public Consultation:

(i) Public Consultation' refers to the process by which the concerns of local affected persons and others who have plausible stake in the environmental impacts of the project or activity are ascertained with a view to taking into account all the material concerns in the project or activity design as appropriate. All Category 'A' and Category B1 projects or activities shall undertake Public Consultation, except the following:-

(a) modernization of irrigation projects (item 1(c) (ii) of the Schedule).

(b) all projects or activities located within industrial estates or parks (item 7(c) of the Schedule) approved by the concerned authorities, and which are not disallowed in such approvals.

(c) expansion of Roads and Highways (item 7 (f) of the Schedule) which do not involve any further acquisition of land.

(d) all Building /Construction projects/Area Development projects and Townships (item 8).

(e) all Category 'B2' projects and activities.

(f) all projects or activities concerning national defence and security or involving other strategic considerations as determined by the Central Government.

10. Post Environmental Clearance Monitoring:

(i) It shall be mandatory for the project management to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.

List of Infrastructure/Construction Projects/Activities Requiring Prior Environmental Clearance

Project or Activity	Category with threshold limit		Conditions if any
	A	B	

7		Physical Infrastructure including Environmental Services		
7(a)	Air ports	All projects	-	-
7(b)	All ship breaking yards including ship breaking units	All projects	-	-
7(c)	Industrial estates/ parks/ complexes/ areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes.	If at least one industry in the proposed industrial estate falls under the Category A, entire industrial area shall be treated as Category A, irrespective of the area. Industrial estates with area greater than 500 ha. and housing at least one Category B industry.	Industrial estates housing at least one Category B industry and area <500 ha. Industrial estates of area > 500 ha. and not housing any industry belonging to Category A or B.	Special condition shall apply Note: Industrial Estate of area below 500 ha. and not housing any industry of category A or B does not require clearance.

7(d)	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	All integrated facilities having incineration & landfill or incineration alone	All facilities having land fill only	General Condition shall apply
7(e)	Ports, Harbours	≥ 5 million TPA of cargo handling capacity (excluding fishing harbours)	< 5 million TPA of cargo handling capacity and/or ports/ harbours ≥10,000 TPA of fish handling capacity	General Condition shall apply
7(f)	Highways	i) New National High ways; and ii) Expansion of National High ways greater than 30 KM, involving additional right of way greater than 20m involving land acquisition and passing through more than one State.	i) New State High ways; and ii) Expansion of National / State Highways greater than 30 km involving additional right of way greater than 20m involving land acquisition.	General Condition shall apply
7(g)	Aerial ropeways		All projects	General Condition shall apply
7(h)	Common Effluent Treatment Plants (CETPs)		All projects	General Condition shall apply
7(i)	Common Municipal Solid Waste Management Facility (CMSWMF)		All projects	General Condition shall apply
8		Building /Construction projects/Area Development projects and Townships		
8(a)	Building and Construction projects		≥20000 sq.mtrs and <1,50,000 sq.mtrs. of built-up area#	#(built up area for covered construction; in the case of facilities open to the sky, it will be the activity area)
8(b)	Townships and Area Development projects.		Covering an area ≥ 50 ha and or built up area ≥1,50,000 sq .mtrs ++	++All projects under Item 8(b) shall be appraised as Category B1

Note:

General Condition (GC): Any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of: (i) Protected Areas notified under the Wild Life (Protection) Act, 1972, (ii) Critically Polluted areas as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive areas, (iv) inter-State boundaries and international boundaries.

FORM 1

I. Basic Information

- Name of the Project:
- Location / site alternatives under consideration:
- Size of the Project: *
- Expected cost of the project:
- Contact Information:
- Screening Category:

Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,)

II. Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)		
1.2	Clearance of existing land, vegetation and buildings?		
1.3	Creation of new land uses?		
1.4	Pre-construction investigations e.g. bore houses, soil testing?		
1.5	Construction works?		
1.6	Demolition works?		
1.7	Temporary sites used for construction works or housing of construction workers?		
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations		
1.9	Underground works including mining or tunneling?		
1.10	Reclamation works?		
1.11	Dredging?		
1.12	Offshore structures?		
1.13	Production and manufacturing processes?		
1.14	Facilities for storage of goods or materials?		
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?		
1.16	Facilities for long term housing of operational workers?		
1.17	New road, rail or sea traffic during construction or operation?		

1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?		
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?		

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.20	New or diverted transmission lines or pipelines?		
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?		
1.22	Stream crossings?		
1.23	Abstraction or transfers of water form ground or surface waters?		
1.24	Changes in water bodies or the land surface affecting drainage or run-off?		
1.25	Transport of personnel or materials for construction, operation or decommissioning?		
1.26	Long-term dismantling or decommissioning or restoration works?		
1.27	Ongoing activity during decommissioning which could have an impact on the environment?		
1.28	Influx of people to an area in either temporarily or permanently?		
1.29	Introduction of alien species?		
1.30	Loss of native species or genetic diversity?		
1.31	Any other actions?		

