

ENVIRONMENT IMPACT ASSESSMENT (EIA) PROCESS OVERVIEW

A. EIA as a Planning and Management Tool

- II. The EIA System is being implemented both as planning, management, and as regulatory tool. To be effective as a planning and management tool, the EIA system should be implemented at the earliest possible stage of project development. It allows the cost of mitigating and positive impact enhancement measures to be incorporated in the total cost analysis. The environmental objectives are made part of the project objective. This is an improvement over that of the old way of looking at the overall cost of the project where environmental costs are not included. The EIA as a planning and management tool is best used by the project proponent. The internalization of the environment costs becomes imperative when the project proponent knows that the ministry of Environment and Forests (MoEF) using the EIA as a regulatory tool will impose conditions such that the cost of environmental protection will be borne by the project proponent.

III. EIA as a Regulatory Tool

- IV. After the project is subjected to an EIA and the application for clearance is submitted and approved, MoEF issues an Environmental Clearance (EC). The EC normally lists down a set of conditions for it to be valid. These conditions stipulate under what conditions will the project operate and clearance granted. In this way, the MoEF is able to regulate the operations of all environmentally critical projects and projects within environmentally critical areas.

V. Operational Framework of the EIA System

1. The EIA process in India is made up of the following phases:
- (i) Screening
 - (ii) Scoping and consideration of alternatives
 - (iii) Baseline data collection
 - (iv) Impact prediction
 - (v) Assessment of alternatives, delineation of mitigation measures, and environmental impact statement
 - (vi) Public hearing
 - (vii) Environment Management Plan
 - (viii) Decision making
 - (ix)** Monitoring the clearance conditions
2. Each of these phases are explained below

VI. Screening

3. Screening is carried out to see whether a project requires EC as per the statutory notifications. Screening Criteria¹ are based upon:

- (i) Scales of impact;
- (ii) Severity of impact; and

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EIA Notification dated 14 September 2006.

(iii) Location of development.²

4. All projects and activities are broadly categorized into 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.

5.. In case of Category 'B' projects or activities, this stage will entail the scrutiny of an application seeking prior EC by the concerned SEAC for determining whether or not the project or activity requires further environmental studies for preparation of an EIA for its appraisal prior to the grant of EC depending upon the nature and location specificity of the project. The projects requiring an EIA report shall be termed Category 'B1' and the remaining projects shall be termed Category 'B2' and will not require an EIA report. For categorization of projects into B1 or B2 except item 8 (b), the MoEF shall issue appropriate guidelines from time to time. (See Annex E-2).

6. A Project requires statutory EC only if the provisions of EIA notification and/or one or more statutory notification mentioned in Table SAG.1 cover it.

Table SAG.1 : Siting Criteria Delineated by MOEF³

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| <ol style="list-style-type: none">1. As far as possible, prime agricultural land/forest land may not be converted into an industrial site.2. Land acquired should be at a minimum but sufficient to provide for a green belt wherein the treated wastewater, if possible/suitable, could be utilized from wastewater treatment systems.3. Enough space may be provided for storing solid wastes. The space and the waste can be made available for possible reuse in future.4. Layout and form of the project must conform to the landscape of the area without unduly affecting the scenic features of that place.5. Associated township of the project, if any, to be created must provide for space for phyto-graphic barrier between the project and the township and should take into account predominant wind direction.6. Coastal Areas: at least 1/2 kilometer (km) from the high tide line (within 0.5 km of high tide line, specified activities as per coastal regulation zones notification, 1991 are permitted. The high tide line is to be delineated by the authorized agency only).7. Estuaries: At least 200 meters from the estuary boundaries.8. Flood Plains of the Riverine systems: at least 500 meters from flood plain or modified flood plain or by flood control systems.9. Transport/Communication System: at least 500 meters from highway and railway.10. Major Settlements (with populations of 300,000) at least 25 km from the projected growth boundary of the settlement. |
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3. The EIA Notification also makes prior EC mandatory for all new projects listed in the schedule, expansion or modernization of existing projects or activities listed in the schedule, and any change in the product mix in an existing manufacturing units included in the schedule beyond the specified limit . The prior EC granted for a project or activity shall be valid for a period of ten years in the case of River Valley projects (item 1(c) of the Schedule), project life as estimated by EAC or SEAC subject to a maximum of thirty years for mining projects and five years in the case of all other projects and activities. However, in the case of

² The site of a project (e.g., in ecologically sensitive areas) is an important factor which decides whether an EC is required. Ecologically sensitive areas include coastal areas (protected by the CRZ Notification), forests (protected by the Forest Conservation Act), various areas notified by MoEF as Ecologically Sensitive Zones (ESZs) areas from, for example, Doon valley, Dahanutaluka, etc.) to wetlands, deserts, national parks, sanctuaries, corals, etc. (which are not protected by any specific Notification). In case of industries, the Environmental Guidelines for Siting of Industry (framed in 1985) and the Environment (Siting for Industrial Projects) Rules, 1999 (presently in draft form) have to be complied.

³ Source: Siting Criteria Delineated by MoEF.

Area Development projects and Townships [item 8(b)], the validity period shall be limited only to such activities as may be the responsibility of the applicant as a developer. This period of validity may be extended by the regulatory authority concerned by a maximum period of five years provided an application is made to the regulatory authority by the applicant within the validity period. To obtain this, the project proponent has to furnish information in an environmental appraisal questionnaire issued by MoEF.

VII. Scoping

8. Scoping⁴ is a process of detailing the terms of reference of EIA. It refers to the process by which the EAC/SEAC⁵ determine detailed and comprehensive Terms Of Reference (TOR) addressing all relevant environmental concerns for the preparation of an EIA Report with respect to the project or activity for which prior EC is sought.

4. The MoEF has published guidelines for different sectors which outline the significant issues to be addressed in the EIA studies. Quantifiable impacts are to be assessed on the basis of magnitude, prevalence, frequency and duration, and non-quantifiable impacts (such as aesthetic or recreational value), significance is commonly determined through the socio-economic criteria. After the areas where the project could have significant impact are identified, the baseline status of these should be monitored and then the likely changes in these on account of the construction and operation of the proposed project should be predicted.

VIII. Baseline Data

10. Baseline data describes the existing environmental status of the identified study area. The site-specific primary data should be monitored for the identified parameters and supplemented by secondary data if available.

IX. Impact Prediction

11. Impact prediction is a way of 'mapping' the environmental consequences of the significant aspects of the project and its alternatives. Environmental impact can never be predicted with absolute certainty and this is all the more reason to consider all possible factors and take all possible precautions for reducing the degree of uncertainty.

12. The impacts that should be assessed have been shown in the following table (Table SAG.2).

Table 1: Parameters for Assessment of Impacts

Impacts	Parameters
Air	<ul style="list-style-type: none"> • changes in ambient levels and ground level concentrations due to total emissions from point, line and area sources • effects on soils, materials, vegetation, and human health
Noise	<ul style="list-style-type: none"> • changes in ambient levels due to noise generated from equipment and movement of vehicles • effect on fauna and human health
Water	<ul style="list-style-type: none"> • availability to competing users

⁴ All projects and activities listed as Category 'B' in Item 8 of the Schedule (Construction/Township/Commercial Complexes /Housing) shall not require Scoping and will be appraised on the basis of Form 1/ Form 1A and the conceptual plan.

⁵ The composition of the EAC will be as given in the EC Notification dated 14 September 2006. The SEAC at the State or the Union territory level shall be constituted by the Central Government in consultation with the concerned State Government or the Union territory Administration with identical composition.

Impacts	Parameters
	<ul style="list-style-type: none"> • changes in quality • sediment transport • ingress of saline water
Land	<ul style="list-style-type: none"> • changes in land use and drainage pattern • changes in land quality including effects of waste disposal • changes in shoreline/riverbank and their stability
Biological	<ul style="list-style-type: none"> • deforestation/ tree-cutting and shrinkage of animal habitat. • impact on fauna and flora (including aquatic species if any) due to contaminants/pollutants • impact on rare and endangered species, endemic species, and migratory path/route of animals. • impact on breeding and nesting grounds
Socio-Economic	<ul style="list-style-type: none"> • impact on the local community including demographic changes. • impact on economic status • impact on human health. • impact of increased traffic

X. Assessment of Alternatives, Delineation of Mitigation Measures and EIA Report

13. For every project, possible alternatives should be identified and environmental attributes compared. Alternatives should cover both project location and process technologies. Alternatives should consider 'no project' option also. Alternatives should then be ranked for selection of the best environmental option for optimum economic benefits to the community at large.

14. Once alternatives have been reviewed, a mitigation plan should be drawn up for the selected option and is supplemented with an Environmental Management Plan (EMP) to guide the proponent towards environmental improvements. The EMP is a crucial input to monitoring the clearance conditions and therefore details of monitoring should be included in the EMP.

15. An EIA report should provide clear information to the decision-maker on the different environmental scenarios without the project, with the project and with project alternatives. Uncertainties should be clearly reflected in the EIA report.

XI. Public Consultation⁶

16. Law requires that the locally affected persons and other stakeholders must be informed and consulted on a proposed development with a view to taking into account all the material concerns in the project or activity design as appropriate.

17. Any one likely to be affected by the proposed project is entitled to have access to the Executive Summary of the EIA. The affected persons may include

⁶ The following categories of projects/activities are exempt from Public Consultation as notified by EC Notification dated 14th September 2006: (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, and (e) all projects or activities concerning national defense and security or involving other strategic considerations as determined by the Central Government.

- (i) bonafide local residents,
- (ii) local associations,
- (iii) environmental groups active in the area, and
- (iv) any other person located at the project site / sites of displacement.

18. They are to be given an opportunity to make oral/written suggestions to the SPCB/regulatory agency.

XII. Decision Making

19. The regulatory authority shall consider the recommendations of the EAC or SEAC concerned and convey its decision to the applicant in the stipulated time from the receipt of the recommendations of the EAC or SEAC concerned or in other words, within one hundred and five days of the receipt of the final EIA Report, and where EIA is not required, within one hundred and five days of the receipt of the complete application with requisite documents.

20. The decision on EC is arrived at through a number of steps including evaluation of EIA and EMP.

XIII. Monitoring the Clearance Conditions

21. It is mandatory for the project management to submit semi-annually, compliance reports with respect to the stipulated prior EC terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.

22. All such compliance reports submitted by the project management shall be public documents. Copies of the same shall be given to any person on application to the concerned regulatory authority. The latest such compliance report shall also be displayed on the web site of the concerned regulatory authority. Monitoring will enable the regulatory agency to review the validity of predictions and the conditions of implementation of the EMP.

XIV. EIA Review

23. All project proposals requiring EA may be examined according to the following review process.

24. Appraisal is the detailed scrutiny by the EAC or SEAC of the application and other documents like the Final EIA report, outcome of the public consultations including public hearing proceedings submitted by the applicant to the regulatory authority concerned for grant of EC. This appraisal shall be made by EAC or SEAC concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative. On conclusion of this proceeding, the EAC or SEAC concerned shall make categorical recommendations to the regulatory authority concerned either for grant of prior EC on stipulated terms and conditions, or rejection of the application for prior EC, together with reasons for the same.