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S. No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)		
2.2	Water (expected source & competing users) unit: KLD		
2.3	Minerals (MT)		
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)		
2.5	Forests and timber (source – MT)		
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)		
2.7	Any other natural resources (use appropriate standard units)		

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S. No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)		
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)		
3.3	Affect the welfare of people e.g. by changing living conditions?		
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,		
3.5	Any other causes		

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes		
4.2	Municipal waste (domestic and or commercial wastes)		
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)		
4.4	Other industrial process wastes		
4.5	Surplus product		
4.6	Sewage sludge or other sludge from effluent treatment		
4.7	Construction or demolition wastes		
4.8	Redundant machinery or equipment		
4.9	Contaminated soils or other materials		
4.10	Agricultural wastes		
4.11	Other solid wastes		

Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources		
5.2	Emissions from production processes		
5.3	Emissions from materials handling including storage or transport		

5.4	Emissions from construction activities including plant and equipment		
5.5	Dust or odours from handling of materials including construction materials, sewage and waste		
5.6	Emissions from incineration of waste		
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)		
5.8	Emissions from any other sources		

Generation of Noise and Vibration, and Emissions of Light and Heat:

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers		
6.2	From industrial or similar processes		
6.3	From construction or demolition		
6.4	From blasting or piling		
6.5	From construction or operational traffic		
6.6	From lighting or cooling systems		
6.7	From any other sources		

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials		
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)		
7.3	By deposition of pollutants emitted to air into the land or into water		
7.4	From any other sources		
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?		

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances		
8.2	From any other causes		
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?		

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting facilities, ancillary development or developments stimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other		
9.2	Lead to after-use of the site, which could have impact on the environment		
9.3	Set a precedent for later developments		
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects		

Environmental Sensitivity

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value		
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests		
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration		
4	Inland, coastal, marine or underground waters		
5	State, National boundaries		
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas		
7	Defence installations		
8	Densely populated or built-up area		
9	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)		
10	Areas containing important, high quality or scarce resources (<i>ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i>)		
11	Areas already subjected to pollution or environmental damage. (<i>those where existing legal environmental standards are exceeded</i>)		
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (<i>earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions</i>)		

HIMACHAL PRADESH NEW HYDRO-POWER POLICY (29 JANUARY, 2006)

“Power is a vital infrastructure for socio-economic development and efforts to accelerate the generation of Hydro-Power for the economic growth of the State are essential for its development. The State Government is committed to take up the task and doing its best to develop the hydro-power potential of the State. Power generation potential of the State has been assessed at 21,000 MW which is about 25 percent of the total hydel potential of the Country, out of which over 6311 MW stands harnessed so far.

A vibrant Electricity Industry of the State will be able to provide adequate, reliable and quality power at competitive rates to match with the new globalized economy. For speedy harnessing the immense hydel potentials, the State Government has decided to evolve its own “Hydro-Power Policy” especially in view of the conducive environment provided for the investments in generation, transmission & distribution. The comprehensive hydro-power policy would also ensure a systemic and scientific development of hydro-power potential of the State.

Small Hydro-Electric Power upto 2 MW would be reserved for Himachalis and the State Government would give first preference to the developers of Hydro Electric Powers above 2 MW and upto 5 MW and above 5 MW upto 25 MW to Himachalis and cooperatives and of such Himachalis. There are good numbers of projects which are yet to be identified and the Himachal Power Corporation/HPSEB shall identify such Projects. The Government reserves the right either to allot these Projects upto 25 MW to HPPCL & HPSEB or offer it to the Independent Power Producers and above 25 MW to HPPCL & Independent Power Producers. In case of bonafide Himachalis to whom Projects upto 5 MW capacity is allotted, the Government would consider the request of promoters to sell equity shares to the bonafide Himachalis who have been living in Himachal Pradesh from generation to generation.

This Hydro-Power Policy is innovative and will have far reaching effect on the overall development of the country. In the next decade about Rs. 80,000 crore would be invested in Himachal Pradesh which will certainly have effect on the overall development of the State.

The Hydro-Power Policy would reflect the felt needs of the people of Himachal Pradesh for their welfare. Fifteen percent of the Project cost is to be utilized by the District-Level Development Authority. The Local Area Development Committee will be entrusted with, but not limited to the activities in the Project included Areas, which are those areas/ villages surrounding/falling in the catchment/ watershed areas extending from the reservoir to the tail race of the project. It would oversee the restoration of facilities adversely affected due to implementation of the Project, implementation of Rehabilitation and Relief Plan, Catchment Area Treatment (CAT) Plan and Compensatory Afforestation and it would also oversee the activities related to development of Agriculture, Horticulture, Animal Husbandry, Fisheries, Rural Development, I&PH, Health, Forest, Education, PWD, Power and other social, Religious and Cultural etc.

The activities of the Local Area Development Committee during execution would be financed by the Project itself and for this purpose, the developer would make a provision of 1.5 percent of final cost of the Project. It has been made mandatory to release minimum flow of 15 percent water immediately down-stream of the diversion structures to address issues concerning riparian rights, drinking water, health, aquatic life, wild life, fisheries, silt and even to honour the sensitive religious issues like cremation and other religious rites etc. on the river banks. The Government would create an Authority of Hydro-Project Safety, Quality Control & Management of Water Flows and Discharge in due course.

As compared to other hilly States, all the river basins in the State are fully developed. As a small compensation, State Government shall be charging an upfront premium of Rs. 10 lac per MW for projects above 100 MW. In addition, the State shall realize royalty ranging from 12 percent to 30 percent and after 40 years, the projects shall revert back to the State.”