25. The appraisal of all projects or activities which are not required to undergo public consultation or submit an Environment Impact Assessment report, shall be carried out on the basis of the prescribed application Form 1 and Form 1A as applicable, any other relevant validated information available and the site visit wherever the same is considered as necessary by the EAC or SEAC concerned.

Table 3: The Impact Assessment Agency

The Impact Assessment Agency (IAA) is the Union Ministry of Environment and Forests (MoEF). EIA Reports submitted along with the application for clearance are evaluated and assessed by the IAA, and if deemed necessary, it may consult a Committee of Experts.

Role of the IAA:

- (i) the IAA will evaluate and assess the EIA report. In this process, the project proponent will be given a chance to present his proposal (where a proponent is required to obtain environmental clearance).
- (ii) the IAA will also prepare a set of recommendations and conditions for its implementation based on this assessment (if a project is accepted).
- (iii) the IAA will also be responsible for the environmental monitoring process (during the implementation and operation of the project).

Earlier, the 1994 EIA Notification made it mandatory for the IAA, i.e., MoEF to consult a Committee of Experts before granting environmental clearance to a particular project. However, in its present amended form, the notification states that the IAA may consult the Committee of experts if deemed necessary. The new notification also leaves it to the discretion of the IAA to make complaint reports publicly available, "subject to public interest." Thus, the recent amendments are resulting in the dilution of the law on EIAs.

A draft memorandum suggesting changes to the environmental clearance procedures in India following the EIA Notification of 2006 recommends the creation of an autonomous and decentralized EIA Authority under the Union Government that has environment clearance granting powers.

As per this draft memorandum, an EIA Authority (EIAA) shall replace the MoEF/SEIA structure specified by MoEF's September 2006 EIA Notification. This EIAA shall be an autonomous body with the same powers as the Election Commission with concomitant accountability to discharge their duties with due diligence and within timeframes defined by the EPA Act/ Rules, in particular, regarding taking decisions on proposed projects/ facilities. It will have a decentralized structure similar to that of the SEIAAs in the MoEF September 2006 EIA Notification. The link ministry for the EIAA shall be MoEF.

XV. Clearance of Projects

26. The following projects or activities require prior EC from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the MoEF for matters falling under Category⁷ 'A' in the Schedule⁸ (see Annex E-3) and at State level, the

⁷ 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.

⁸ EC notification dt. 14th September 2006.

SEIAA⁹ 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.

XVI. Follow up and Monitoring Activities

27. It shall be mandatory for the project management to submit semi-annually, compliance reports with respect to the stipulated prior EC terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.

28. All such compliance reports submitted by the project management shall be public documents. Copies of the same shall be given to any person on application to the concerned regulatory authority. The latest such compliance report shall also be displayed on the web site of the concerned regulatory authority.

XVII. Penalty

29. Concealing factual data or submission of false, misleading data/reports, decisions or recommendations would lead to the project being rejected. Approval, if granted earlier on the basis of false data, would also be revoked. Misleading and wrong information will cover the following:

- (i) False information,
- (ii) False data,
- (iii) Engineered reports,
- (iv) Concealing of factual data, or
- (v) False recommendations or decisions

⁹ A State level EIA Authority hereinafter referred to as the SECA 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.

SPECIFIED REQUIREMENTS FOR ENVIRONMENTAL CLEARANCE AS LISTED IN THE ENVIRONMENT IMPACT ASSESSMENT NOTIFICATION, MoEF, 2006

1. The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, i.e. the Central Government in the MoEF for matters falling under Category 'A' in the Schedule (see below) and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the 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 the notification;
 - (ii) Expansion and modernization of existing projects or activities listed in the Schedule to the 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 the Schedule beyond the specified range.

Schedule – List of Projects/Activities Requiring Environmental Clearance

Project or Activity		Category with threshold limit		Conditions if any
		A	B	
1		Mining, extraction of natural resources and power generation (for a specified production capacity)		
(1)	(2)	(3)	(4)	(5)
1a	Mining of minerals	<p>≥ 50 ha. of mining lease area</p> <p>Asbestos mining irrespective of mining area</p>	<p><50 ha</p> <p>≥ 5 ha .of mining lease area</p>	<p>General Condition shall apply</p> <p><u>Note</u> Mineral prospecting (not involving drilling) are exempted provided the concession areas have got previous clearance for physical survey</p>
1b	Offshore and onshore oil and gas exploration, development and production	All projects	-	<p><u>Note</u> Exploration Surveys (not involving drilling) are exempted provided the concession areas have got previous clearance for physical survey</p>
1c	River valley projects	<p>(i) ≥ 50 MW hydroelectric power generation;</p> <p>(ii) ≥ 10,000 ha. of culturable command area</p>	<p>(i) < 50 MW ≥25 MW hydroelectric power generation;</p> <p>(ii) < 10,000 ha. of culturable command area</p>	General Condition shall apply
1d	Thermal power plants	<p>≥ 500 MW (coal/lignite/napht ha and gas based);</p> <p>> 50 MW (pet</p>	<p>< 500 MW (coal/lignite/napht ha and gas based);</p> <p><50 MW ≥ 5MW</p>	General Condition shall apply

Project or Activity		Category with threshold limit		Conditions if any
1		A	B	
Mining, extraction of natural resources and power generation (for a specified production capacity)				
(1)	(2)	(3)	(4)	(5)
		coke diesel and all other fuels)	(pet coke ,diesel and all other fuels)	
1e	Nuclear power projects and processing of nuclear fuel	All projects	-	
2 Primary processing				
2a	Coal washeries	≥1 million ton/annum throughput of coal	<1million ton/annum throughput of coal	General Condition shall apply (If located within mining area the proposal shall be appraised together with the mining proposal)
2b	Mineral beneficiation	≥0.1million ton/annum mineral throughput	< 0.1million ton/annum mineral throughput	General Condition shall apply (Mining proposal with Mineral beneficiation shall be appraised together for grant of clearance)
3 Materials production				
3a	Metallurgical industries (ferrous and non-ferrous)	a)Primary metallurgical industry All projects b) Sponge iron manufacturing ≥200TPD c)Secondary metallurgical processing industry All toxic and heavy metal producing units ≥20,000 tonnes /annum - i)All toxic and heavy metal producing units <20,000 tonnes /annum ii)All other non – toxic secondary metallurgical processing industries>5,000 tonnes/annum	Sponge iron manufacturing <200TPD Secondary metallurgical processing industry	General Condition shall apply for Sponge iron manufacturing
3b	Cement plants	≥ 1.0 million tonnes/annum production capacity	<1.0 million tonnes/annum production capacity. All Stand alone grinding units	General Condition shall apply
4 Materials processing				

Project or Activity		Category with threshold limit		Conditions if any
1		A	B	
Mining, extraction of natural resources and power generation (for a specified production capacity)				
(1)	(2)	(3)	(4)	(5)
4a	Petroleum refining industry	All projects	-	-
4b	Coke oven plants	≥2,50,000 tonnes/annum -	<2,50,000 and ≥25,000 tonnes/annum	-
4c	Asbestos milling and asbestos based products	All projects	-	-
4d	Chlor-alkali industry	≥300 TPD production capacity or a unit located out side the notified industrial area/estate	<300 TPD production capacity and located within a notified industrial area/estate	Specific Condition shall apply No new Mercury Cell based plants will be permitted and existing units converting to membrane cell technology are exempted from this Notification
4e	Soda ash Industry	All projects	-	-
4f	Leather/skin/hide processing industry	New projects outside the industrial area or expansion of existing units out side the industrial area	All new or expansion of projects located within a notified industrial area/estate	Specific Condition shall apply
5	<i>Manufacturing/fabrication</i>			
5a	Chemical fertilizers	All projects	-	-
5b	Pesticides industry and pesticide specific intermediates (excluding formulations)	All units producing technical grade pesticides	-	-
5c	Petro-chemical complexes (industries based on processing of petroleum fractions and natural gas and/or reforming to aromatics)	All projects	-	-
5d	Manmade fibres manufacturing	Rayon	Others	General Condition shall apply
5e	Petrochemical based processing (processes other than cracking and reformation and not covered under the complexes)	Located out side the notified industrial area/estate	Located in a notified industrial area/estate	Specific Condition shall apply
5f	Synthetic organic chemicals industry (dyes and dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals	Located out side the notified industrial area/estate	Located in a notified industrial area/estate	Specific Condition shall apply

Project or Activity		Category with threshold limit		Conditions if any
1		A	B	
Mining, extraction of natural resources and power generation (for a specified production capacity)				
(1)	(2)	(3)	(4)	(5)
	and chemical intermediates)			
5g	Distilleries	(i) All Molasses based distilleries (ii) All Cane juice/ non-molasses based distilleries ≥ 30 KLD	All Cane juice/non-molasses-based distilleries <30 KLD	General Condition shall apply
5h	Integrated paint industry	-	All projects	General Condition shall apply
5i	Pulp and paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp with out bleaching	Pulp manufacturing and Pulp and Paper manufacturing industry	Paper manufacturing industry without pulp manufacturing	General Condition shall apply
5j	Sugar Industry	-	≥ 5000 TCD cane crushing capacity	General Condition shall apply
5k	Induction/arc furnaces/cupola furnaces 5TPH or more	-	All projects	General Condition shall apply
6	<i>Service sectors</i>			
6a	Oil and gas transportation pipe line (crude and refinery/ petrochemical products), passing through national parks /sanctuaries/coral reefs /ecologically sensitive areas including LNG Terminal	All projects	-	
6b	Isolated storage and handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of schedule 2 and 3 of MSIHC Rules 1989 amended 2000)	-	All projects	General Condition shall apply
7	<i>Physical infrastructure including environmental services</i>			
7a	Air ports	All projects	-	-
7b	All ship breaking yards including ship breaking units	All projects	-	-
7c	Industrial estates/parks/ complexes/areas, Export Processing Zones (EPZs), Special Economic Zones (SEZs), BiotechParks, 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 housing at least one Category B industry and area <500 ha.	Special Condition shall apply <u>Note:</u> Industrial Estate of area below 500 ha. and not housing any industry of category A or B does not require clearance.

Project or Activity		Category with threshold limit		Conditions if any
1		A	B	
Mining, extraction of natural resources and power generation (for a specified production capacity)				
(1)	(2)	(3)	(4)	(5)
		Industrial estates with area greater than 500 ha. and housing at least one Category B industry.	Industrial estates of area >500 ha. and not housing any industry belonging to Category A or B.	
7d	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	All integrated facilities having incineration and landfill or incineration alone	All facilities having landfill only	General Condition shall apply
7e	Ports and 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
7f	Highways	i) New National Highways; and ii) Expansion of National Highways 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 Highways; 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
7g	Aerial ropeways	-	All projects	General Condition shall apply
7h	Common Effluent Treatment Plants (CETPs)	-	All projects	General Condition shall apply
7i	Common Municipal Solid Waste Management Facility (CMSWMF)	-	All projects	General Condition shall apply
7j	Building and construction projects	-	≥20000 sq. m. and <1,50,000 sq. m. 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)
7k	Townships and Area Development projects	-	Covering an area ≥50 ha and / or built up area ≥1,50,000 sq. m.++	++All projects under Item 8(b) shall be appraised as Category B1

Notes:

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

Specific Condition (SC):

If any Industrial Estate/Complex/Export Processing Zone/ Special Economic Zone/Biotech Park/Leather Complex with homogeneous type of industries such as Items 4(d), 4(f), 5(e), 5(f), or those Industrial estates with pre-defined set of activities (not necessarily homogeneous), obtains prior environmental clearance, individual industries including proposed industrial housing within such estates / complexes will not be required to take prior environmental clearance, so long as the terms and conditions for the industrial estate / complex are complied with. Such estates/complexes must have a clearly identified management with the legal responsibility of ensuring adherence to the terms and conditions of prior environmental clearance, and must indicate the authority to be held responsible for violation of the same throughout the life of the complex / estate

SUMMARY OF KEY E&S LEGISLATIONS IN INDIA

NAME	SCOPE AND OBJECTIVE	OPERATIONAL AGENCIES/KEY PLAYERS
1. Water (Prevention and Control of Pollution) Act, 1974, amended, 1988	To provide for the prevention and control of water pollution and enhancing the quality of water	Central and State Pollution Control Boards
2. Air (Prevention and Control of Pollution) Act, 1981, amended, 1987	To provide for prevention, control and abatement of air pollution	Central and State Pollution Control Boards
3. Indian Forest Act, 1927	To consolidate acquisition of common property such as forests	State Government, Forest Settlement Officers
4. Forest Conservation Act, 1980, amended, 1988	To halt India's rapid deforestation and resulting environmental degradation	Central Government
5. Wildlife Protection Act, 1972, amended, 1993	To protect wildlife	Wildlife Advisory Boards, Central Zoo Authorities
6. Environment (Protection) Act, 1986, amended, 1991	To provide for the protection and improvement of the environment under an umbrella legislation	Central Government, nodal agency MoEF, can delegate powers, State Departments of Environment
7. Land Acquisition Act, 1894, amended 1985	To set out rules for the acquisition of land by the Government	Ministry of Rural Development (Department of Land Resources)
8. National Resettlement and Rehabilitation (R & R) Policy, 2003	To provide guidelines and for planning and implementation for the R&R component of the project	Ministry of Rural Development (Department of Land Resources)
9. Various Panchayat Acts ¹⁰	To provide for planning the development at district level and the roles and responsibilities of Panchayats for planning and	Directorate of Town Panchayats

NAME	SCOPE AND OBJECTIVE	OPERATIONAL AGENCIES/KEY PLAYERS
	implementing the project	

For a State-wise Profile on Panchayats, refer to <http://www.iespanchayat.net.in/database-panchayat-profile.htm>

ENVIRONMENTAL RULES AND NOTIFICATIONS RELEVANT TO INFRASTRUCTURE PROJECTS¹¹

1. The Central and State Governments have the authority to regulate any operation relevant to infrastructure projects that are not in keeping with the following rules.
2. **The Environment (Protection) Act, 1986, amended 1991.** This Act is an umbrella legislation providing a single focus in the country for the protection of environment and seeks to plug the loopholes of earlier legislation relating to environment. Several sets of Rules relating to various aspects of management of hazardous chemicals, wastes, micro-organisms etc. have been notified under this Act. Some important points of this Act are
 - (i) The Central Government may also put restrictions on an area in which any industry, operation or process or class of industries or operations shall not be carried out. If they are to be carried out, they may be permitted with certain safeguards.
 - (ii) Emissions and effluent standards with respect to 60-odd categories of industries have been evolved and notified so far
 - (iii) The standards with respect to pollutants are to be achieved within a period of one year from the date of their notification, especially by those industries identified as highly polluting.
 - (iv) However, if a particular State Pollution Control Board (SPCB) / Union Territory Pollution Control Committee (UTPCC)¹² may so desire, it may reduce the time limit and also specify more stringent standards with respect to a specified category of industries within their jurisdiction. The SPCB however cannot relax either the time limit or the standards.
 - (v) Those industries that require consent under the Water Act, Air Act or both, or authorisation under the Hazardous Waste (Management and Handling) Rules, 1989, are required to submit an environmental audit report to the concerned SPCB/PCC on or before 30th September every year.
3. **The Water (Prevention and Control of Pollution) Act, 1974, amended 1988.** The main provisions of this Act aim at prevention and control of water pollution as well as restoration of water quality, through the establishment of SPCB. Some salient features of this Act
 - (i) No persons shall knowingly cause or permit any poisonous, noxious or polluting matter determined in accordance with such standards as may be laid down by the SPCB to enter (whether directly or indirectly) into any stream or well or sewer or on land
 - (ii) No person shall knowingly cause or permit to enter into any stream any other matter which may tend, either directly or in combination with similar matters, to impede the proper flow of the water of the stream in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes or of its consequences
 - (iii) No person shall, without the previous consent of the SPCB:
 - Establish or take any steps to establish any industry, operation or

process, or any treatment and disposal system or an extension or addition thereto which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land (such discharge being hereafter in this section referred to as discharge of sewage) or

- Bring into use any new or altered outlets for the discharge of sewage or
- Begin to make any new discharge of sewage

4. An investor intending to set up an industry is required to apply in the prescribed form to the SPCB concerned to obtain the consent to establish as well as the consent to operate the industry after establishment. While granting the consent, the SPCB also stipulates specific conditions relating to the temperature, volume, composition, rate and point of discharge of emissions, effluents etc. The consent to operate an industry is granted for a specific period after which the conditions stipulated at the time of granting consent are reviewed by the SPCB. Even before the expiry of the consent period, the SPCB is authorised to carry out random checks on any industry to check if the standards prescribed are being complied with by the industry; in case the standards are not being met, the SPCB is authorised to serve a notice to the concerned person.
5. The owner of a defaulting industry may be required to construct a sewage/effluent treatment system. In the event of non-compliance of the standards, the SPCB may issue directions for disconnecting electricity and water supply or any other services to the industry, in extreme cases even to close down the unit.
6. Stringent penalties are prescribed in this Act for those who operate their industry without the valid consent or in violation of consent conditions. Any person aggrieved by an order of the SPCB in the above context may appeal to the Appellate Authority constituted by the concerned State Government. As per the provisions under the Water Act and the Air Act, all State Governments, are required to constitute Appellate Authorities for addressing the appeals received against SPCB. While some State Governments have separate Appellate Authorities under the two Acts, a single Appellate Authority may also exist in other states.
7. **The Air (Prevention and Control of Pollution) Act, 1981, amended 1987.** The objective of the Air Act is to prevent, control and reduce air pollution including noise pollution and to establish Boards at the States/UTs for this. Under the provisions of this Act, no person shall establish or operate any industrial plant without the consent of the SPCB. For obtaining consent to establish an industry, the investor has to apply to the SPCB in the prescribed form accompanied by the prescribed fees. The Board is required to grant consent within 4 months of receipt of the application. The consent would contain conditions relating to specifications of pollution control equipment to be installed.
8. The other Provisions of the Act are similar to those of the Water Act, 1974.
9. **The Public Liability Insurance Act, 1991.** This Act imposes on the owner the liability to provide immediate relief with respect to death or injury to any person or damage to any property resulting from an accident while handling any of the notified hazardous chemicals. This relief has to be provided on 'on fault' basis. To be able to meet this liability, the owner handling hazardous chemicals has to take an insurance policy of an amount equal to its 'paid up capital' or up to Rs.500 million, whichever is less. The policy has to be renewed every year. New undertakings will have to take this policy before starting their activity. For existing plants the policy was to be taken within one year of the Act coming into force i.e. up to 31st March, 1992. The owner also has to pay an amount equal to its annual premium to the Central Government's Environment

Relief Fund (ERF). The reimbursement of relief to the extent of Rs25,000 per person is admissible in case of fatal accidents in addition to the reimbursement of medical expenses up to Rs12,500. The liability of the insurer is limited to Rs50 million per accident up to Rs150 million per year or up to the tenure of the policy. Any claims in excess of this liability will be paid from the ERF. In case the award still exceeds, the remaining amount shall have to be met by the owner. The payment under the Act is only for the immediate relief; owners shall have to provide the final compensation, if any, arising out of legal proceedings.

10. **The Environmental Impact Assessment Notification, 2006.** This notification lays down specific project categories that require environmental clearance from the from the Central Government or as the case may be, by the State Level Environment Impact Assessment Authority, duly constituted by the Central Government, prior to establishing an industrial unit (see “Specified Requirements for Environmental Clearance as listed in the Environment Impact Assessment Notification, 2006, MoEF” in this document). It also addresses the composition of Screening, Scoping and Appraisal Committees, stages prior to environmental clearance, including public consultation and post-environmental clearance monitoring as well as transferability of environmental clearance.
11. **Forests Clearance.** Under Forests (Conservation) Act, 1980, de-reservation of forests, transfer to forest land by way of lease and clearing of trees for the purposes of reforestation during the undertaking of any infrastructure projects requires prior approval from the MoEF.
12. **Environment (Siting for Industrial Projects) Rules, 1999.** These are the various environmental guidelines mandated by the MoEF for siting of industries. Topics addressed include (i) prohibition for setting up of certain industries, (ii) establishment of new units with certain conditions, (iii) restrictions on the units in Taj Trapezium and (iv) establishment of new units around archaeological monuments.
13. **Notifications concerning Ecosensitive Zones.** The MoEF has prohibited and/or restricted specified industrial activities in certain areas of the country. These zones are also called ecosensitive zones and are listed below:
 - (i) Matheran and surrounding region
 - (ii) MahabaleswarPanchgani region
 - (iii) Pachmarhi region
 - (iv) Taj Trapezium Zone
 - (v) DahanuTaluka, District Thane, Maharashtra
 - (vi) Numaligarh, East of Kaziranga
 - (vii) AravalliRange
 - (viii) DoonValley (Uttar Pradesh)
 - (ix) Murud-Janjira, Raigadh District, Maharashtra
14. **Notifications concerning Coastal Regulation Zones.** To further supplement the law on site clearance, there is a notification declaring coastal stretches in various States and UnionTerritories (namely, Gujarat, Daman and Diu, Maharashtra, Goa, Kerala, Karnataka, Pondicherry, Tamil Nadu, Orissa,West Bengal, Lakshadweep, Andhra Pradesh and Andaman and Nicobar) as Coastal Regulation Zones (CRZs). The notifications aim at regulating activities in the CRZs.
15. **Noise Pollution (Control and Regulation) Rules, 2000, amended 2002.** As per these rules, the noise levels in any area/zone shall not exceed the ambient air quality standards with respect to noise as specified in the Schedule.

16. **The Environmental Audit Notification, 1992.** This notification directs that an environmental audit report be submitted yearly to the Pollution Control Board in cases where consent is required under the Water/Air Act or authorisation under the Hazardous Wastes (Management and Handling) rules.
17. **Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organisms and Genetically Engineered Organism or Cell Rules, 1989.** The Department of Bio-Technology under the Ministry of Science and Technology is the nodal agency for granting licences for manufacture, import and export of micro-organisms and genetically engineered organisms. However, such licences are issued only after the proposal is cleared from the environmental angle by the Ministry of Environment and Forests. For according such clearances, the Ministry has notified the 'Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Micro-organisms and Genetically Engineered Organisms or Cells' in 1989 under the EPA, 1986.
18. The investor is required to submit an application in the prescribed proforma to the Ministry of Environment and Forests. The Genetic Engineering Approval Committee (GEAC) constituted by the MoEF examines the application form and makes recommendations.
19. All industries involving hazardous micro-organisms or genetically engineered organisms, are required to constitute an Institutional Bio-Safety Committee (IBSC) to oversee the planning and execution of various operations in a safe manner and to prepare an on-site emergency plan to deal with any accident which may occur due to a hazardous micro-organism.
20. These rules will apply to infrastructure projects such as those requiring bioremediation of contaminated sites.
21. **The Hazardous Wastes (Management and Handling) Rules, 1989, amended 2003.** These rules lay down the responsibility of the 'occupier' of the infrastructure project for the handling of wastes. The occupier shall take all practical steps to ensure that such wastes are properly handled and disposed of without any adverse effects which may result from such wastes. The occupier shall also be responsible for proper collection, reception, treatment, storage and disposal of these wastes either himself or through the operator of a facility. The rules also specify criteria for the grant of authorizations for the handling of hazardous wastes, rules to be followed during the packaging, labelling and transport of hazardous wastes, inventory of disposal sites, generation and maintenance of records, accident reporting and follow-up.
22. **The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, amended 2000.** These rules apply to an industrial activity in which a hazardous chemical, which satisfies any of the criteria laid down in the rules, and/or isolated storage in which there is involved a threshold quantity of a hazardous chemical are involved. The occupier (who has control of an industrial activity) has to provide evidence to show that he has identified the major accident hazards and taken adequate steps to prevent such major accidents and limit their consequences to persons and the environment and provide the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety. These rules also lay down the criteria for the notification of major accidents, notification of sites and the updating the site notification following changes in the threshold quantity, safety reports, and preparation of on-site and off-site emergency plans by the occupier, as well as information disclosure.

23. **The Biomedical Waste (Management and Handling) Rules, 1998, amended 2003.** These rules apply to all projects which generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form. They deal with the various categories of biomedical waste, segregation, packaging, transportation, storage and disposal of such waste.
24. **Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.** These rules concern chemical accidents - any accident involving a sudden or unintended occurrence while handling any hazardous chemicals resulting in continuous, intermittent or repeated exposure to death, or injury to, any person or damage to any property. Schedules 2 and 3 of the Rules list the threshold quantities and names of the various chemicals to which they are applicable.
25. **The Batteries (Management and Handling) Rules, 2001.** These rules shall apply to every manufacturer, importer, re-conditioner, assembler, dealer, recycler, auctioneer, consumer and bulk consumer involved in manufacture, processing, sale, purchase and use of lead acid batteries or components thereof. The rules delineate the responsibility of the consumer, (the category under which infrastructure project sites using plants, equipment and vehicles would fall) namely that they must ensure that used batteries are not disposed of in any manner other than depositing with a dealer, manufacturer, importer, assembler, registered recycler, reconditioner or at designated collection centres.

E&S REGULATIONS AND OBLIGATIONS, AND AREAS OF APPLICABILITY AT PROJECT SITES

E&S Regulation	Areas of Applicability at Project Sites	Obligations
The Water (Prevention and Control of Pollution) Act, 1974, amended 1988	Wastewater effluent from camp and construction activities	As per Rule/Clause 20(3), provide PCB information sought by it for preventing or controlling pollution of water regarding the construction, installation, operation or the treatment and disposal systems of the factory (site)
The Water (Prevention and Control of Pollution) Rules, 1975		<p>As per Rule/Clause 21(1), provide access to the PCB or any officer empowered by it for taking samples of water or effluents from the factory for analysis</p> <p>As per Rule/Clause 23 (1) (C), allow entry to the PCB or any person empowered by it, at any time, for the purpose of performing any of the entrusted functions, or for inspecting to ascertain the provisions of the Act are being complied with, or for seizing any plant records, registers, documents or any material object, in case there are reasons to believe that provisions of the Act are being contravened</p> <p>As per Rule/Clause 24 (1), do not knowingly discharge any effluent into the stream, sewer or on land, of quality which is not conforming to the standards prescribed by the PCB</p> <p>As per Rule/Clause 31(1), furnish information to the PCB and other designated agencies, of any accidental or unforeseen event, in which effluents not conforming to the prescribed standards are being discharged, or likely to be discharged into a stream or sewer or on land</p> <p>As per Rule/Clause 33(A), comply with the directions issued in writing by the PCB, within the specified time, as mentioned in the order. The directions may include, i) the closure, prohibition or regulation of any industry, operation or process, or ii) the stoppage or regulation of supply of electricity, water or any other service, and (iii) comply with the conditions as prescribed in the "Consent to Establish" or "Consent to Operate" for discharge of effluents into a stream or sewer or on land</p> <p>As per Rule/Clause 25(1), obtain "Consent to establish" prior to taking any steps to establish any industry, operation or process or any treatment and disposal system which is likely to discharge effluents</p>

E&S Regulation	Areas of Applicability at Project Sites	Obligations
		As per Rule/Clause 26, (i) obtain "Consent to operate" prior to commencing operations of any industry, or any treatment and disposal system which is likely to discharge effluents (ii) apply for renewal of the consent to operate before the expiry of validity period, as specified in the consent granted earlier, in the prescribed form and along with the prescribed fees
The Water (Prevention and Control of Pollution) Cess Act, 1977, amended 2003	Consumption of water for camp and construction activities	As per Section 3(2), 5(1) and Rules 3 & 4, pay water cess, as prescribed within the specified time as indicated in the assessment order, if the industry is included in the specified schedule under the Act
The Water (Prevention and Control of Pollution) Cess Rules, 1978		<p>As per Section 4(1) and Rule 7, affix meters of the prescribed standards for water consumption measurements at places specified by the PCB</p> <p>As per Section 9(a) and Rule 7, provide access to PCB, at all reasonable times, for implementing the provisions of the Act, including testing of the meters for their accuracy</p> <p>As per Section 10 and Rule 8, pay interest at the prescribed rates, in case of delay in paying water cess</p> <p>As per Section 11 and Rule 8, pay penalty for non-payment of cess, within the specified time, not exceeding the amount of cess, in arrears, after being given a reasonable opportunity of hearing</p> <p>As per Section 3(2), 5(1) and Rule 4, (i) submit the "Water Cess Return" in the prescribed form at specified intervals, to the PCB (ii) submit analytical report of the treated waste sample/s for the assessment month along with the form of Cess return and claim the rebate of 25%</p>
The Air (Prevention and Control of Pollution) Act, 1981, amended 1987	Plants and equipment releasing emissions	Comply with the conditions as prescribed in the "Consent to Establish" or "Consent to Operate" for emissions
The Air (Prevention and Control of Pollution) Rules, 1982		<p>As per Rule/Clause 21(1), obtain "Consent to establish" prior to taking any steps to establish any industrial plant in an air pollution control area, which is likely to emit air pollutant(s)</p> <p>As per Rule/Clause 21(1), obtain "Consent to operate" prior to commencing operations of any industrial plant which is likely to emit air pollutant(s) in an air pollution control area</p>
The Air (Prevention and		

E&S Regulation	Areas of Applicability at Project Sites	Obligations
Control of Pollution) (Union Territories) Rules, 1983		<p>As per Rule/Clause 21(2), apply for renewal of the consent to operate before the expiry of validity period, as specified in the consent granted earlier, in the prescribed form and along with the prescribed fees</p> <p>As per Rule/Clause 21(5), comply with the conditions under this clause</p> <p>As per Rule/Clause 22, no person operating any industrial plant, in any air pollution control area shall discharge or cause or permit to be discharged the emission of any air pollutant in excess of the standards laid down by the State Board under clause (g) of sub-section (1) of section 17</p> <p>As per Rule/Clause 23(1), furnish information to the PCB and other designated agencies, of any accidental or unforeseen act or event in which emissions of air pollutant(s) occurred in excess of the prescribed standards or are likely to occur</p> <p>As per Rule/Clause 24(2), provide all facilities required by the PCB official for the purpose of sampling</p> <p>As per Rule/Clause 25, (i) allow entry to the PCB or any official empowered by it to the industrial established, at all reasonable times, for the purposes of carrying out any of the entrusted functions or for inspecting to ascertain that provisions of the Act are being complied with or for seizing any equipment, plant, records, registers, documents or any other material object if there are reasons to believe that provisions of the act are being contravened (ii) do not discharge air pollutant (s) in excess of the standards prescribed standards by the PCB (iii) provide the PCB any information to enable it to implement the provisions of the Act</p>
The Environment (Protection) Act, 1986, amended 1991	Activities involving raw material consumption, pollution discharge, and hazardous waste and solid waste generation	As per Section 7, Rule 3, prevent discharges or emissions of environmental pollutants in excess of the prescribed standards
The Environment (Protection) Rules, 1986, various amendments		As per Rule/Clause 8, handle hazardous substances in accordance with the procedures and safeguards as prescribed by the respective authorities

E&S Regulation	Areas of Applicability at Project Sites	Obligations
		<p>As per Rule/Clause 9, furnish information to the prescribed agencies of any accidental or unforeseen event in which environmental pollutant(s) not conforming to the prescribed standards are being discharged, or are likely to be discharged, into the environment</p> <p>As per Rule/Clause 10, allow entry and inspection by any person empowered by the Central Government into the industrial establishment at all reasonable times, for the purpose of performing any of the functions entrusted, or to ascertain compliance with the provisions of the Act or for seizing of any equipment, plant registers, records or documents in case there are reasons to believe that any provision of the Act is being contravened</p> <p>As per Rule/Clause 10(2),11, allow Central Government or any official empowered by it, to take samples of air, water, soil or any other substance from the industry for analysis</p> <p>As per Rule/Clause 12, furnish of information to authorities and agencies in certain cases</p> <p>As per Rule/Clause 14, (i) submit an " Environmental Statement" every year, before 30th September, to the PCB, in case consent is required under the Water/Air Act or authorisation under the Hazardous Wastes (Management and Handling) rules or both (ii) obtain prior "Environmental Clearance from MoEF, in case of a new project or for modernisation/expansion of the existing project, if it falls under the specified schedule, subject to certain conditions</p>
The Environmental Audit Notification, 1992		
The Environmental Standards Notification, 1993		
Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organisms and Genetically Engineered Organism or Cell Rules, 1989	Activities involving on-site bioremediation	

E&S Regulation	Areas of Applicability at Project Sites	Obligations
The Public Liability Insurance Act, 1991	Accidents on-site	As per Rule/Clause 3(1), to provide relief, as specified, in case of death, or injury to any person (other than workman), or damage to property from an accident occurring while handling specified hazardous substances, on the principle of no fault
The Public Liability Insurance Rules, 1992		<p>As per Rule/Clause 4(2/2A), to draw insurance policies more than the paid-up capital of the undertaking, but less than Rs. 50 crores, before handling any hazardous substances</p> <p>As per Rule/Clause 4(2C), pay additional amounts, as prescribed, to the insurer not exceeding the amount of premium, as contribution to the Environmental Relief Fund to be established under the Act</p> <p>As per Rule/Clause 9, provide any information required by the Central Government or agencies authorised by it, for ascertaining compliance with the provisions of the Act</p> <p>As per Rule/Clause 10, allow entry and inspection of any person empowered by the Central Government to the place where the industrial activity involving hazardous chemicals is being carried out at all reasonable times, to ascertain compliance with the provisions of the Act</p> <p>As per Rule/Clause 7, pay the amount of an award as specified by the collector in the prescribed manner</p> <p>As per Rule/Clause 7 (3) (C), within such period, deposit such amount in such manner as the Collector may direct</p> <p>As per Rule/Clause 7 (6), The owner against whom the award is made under sub-section (1) fails to deposit the amount of such award within the period specified under sub-section (3), such amount shall be recoverable from the owner, or as the case may be, the insurer as arrears of land revenue or of public demand</p> <p>As per Rule/Clause (12), comply with the directions issued in writing by the Central Government, within the specified time, as mentioned in the order. The directions may include a)Prohibition or regulation of handling of any hazardous substances, or b)Stoppage or</p>

E&S Regulation	Areas of Applicability at Project Sites	Obligations
Gas Cylinder Rules, 1981		regulation of the supply of electricity, water or any other service
The National Environmental Tribunal Act, 1995		
The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, amended 2000		Handling of hazardous chemicals in construction activities

E&S Regulation	Areas of Applicability at Project Sites	Obligations
		<p>As per Rule/Clause 18(5), maintain records of imports of hazardous chemicals in the prescribed form (Schedule 10)</p> <p>As per Rule/Clause 18(6), carry out an independent safety audit with the help of an expert, not associated with such industrial activities & forward a copy with his comments within 30 days to that authority</p> <p>As per Rules 10 to 12, (a) carry out an independent safety audit with the help of an expert, not associated with such industrial activities & forward a copy with his comments within 30 days to that authority (b) update safety audit report once a year by conducting a fresh safety audit (c) conduct mockdrills once in six months and communicate compliance to the respective authorities provided in Schedule 5 of the Rules (d) assist the District Collector in the preparation of off-site emergency plans as per serial number 9 of this Schedule 5</p>
<p>The Hazardous Wastes (Management and Handling) Rules, 1989, amended 2003</p>		<p>As per Rule/Clause 4(1), ensure proper collection, reception, treatment, storage and disposal of hazardous wastes by the owner himself or through an operator of the facility for specified hazardous wastes</p> <p>As per Rule/Clause 4A, take adequate steps while handling hazardous waste to contain contaminants and prevent accidents and limit their consequences on human and the environment and provide persons working on the site with information, training and equipment necessary to ensure their safety</p> <p>As per Rule/Clause 5, comply with the conditions specified in the authorisation granted for handling of hazardous wastes</p> <p>As per Rule/Clause 5(2), obtain "grant of authorisation" for handling hazardous wastes from PCB after payment of fees Rs. 2500/-</p> <p>As per Rule/Clause 5(6)(ii), apply for renewal of authorisation before expiry of the validity period as specified in the authorisation granted in the prescribed form</p> <p>As per Rule/Clause 5(8) (i) and 9 (2), submit annual returns by the Occupier in Form 4</p>

E&S Regulation	Areas of Applicability at Project Sites	Obligations
		<p>As per Rule/Clause 5(8) (ii), submit documentary evidence on steps taken, wherever feasible, for reduction in volume/ concentration of hazardous waste generated or recycled or reused</p> <p>As per Rule/Clause 5(8) (iii), fulfill conditions prescribed in the authorization regarding management in an Environmentally Sound Manner (ESM) of Wastes</p> <p>As per Rule/Clause 7(2), ensure packaging, labelling and transportation of hazardous wastes in accordance with the provisions of Motor Vehicles Act, 1988</p> <p>As per Rule/Clause 7(3), all hazardous waste containers should be provided with a general label as given in Form 8"</p> <p>As per Rule/Clause 7(5), provide the transporter with six copies of the manifest as per the 7 colour codes of the manifest system</p> <p>As per Rule/Clause 7(6), obtain NOC from SPCBs of the respective states involved in case of any inter and intra state transport of hazardous wastes</p> <p>As per Rule/Clause 7(7), provide the transporter with relevant information in Form 10 regarding hazardous nature of the wastes and measures to be taken in case of an emergency</p> <p>As per Rule/Clause 9(1), maintain records of operations generating hazardous waste in Form 3</p> <p>As per Rule/Clause 10, report to the PCB any accident at site, or during transportation, while handling hazardous wastes in the prescribed form</p> <p>As per Rule/Clause 16, the occupier, transporter and operator of a facility shall be (i) liable for damages caused to the environment resulting due to improper handling and disposal of hazardous waste listed in schedule 1, 2 and 3 (2) shall be liable to reinstate or restore damaged or destroyed elements of the environment (iii) shall be liable to pay a fine as levied by the SPCB with the approval of the CPCB for any violation of the provisions under these rules</p>
Chemical Accidents (Emergency Planning,		

E&S Regulation	Areas of Applicability at Project Sites	Obligations
Preparedness and Response) Rules, 1996		
The Biomedical Waste (Management and Handling) Rules, 1998, amended 2003	On-site / construction camp clinics and first-aid centres	As per Rule/Clause (4), ensure that biomedical waste is handled without any adverse effect to human health and the environment As per Rule/Clause 5(1), dispose of biomedical waste in accordance with Schedule I and Schedule V
Noise Pollution (Control and Regulation) Rules, 2000, amended 2002	Plants, equipment and vehicles	(a) As per Rules/Clause 4(1), ensure that noise levels do not exceed those specified in Schedule (b) follow the conditions stipulated in the letter of Consent by the SPCB (c) Monitor limits for day-time and night-time noise [day-time: 75 dB(A) Leq and night-time: 70 75 dB(A) Leq]
The Batteries (Management and Handling) Rules, 2001		As per Rules/Clause 10(1), the user must ensure that used batteries are not disposed off in any manner other than depositing with the dealer, manufacturer, importer, assembler, registered recycler, reconditioner or at designated collection centres
Motor Vehicle Act, 1988	Light and heavy motor vehicles	

EIA REVIEW CHECKLIST

1. The checklist is organised in seven sections:
 - (i) Description of the project
 - (ii) Alternatives
 - (iii) Description of the environment likely to be affected by the project
 - (iv) Description of the likely significant effects of the project
 - (v) Description of mitigating measures
 - (vi) Non-technical summary
 - (vii) Quality of presentation

2. Within each section there are numbered Review Questions. For some questions notes are provided to assist the reviewer.

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
SECTION 1: DESCRIPTION OF THE PROJECT				
Objectives and physical characteristics of the project				
1.1	Are the need for and objectives of the project explained?			
1.2	Is the programme for implementation of the project described, detailing the estimated length of time and start and finish dates for construction, operation and decommissioning? <i>(this should include any phases of different activity within the main phases of the project, for example extraction phases for mining operations)</i>			
1.3	Are all the main components of the project described <i>(see the Checklist of project Activities in Procedure for Scoping)</i>			
1.4	Is the location of each project component identified, using maps, plans and diagrams as necessary?			
1.5	Is the layout of the site (or sites) occupied by the project described? <i>(including ground levels, buildings, other physical structures, underground works, coastal works, storage facilities, water features, planting, access corridors, boundaries)</i>			
1.6	For linear projects, are the route corridor, the vertical and horizontal alignment and any tunneling and earthworks described?			
1.7	Are the activities involved in construction of the project all described?			
1.8	Are the activities involved in operation of the project all described?			
1.9	Are the activities involved in decommissioning the project all described? <i>(e.g. closure, dismantling, demolition, clearance, site restoration, site re-use etc.)</i>			
1.10	Are any additional services required for the			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
	project all described? (e.g. transport access, water, sewerage, waste disposal, electricity, telecoms) or developments (e.g. roads, harbours, powerlines, pipelines)			
1.11	Are any developments likely to occur as a consequence of the project identified? (e.g. new housing, roads, water or sewerage infrastructure, aggregate extraction)			
1.12	Are any existing activities which will alter or cease as a consequence of the project identified?			
1.13	Are any other existing or planned developments with which the project could have cumulative effects identified?			
Size of the project				
1.14	Is the area of land occupied by each of the permanent project components quantified and shown on a scaled map? (including any associated access arrangements, landscaping and ancillary facilities)			
1.15	Is the area of land required temporarily for construction quantified and mapped?			
1.16	Is the reinstatement and after use of land occupied temporarily for operation of the project described? (e.g. land used for mining or quarrying)			
1.17	Is the size of any structures or other works developed as part of the project identified? (e.g. the floor area and height of buildings, the size of excavations, the area or height of planting, the height of structures such as embankments, bridges of chimneys, the flow or depth of water)			
1.18	Is the form and appearance of any structures or other works developed as part of the project described? (e.g. the type, finish and colour of materials, architectural design of buildings and structures, plant species, ground surfaces, etc.)			
1.19	For urban or similar development projects, are the numbers and other characteristics of new populations or business communities described?			
1.20	For projects involving the displacement of people or businesses, are the numbers and other characteristics of those displaced described?			
1.21	For new transport infrastructure or projects generating substantial traffic flows, is the type, volume, temporal pattern and geographical distribution of new traffic generated or diverted as a consequence of the project described?			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
Production processes and resources used				
1.22	Are all the processes involved in operating the project described? (<i>e.g. manufacturing or engineering processes, primary raw material production, agricultural or forestry production methods, extraction processes</i>)			
1.23	Are the types and quantities of outputs produced by the project described? (<i>these could be primary or manufactured products, goods such as power or water or services such as homes, transport, retailing, recreation, education, municipal services (water, waste, etc.)</i>)			
1.24	Are the types and quantities of raw materials and energy needed for construction and operation discussed?			
1.25	Are the E&S implications of the sourcing of raw materials discussed?			
1.26	Is efficiency in use of energy and raw materials discussed?			
1.27	Are any hazardous materials used, stored, handled or produced by the project identified and quantified? <ul style="list-style-type: none"> · During construction · During operation · During decommissioning 			
1.28	Are the transport of raw materials to the project and the number of traffic movements involved discussed? (<i>including road, rail and sea transport</i>) <ul style="list-style-type: none"> · During construction · During operation · During decommissioning 			
1.29	Is employment created or lost as a result of the project discussed? <ul style="list-style-type: none"> · During construction · During operation · During decommissioning 			
1.30	Are the access arrangements and the number of traffic movements involved in bringing workers and visitors to the project estimated? <ul style="list-style-type: none"> · During construction · During operation · During decommissioning 			
1.31	Is the housing and provision of services for any temporary or permanent employees for the project discussed? (<i>relevant for projects requiring migration of a substantial new workforce into the area for either construction or the long term</i>)			
Residues and emissions				

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
1.32	<p>Are the types and quantities of solid waste generated by the project identified? <i>(including construction or demolition wastes, surplus spoil, process wastes, by-products, surplus or reject products, hazardous wastes, household or commercial wastes, agricultural or forestry wastes, site clean-up wastes, mining wastes, decommissioning wastes)</i></p> <ul style="list-style-type: none"> · During construction · During operation · During decommissioning 			
1.33	<p>Are the composition and toxicity or other hazards of all solid wastes produced by the project discussed?</p>			
1.34	<p>Are the methods for collecting, storing, treating, transporting and finally disposing of these solid wastes described?</p>			
1.35	<p>Are the locations for final disposal of all solid wastes discussed?</p>			
1.36	<p>Are the types and quantities of liquid effluents generated by the project identified? <i>(including site drainage and run-off, process wastes, cooling water, treated effluents, sewage)</i></p> <ul style="list-style-type: none"> · During construction · During operation · During decommissioning 			
1.37	<p>Are the composition and toxicity or other hazards of all liquid effluents produced by the project discussed?</p>			
1.38	<p>Are the methods for collecting, storing, treating, transporting and finally disposing of these liquid effluents described?</p>			
1.39	<p>Are the locations for final disposal of all liquid effluents discussed?</p>			
1.40	<p>Are the types and quantities of gaseous and particulate emissions generated by the project identified? <i>(including process emissions, fugitive emissions, emissions from combustion of fossil fuels in stationary and mobile plant, emissions from traffic, dust from materials handling, odours)</i></p> <ul style="list-style-type: none"> · During construction · During operation · During decommissioning 			
1.41	<p>Are the composition and toxicity or other hazards of all emissions to air produce by the project discussed?</p>			
1.42	<p>Are the methods for collecting, treating and finally discharging these emissions to air described?</p>			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
1.43	Are the locations for discharge of all emissions to air identified and the characteristics of the discharges identified? <i>(e.g. height of stack, velocity and temperature of release)</i>			
1.44	Is the potential for resource recovery from wastes and residues discussed? <i>(including re-use, recycling or energy recovery from solid waste and liquid effluents)</i>			
1.45	Are any sources of noise, heat, light or electromagnetic radiation from the project identified and quantified? <i>(including equipment, processes, construction works, traffic, lighting, etc.)</i>			
1.46	Are the methods for estimating the quantities and composition of all residues and emissions identified and any difficulties discussed?			
1.47	Is the uncertainty attached to estimates of residues and emissions discussed?			
Risks of accidents and hazards				
1.48	Are any risks associated with the project discussed? <ul style="list-style-type: none"> · Risks from handling of hazardous materials · Risks from spills fire, explosion · Risks of traffic accidents · Risks from breakdown or failure of processes or facilities · Risks from exposure of the project to natural disasters (earthquake, flood, landslip, etc.) 			
1.49	Are measures to prevent and respond to accidents and abnormal events described? <i>(preventive measures, training, contingency plans, emergency plans, etc.)</i>			
Any other questions on project description				
SECTION 2: CONSIDERATION OF ALTERNATIVES				
2.1	Is the process by which the project was developed described and are alternatives considered during this process described? <i>(See guidance on types of alternatives which may be relevant in Procedure for Scoping)</i>			
2.2	Is the baseline situation in the 'No project' situation described?			
2.3	Are the alternatives realistic and genuine alternatives to the project?			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
2.4	Are the main reasons for choice of the proposed project explained, including any E&S reasons for the choice?			
2.5	Are the main E&S effects of the alternatives compared with those of the proposed project?			
Any other questions on consideration of alternatives				
SECTION 3: DESCRIPTION OF ENVIRONMENT AND PEOPLE LIKELY TO BE AFFECTED BY THE PROJECT				
Aspects of the environment				
3.1	Are the existing land uses of the land to be occupied by the project and the surrounding area described and are any people living on or using the land identified? <i>(including residential, commercial, industrial, agricultural, recreational and amenity land uses and any buildings, structures or other property)</i>			
3.2	Are the topography, geology and soils of the land to be occupied by the project and the surrounding area described?			
3.3	Are any significant features of the topography or geology of the area described and are the conditions and use of soils described? <i>(including soil quality stability and erosion, agricultural use and agricultural land quality)</i>			
3.4	Are the fauna and flora and habitats of the land to be occupied by the project and the surrounding area described and illustrated on appropriate maps?			
3.5	Are species populations and characteristics of habitats that may be affected by the project described and are any designated or protected species or areas defined?			
3.6	Is the water environment of the area described? <i>(including running and static surface waters, groundwater, estuaries, coastal waters and the sea and including run off and drainage. Not relevant if water environment will not be affected by the project)</i>			
3.7	Are the hydrology, water quality and use of any water resources that may be affected by the project described? <i>(including use for water supply, fisheries, angling, bathing, amenity, navigation, effluent disposal)</i>			
3.8	Are local climatic and meteorological			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
	conditions and existing air quality in the area described? <i>(not relevant if the atmospheric environment will not be affected by the project)</i>			
3.9	Is the existing noise climate described? <i>(not relevant if acoustic environment will not be affected by the project)</i>			
3.10	Is the existing situation regarding light, heat and electromagnetic radiation described? <i>(not relevant if these characteristics of the environment will not be affected by the project)</i>			
3.11	Are any material assets in the area that may be affected by the project described? <i>(including buildings, other structures, mineral resources, water resources)</i>			
3.12	Are any locations or features of archaeological, historic, architectural or other community or cultural importance in the area that may be bisected the project described, including any designated or protected sites?			
3.13	Is the landscape or townscape of the area that may be affected by the project described, including any designated or protected landscapes and any important views or viewpoints?			
3.14	Are demographic, social and socio-economic conditions <i>(e.g. employment)</i> in the area described?			
3.15	Are any future changes in any of the above aspects of the environment that may occur in the absence of the project, described? <i>(the so-called Moving Baseline or 'No project' situation)</i>			
Data collection and survey methods				
3.16	Has the study area been defined widely enough to include all the area likely to be significantly affected by the project?			
3.17	Have all relevant national and local agencies been contacted to collect information on the baseline environment?			
3.18	Have sources of data and information on the existing environment (including social issues) been adequately referenced?			
3.19	Where surveys have been undertaken as part of the E&S studies to characterize the baseline environment are the methods used, any difficulties encountered and any uncertainties in the data described?			
3.20	Were the methods used appropriate for the purpose?			
3.21	Are any important gaps in the data on the			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
	existing environment (including social issues) identified and the means used to deal with these gaps during the assessment explained?			
3.22	If surveys would be required to adequately characterise the baseline conditions but they have not been practicable for any reason, are the reasons explained and proposals set out for the surveys to be undertaken at a later stage?			
Any other questions on description of the environment				
SECTION 4: DESCRIPTION OF LIKELY SIGNIFICANT E&S EFFECTS OF THE PROJECT				
Scoping of effects (See Procedure for Scoping)				
4.1	Is the process by which the scope of the E&S studies were defined described?			
4.2	Is it evident that a systematic approach to scoping was adopted?			
4.3	Is it evident that full consultation was carried out during scoping?			
4.4	Are the comments and views of consultees presented?			
Prediction of direct effects				
4.5	Are direct, primary effects on land uses, people and property described and where appropriate quantified?			
4.6	Are direct, primary effects on geological features and characteristics of soils described and where appropriate quantified?			
4.7	Are direct, primary effects on fauna and flora and habitats described and where appropriate quantified?			
4.8	Are direct, primary effects on the hydrology and water quality of water features described and where appropriate quantified?			
4.9	Are direct, primary effects on uses of the water environment described and where appropriate quantified?			
4.10	Are direct, primary effects on air quality and climatic conditions described and where appropriate quantified?			
4.11	Are direct, primary effects on the acoustic environment (noise or vibration) described and where appropriate quantified?			
4.12	Are direct, primary effects on heat, light or electromagnetic radiation described and where appropriate quantified?			
4.13	Are direct, primary effects on material			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
	assets and depletion of non-renewable natural resources (<i>e.g. fossil fuels, minerals</i>) described?			
4.14	Are direct, primary effects on locations or features of cultural importance described?			
4.15	Are direct, primary effects on the quality of the landscape and on views and viewpoints described and where appropriate illustrated?			
4.16	Are direct, primary effects on demography, social and socio-economic condition in the area described and where appropriate quantified?			
Prediction of secondary, temporary, short-term, permanent, long-term, accidental, indirect, cumulative effects				
4.17	Are secondary effects on any of the above aspects of the environment caused by primary effects on other aspects described and where appropriate quantified? (<i>e.g. effects on fauna, flora or habitats caused by soil, air or water pollution or noise; effects in uses of water caused by changes in hydrology or water quality; effects on archaeological remains caused by desiccation of soils</i>)			
4.18	Are temporary, short term effects caused during construction or during time limited phases of project operation or decommissioning described?			
4.19	Are permanent effects on the environment caused by construction, operation or decommissioning of the project described?			
4.20	Are long term effects on the environment caused over the lifetime of project operations or caused by build up of pollutants in the environment described?			
4.21	Are effects which could result from accidents, abnormal events or exposure of the project to natural or man-made disasters described and where appropriate quantified?			
4.22	Are effects on the environment caused by activities ancillary to the main project described? (<i>ancillary activities are part of the project but usually take place distant from the main project location; e.g. construction of access routes and infrastructure, traffic movements, sourcing of aggregates or other raw materials, generation and supply of power, disposal of effluents or wastes</i>)			
4.23	Are indirect effects on the environment caused by consequential development			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
	described? (<i>consequential development is other projects, not part of the main project, stimulated to take place by implementation of the project e.g. to provide new goods or services needed for the project, to house new populations or businesses stimulated by the project</i>)			
4.24	Are cumulative effects on the environment off the project together with other existing or planned developments in the locality described? (<i>different future scenarios including a worst case scenario should be described</i>)			
4.25	Are the geographic extent, duration, frequency, reversibility and probability of occurrence of each effect identified as appropriate?			
Prediction of effects on human health and sustainable development issues				
4.26	Are primary and secondary effects on human health and welfare described and where appropriate quantified? (<i>e.g. health effects caused by release of toxic substances to the environment, health risks arising from major hazards associated with the project, effects caused by changes in disease vectors caused by the project, changes in living conditions, effects on vulnerable groups</i>)			
4.27	Are impacts on issues such as biodiversity, global climate change and sustainable development discussed where appropriate?			
Evaluation of the significance of effects (See <i>Criteria for Evaluating Significance of Impacts in Procedure for Scoping</i>)				
4.28	Is the significance or importance of each predicted effect discussed in terms of its compliance with legal requirement and the number, importance and sensitivity of people, resources or other receptors affected?			
4.29	Where effects are evaluated against legal standards or requirements are appropriate local, national or international standards used and relevant guidance followed?			
4.30	Are positive effects on the environment described as well as negative effects?			
4.31	Is the significance of each effect clearly explained?			
Impact assessment methods				
4.32	Are methods used to predict effects described and are the reasons for their choice, any difficulties encountered and uncertainties in the results discussed?			
4.33	Where there is uncertainty about the			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
	precise details of the project and its impact on the environment are worst case predictions described?			
4.34	Where there have been difficulties in compiling the data needed to predict or evaluate effects are these difficulties acknowledged and their implications for the results discussed?			
4.35	Is the basis for evaluating the significance or importance of impacts clearly described?			
4.36	Are impacts described on the basis that all proposed mitigation has been implemented? i.e. are residual impacts described?			
4.37	Is the level of treatment of each effect appropriate to its importance for the development consent decision? Does the discussion focus on the key issues and avoid irrelevant or unnecessary information?			
4.38	Is appropriate emphasis given to the most severe, adverse effects of the project with lesser emphasis given to less significant effects			
Any other questions relevant to description of E&S effects				
SECTION 5: DESCRIPTION OF MITIGATION MEASURES				
5.1	Where there are significant adverse effects on any aspect of the environment is the potential for mitigation of these effects discussed?			
5.2	Are any measures which the developer proposes to implement to mitigate effects clearly described and their effect on the magnitude and significance of impacts clearly explained?			
5.3	If the effect of mitigation measures on the magnitude and significance of impacts is uncertain is this explained?			
5.4	Is it clear whether the developer has made a binding commitment to implement the proposed mitigation or that the mitigation measures are just suggestions or recommendations?			
5.5	Are the developer's reasons for choosing the proposed mitigation explained?			
5.6	Are responsibilities for implementation of mitigation including funding clearly defined?			
5.7	Where mitigation of significant adverse effects is not practicable or the developer			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
	has chosen not to propose any mitigation are the reasons for this clearly explained?			
5.8	Is it evident that the EA/SA Team and the developer have considered the full range of possible approaches to mitigation including measures to reduce or avoid impacts by alternative strategies or locations, changes to the project design and layout, changes to methods and processes, “end of pipe” treatment, changes to implementation plans and management practices, measures to repair or remedy impacts and measures to compensate impacts?			
5.9	Are arrangements proposed to monitor and manage residual impacts?			
5.10	Are any negative effects of the proposed mitigation described?			
Any other questions on mitigation measures				
SECTION 6: NON-TECHNICAL SUMMARY				
6.1	Does the EAR/SAR include a Non-Technical summary?			
6.2	Does the summary provide a concise but comprehensive description of the project, its environment, the effects of the project on the environment and the proposed mitigation?			
6.3	Does the summary highlight any significant uncertainties about the project and its E&S effects?			
6.4	Does the summary explain the development consent process for the project and the role of EA/SA in this process?			
6.5	Does the summary provide an overview of the approach to the assessment?			
6.6	Is the summary written in non-technical language, avoiding technical terms, detailed data and scientific discussion?			
6.7	Would it be comprehensible to a lay member of the public?			
Any other questions on non-technical summary				
SECTION 7: QUALITY OF PRESENTATION				
7.1	Is the EAR/SAR available in one or more clearly defined documents?			
7.2	Is the document(s) logically organised and clearly structured so that the reader can			

No.	Review Question	Relevant?	Adequately addressed?	Any further information needed?
	locate information easily?			
7.3	Is there a table of contents at the beginning of the document(s)			
7.4	Is there a clear description of the process which has been followed?			
7.5	Is the presentation comprehensive but concise, avoiding irrelevant data and information?			
7.6	Does the presentation make effective use of tables, figures, maps, photographs and other graphics?			
7.7	Does the presentation make effective use of annexes or appendices to present detailed data not essential to understanding the main text?			
7.8	Are all analyses and conclusions adequately supported with data and evidence?			
7.9	Are all sources of data properly referenced?			
7.10	Is consistent terminology used throughout the document(s)?			
7.11	Does it read as a single document with cross referencing between sections used to help the reader navigate through the document(s)?			
7.12	Is the presentation demonstrably fair and as far as possible impartial and objective?			
Any other questions on non-technical summary				

Table: Overall Appraisal of the EAR/SAR

No.	Review Topic	Grade	Comment
1	Description of the project		
2	Alternatives		
3	Description of the environment likely to be affected by the project		
4	Description of the likely significant effects of the project		
5	Description of mitigating measures		
6	Non-technical summary		
7	Quality of presentation		
Overall assessment:			
Comments:			

INDICATIVE TERMS OF REFERENCE FOR ENVIRONMENTAL ASSESSMENT

1. The consultant shall under take the detailed environmental and social assessment in accordance with the standard set by the Government of India / State Government for infrastructure construction Projects.

A. Environmental Impact Assessment

2. Environment impact assessment or initial environment examination be carried out in accordance to the applicable laws/rules/guidelines set out by appropriate body/organization (for e.g. the Government of India, State Government and/or concerned MDB).
3. The consultant should carry out preliminary environmental screening to assess the direct and induced impacts due to the Project.
4. The consultant shall ensure to document baseline conditions relevant to the Project with the objective to establish the benchmarks.
5. The consultant shall assess the potential significant impacts and identify the mitigative measures to address these impacts adequately.
6. The consultant shall do the analysis of alternatives incorporating environmental concerns. This should include with and without scenario and modification incorporated in the proposed Project due to environment considerations.
7. The consultant shall give special attention to the environmental enhancement measures in the Project for the following:
 - (i) Cultural property enhancement along the highways
 - (ii) Bus bays and bus shelters including review of their location
 - (iii) Highway side landscape and enhancement of the road junctions
 - (iv) Enhancement of highway side water bodies
 - (v) Redevelopment of the borrow areas located on public land
8. The consultant shall prepare the Bill of Quantities (BOQ) and technical specifications for all its items of work in such a way that these may be readily integrated to the construction contracts.
9. The consultant shall establish a suitable monitoring network with regard to air, water and noise pollution. The consultant will also provide additional inputs in the areas of performance indicators and monitoring mechanisms for environmental components during construction and operational phase of the Project.
10. The consultant shall provide the cost of mitigation measures and ensure that environmental related staffing, training and institutional requirements are budgeted in Project cost.
11. The consultant shall prepare the application forms and obtain forestry and environmental clearances from the respective authorities including the SPCBs and the MoEF on behalf of CLIENT.

12. The consultant will make presentation, if required, in defending the Project to the MoEF Infrastructure Committee.
13. The consultant shall identify and plan for plantation of the suitable trees along the existing highway in accordance with Indian Road Congress (IRC) guidelines.
14. The consultant shall assist in providing appropriate input in preparation of relevant environment and social sections of the Project.

B. Reporting Requirements of EIA

15. The consultant would prepare the stand-alone reports as per the guidelines provided by the Government of India/State Government, with contents as per the following:
 - (i) Executive Summary
 - (ii) Description of the Project
 - (iii) Environmental setting of the Project
 - (iv) Identification and categorization of the potential impacts (during pre-construction, construction and operation periods)
 - (v) The public consultation process
 - (vi) Policy, legal and administrative framework: This would include mechanisms at the states and national level for operational policies. This would also include a description of the organizational and implementation mechanism recommended for this Project
 - (vii) Typical plan or specific designs for all additional environmental items as described in the scope of work
 - (viii) Incorporating any other as per the suggestions of the CLIENT, till the acceptance of the reports by the CLIENT
 - (ix) EMP Reports for each Contract Package based on uniform methodology and processes. The consultant will also ensure that the EMP has all the elements for it to be a legal document. The EMP reports would include the following:
 - (x) Brief description of the Project, purpose of the EMP, commitments on incorporating environmental considerations in the design, construction and operations phases of the Project and institutional arrangements for implementing the EMP
 - (xi) A detailed EMP for construction and operational phases with recourse to the mitigation measures for all adverse impacts
 - (xii) Detailed plans for highway-side tree plantation (as part of the compensatory afforestation component)
 - (xiii) Environmental enhancement measures would be incorporated. Enhancement measures would include items described in the scope of work and shall be complete with plans, designs, BOQ and technical specifications
 - (xiv) Environmental monitoring plans during and after construction including scaling add measurement techniques for the performance indicators selected for monitoring
 - (xv) The EMP should be amendable to be included in the contract documents for the works
 - (xvi) Incorporating any other as per the suggestions of the CLIENT, till the acceptance of the reports by the CLIENT

**ANNEX -9: PUBLIC CONSULTATION PROCESS DEFINED BY
MoEF'S EIA NOTIFICATION, 2006**

1. The Public Consultation shall ordinarily have two components comprising of:
 - (i) A public hearing at the site or in its close proximity- district wise, to be carried out, for ascertaining concerns of local affected persons
 - (ii) Obtain responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity
2. The public hearing at, or in close proximity to, the site(s) in all cases shall be conducted by the State Pollution Control Board (SPCB) or the Union territory Pollution Control Committee (UTPCC) concerned in the specified manner and forward the proceedings to the regulatory authority concerned within 45 (forty five) of a request to the effect from the applicant.
3. In case the State Pollution Control Board or the Union territory Pollution Control Committee concerned does not undertake and complete the public hearing within the specified period, and/or does not convey the proceedings of the public hearing within the prescribed period directly to the regulatory authority concerned as above, the regulatory authority shall engage another public agency or authority which is not subordinate to the regulatory authority, to complete the process within a further period of forty five days.
4. If the public agency or authority nominated under the sub-paragraph (iii) above reports to the regulatory authority concerned that owing to the local situation, it is not possible to conduct the public hearing in a manner which will enable the views of the concerned local persons to be freely expressed, it shall report the facts in detail to the concerned regulatory authority, which may, after due consideration of the report and other reliable information that it may have, decide that the public consultation in the case need not include the public hearing.
5. For obtaining responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity, the concerned regulatory authority and the State Pollution Control Board (SPCB) or the Union territory Pollution Control Committee (UTPCC) shall invite responses from such concerned persons by placing on their website the summary EIA report prepared in the format given in Annex IIIA¹³ by the applicant along with a copy of the application in the prescribed form, within seven days of the receipt of a written request for arranging the public hearing. Confidential information including non-disclosable or legally privileged information involving Intellectual Property Right, source specified in the application shall not be placed on the web site. The regulatory authority concerned may also use other appropriate media for ensuring wide publicity about the project or activity. The regulatory authority shall, however, make available on a written request from any concerned person the Draft EIA report for inspection at a notified place during normal office hours till the date of the public hearing. All the responses received as part of this public consultation process shall be forwarded to the applicant through the quickest available means.
6. After completion of the public consultation, the applicant shall address all the material environmental concerns expressed during this process, and make appropriate changes in

the draft EIA and EMP. The final EIA report, so prepared, shall be submitted by the applicant to the concerned regulatory authority for appraisal. The applicant may alternatively submit a supplementary report to draft EIA and EMP addressing all the concerns expressed during the public consultation.

PUBLIC CONSULTATION AND INFORMATION DISCLOSURE MECHANISM AS PER MoEF'S EIA NOTIFICATION, 2006

1.0 The Public Hearing shall be arranged in a systematic, time bound and transparent manner ensuring widest possible public participation at the project site(s) or in its close proximity District - wise, by the concerned State Pollution Control Board (SPCB) or the Union Territory Pollution Control Committee (UTPCC).

2.0 The Process.

The Applicant shall make a request through a simple letter to the Member Secretary of the SPCB or Union Territory Pollution Control Committee, in whose jurisdiction the project is located, to arrange the public hearing within the prescribed statutory period. In case the project site is extending beyond a State or Union Territory, the public hearing is mandated in each State or Union Territory in which the project is sited and the Applicant shall make separate requests to each concerned SPCB or UTPCC for holding the public hearing as per this procedure.

The Applicant shall enclose with the letter of request, at least 10 hard copies and an equivalent number of soft (electronic) copies of the draft EIA Report with the generic structure given in Annex III¹⁴ including the Summary Environment Impact Assessment report in English and in the local language, prepared strictly in accordance with the Terms of Reference communicated after Scoping. Simultaneously the applicant shall arrange to forward copies, one hard and one soft, of the above draft EIA Report along with the Summary EIA report to the Ministry of Environment and Forests and to the following authorities or offices, within whose jurisdiction the project will be located:

- (i) District Magistrate/s
- (ii) Zila Parishad or Municipal Corporation
- (iii) District Industries Office
- (iv) Concerned Regional Office of the Ministry of Environment and Forests

On receiving the draft Environmental Impact Assessment report, the abovementioned authorities except the MoEF, shall arrange to widely publicize it within their respective jurisdictions requesting the interested persons to send their comments to the concerned regulatory authorities. They shall also make available the draft EIA Report for inspection electronically or otherwise to the public during normal office hours till the Public Hearing is over. The Ministry of Environment and Forests shall promptly display the Summary of the draft Environmental Impact Assessment report on its website, and also make the full draft EIA available for reference at a notified place during normal office hours in the Ministry at Delhi.

The SPCB or UTPCC concerned shall also make similar arrangements for giving publicity about the project within the State/Union Territory and make available the Summary of the draft Environmental Impact Assessment report for inspection in select offices or public libraries or panchayats etc. They shall also additionally make available a copy of the draft Environmental Impact Assessment report to the above five authorities/offices viz, Ministry of Environment and Forests, District

Magistrate etc.

3.0 Notice of Public Hearing

- 3.1 The Member-Secretary of the concerned SPCB or UTPCC shall finalize the date, time and exact venue for the conduct of public hearing within 7(seven) days of the date of receipt of the draft Environmental Impact Assessment report from the project proponent, and advertise the same in one major National Daily and one Regional vernacular Daily. A minimum notice period of 30(thirty) days shall be provided to the public for furnishing their Responses.
- 3.2 The advertisement shall also inform the public about the places or offices where the public could access the draft Environmental Impact Assessment report and the Summary Environmental Impact Assessment report before the public hearing.
- 3.3 No postponement of the date, time, venue of the public hearing shall be undertaken, unless some untoward emergency situation occurs and only on the recommendation of the concerned District Magistrate the postponement shall be notified to the public through the same National and Regional vernacular dailies and also prominently displayed at all the identified offices by the concerned SPCB or Union Territory Pollution Control Committee.
- 3.4 In the above exceptional circumstances fresh date, time and venue for the public consultation shall be decided by the Member –Secretary of the concerned SPCB or UTPCC only in consultation with the District Magistrate and notified afresh as per procedure under 3.1 above.

4.0 The Panel

- 4.1 The District Magistrate or his or her representative not below the rank of an Additional District Magistrate assisted by a representative of SPCB or UTPCC, shall supervise and preside over the entire public hearing process.

5.0 Videography

- 5.1 The SPCB or UTPCC shall arrange to video film the entire proceedings. A copy of the videotape or a CD shall be enclosed with the public hearing proceedings while forwarding it to the Regulatory Authority concerned.

6.0 Proceedings

- 6.1. The attendance of all those who are present at the venue shall be noted and annexed with the final proceedings.
- 6.2. There shall be no quorum required for attendance for starting the proceedings.
- 6.3. A representative of the applicant shall initiate the proceedings with a presentation on the project and the Summary EIA report.
- 6.4. Every person present at the venue shall be granted the opportunity to seek information or clarifications on the project from the Applicant. The summary of the public hearing proceedings accurately reflecting all the views and concerns expressed shall be recorded by the representative of the SPCB or UTPCC and read over to the audience at the end of the proceedings explaining the contents in the vernacular language and the agreed minutes shall be signed by the District Magistrate or his or her representative on the same day and forwarded to the

SPCB/UTPCC concerned.

- 6.5. A Statement of the issues raised by the public and the comments of the Applicant shall also be prepared in the local language and in English and annexed to the proceedings.
- 6.6. The proceedings of the public hearing shall be conspicuously displayed at the office of the Panchyats within whose jurisdiction the project is located, office of the concerned ZilaParishad, District Magistrate ,and the SPCB or UTPCC . The SPCB or UTPCC shall also display the proceedings on its website for general information. Comments, if any, on the proceedings which may be sent directly to the concerned regulatory authorities and the Applicant concerned.¹⁵

7.0 Time Period for Completion of Public Hearing

- 7.1 The public hearing shall be completed within a period of 45 (forty five) days from date of receipt of the request letter from the Applicant. Therefore the SPCB or UTPCC concerned shall sent the public hearing proceedings to the concerned regulatory authority within 8(eight) days of the completion of the public hearing .The applicant may also directly forward a copy of the approved public hearing proceedings to the regulatory authority concerned along with the final Environmental Impact Assessment report or supplementary report to the draft EIA report prepared after the public hearing and public consultations.
- 7.2 If the SPCB or UTPCC fails to hold the public hearing within the stipulated 45 (forty five) days, the Central Government in Ministry of Environment and Forests for Category 'A' project or activity and the State Government or Union Territory Administration for Category 'B' project or activity at the request of the SEIAA, shall engage any other agency or authority to complete the process, as per procedure laid down in this notification.

¹⁵ Note that the *draft* EIA report will be available to the locally affected persons prior to the Public Hearing. Thus, citizens will not get to see the *final* EIA report (on the basis of which the decision on the project will be made)

ILLUSTRATIVE FORMATS FOR MONITORING

Format A: Template for Summarizing Mitigation Measures

Project Stage	Project Activity	Potential Environmental Impacts	Proposed Mitigation Measures	Institutional Responsibilities	Cost Estimates
Pre-Construction Phase					
Construction Phase					
Operation and Maintenance Phase					

Format B: Template for Summarizing Monitoring Requirements

	Mitigation Measure	Parameters to be Monitored	Location	Measurements	Frequency	Responsibilities	Cost
Pre-Construction Phase							
Construction Phase							
Operation and Maintenance Phase							

Format C: Template for Summarizing Institutional Strengthening and Training

I.	Strengt hening Activity	Position (Responsibilities)	Strengthening Program		Schedule	Cost Estimate
	1. Mitigation					
	2. Monitoring					
II.	Trainin g Activity	Participants	Course	Content	Schedule	Cost Estimate
	1. EMP Implementation Re- design/Conflict Resolution					
	2. Environmental Processes, Methods and Equipment					
	3. Environmental Policies and Programs					

ANNEX -12: ILLUSTRATIVE FORMATS FOR REPORTING TO THE DONORS

Format A

Sub-project	Short description	Sub-project category	Sub-project proponent (Lead Bank/SPV)	Project cost	Loan amount requested	Present status of the sub-project (being appraised/sanctioned/cancelled/under implementation/under operation)	Loan amount disbursed	Any special comments

Format B

Sub-project	Short description	Responsible Lead Bank/SPV	Sub-project Location	Location sensitivity (Environmental)	Categorization as per EIA Notification	Status on GOI/State Environmental and related (e.g. forest, Coastal Regulation Zone) Clearances	Any environmental implications (e.g. filing of PILs)	Key environmental issues	Key elements of Environmental Management Plan (EMP) to address the issues	Budget allocated for EMP and its percentage to the project cost	EMP budget spent (amount and percentage of allocated EMP budget)

OUTLINE TERMS OF REFERENCE FOR PROJECT MANAGEMENT CONSULTANT I¹⁶

1. PMC will provide core support to ESMU of RREC in operation of the EMF
2. PMC will be identified through competitive bidding. PMC-I will need to have at least 10 years of experience as an organization in Environmental and Social Assessment (ESA), especially on obtaining Environmental Clearance (EC), should have worked on ESA of projects that have received international donor funding and has resident team that has core ESA competencies.
3. PMC will provide one full time environmental and one full time social assessment specialist to RREC. In addition, PMC-I will support ESMU/RREC by providing Field ESA specialists and ESA Training specialists on needs basis.
4. The full time as well as Field Assessment Environmental Specialist will be masters in Environmental Science/Engineering/Planning with at least 5 years of experience. Previous experience in preparing EIAs and obtaining EC at Centre and State levels for infrastructure projects will be essential.
5. The full time as well as Field Assessment Social specialists will have a Masters in Social Development and allied areas with at least 5 years of experience in the preparation of Resettlement Action Plans (RAP) and Indigenous Peoples Development Plans (IPDP).
6. The Training Specialists will have at least a Masters qualification in ESA with 10 years of experience in practicing ESA with at least 3 years of experience on conducting training programmes in ESA.
7. The full time two specialists will work at RREC and report to Head, ESMU. Through the two full time specialists, following services will be rendered by PMC to ESMU/RREC.

Task 1: Conduct compliance review – The specialists will review project documentation received from Lead Bank/SPV; check applicability of all applicable national, state and local environmental and social policies and regulatory requirements; donor requirements – especially on the process to be followed and identify gaps if any for action at the end of Lead Bank/SPV.

Task 2: Check adequacy and effectiveness of EMPs/RAPs/IPDPs – The specialists will review the EMPs/RAPs/IPDPs and check their adequacy and effectiveness in mitigating adverse environmental and social issues, appropriateness of the budget and robustness of the institutional mechanism for implementation and monitoring. Make suggestions if there are deficiencies to the Lead Bank/SPV.

Task 3: Develop conditions as loan covenants that stipulate requirements or outcomes of EMP/RAP/IPDPs.

Task 4: Prepare Memo for Board on the basis of Tasks 1, 2, and 3.

Task 5: Prepare sector specific checklists, guidelines, monitoring and reporting formats to strengthen EMS. These guidelines will make use of materials developed by GOI and MDBs (**Annex 8,9, 10, 11, and 13** illustrate such guidance materials of

relevance to Lead Banks/SPVs. PMC will build a compendium to this effect and provide to the Lead Banks/SPVs).

Task 6: Coordinate with Field Environmental and Social Specialists for assessment, monitoring and review as required. These Field Specialists will be provided by PMC-I through its pool of resources. The full time ESA specialists will recommend to the Head, ESMU need to deploy Field Environmental and Social Specialists based on information requirements, interest on independent checking, project sensitivity, time pressures etc.

Task 7: Coordinate with Lead Banks/SPVs to provide support to independent environmental and social auditors (PMC) for preparing RREC's Annual Environmental and Social report. The specialists will work closely with the Lead Banks/SPVs as well as the auditors to ensure that required information is compiled and provided in a timely manner.

Task 8: Prepare progress and performance reports for the various donors. **Annex E-13** provides a guideline.

Task 9: Coordinate with the Training Specialists to provide guidance to the Lead Banks/SPVs on project processing under EMS/Social Management System. The specialists will identify training needs and work closely with Training Specialists provided by PMC-I to conduct training programmes at Lead Bank/SPV on a regular basis, conduct evaluation of the training programmes and prepare reports.

Task 10: Update EMS/Social Management System based on operational experience.

1. Fees to PMC will be paid for the provision of full time staff (two ESA specialists) and towards need based usage of other staff (Field and Training Specialists) on agreed daily rates. ESMU/RREC will provide the office space, office support such as computers, stationary and communication facilities. All field travel for work will be reimbursed following the norms as applicable at RREC.
2. In case of any dissatisfaction on the services and qualifications of the full time or part time staff, PMC will be obligated to do requisite replacement.

OUTLINE TERMS OF REFERENCE FOR PROJECT MANAGEMENT CONSULTANT II¹⁷

1. PMC will be responsible to conduct annual environmental and social audit of RREC's EMF.
2. PMCI will be identified through competitive bidding. PMC-II will need to have at least 10 years of experience as an organization in Environmental and Social Assessment (ESA), especially on obtaining Environmental Clearance (EC), should have worked on ESA of projects that have received international donor funding and has resident team that has core ESA competencies.
3. PMC will provide one senior environmental and one senior social assessment specialist for conducting annual environmental and social audit.
4. The Senior Environmental Specialist will be masters in Environmental Science/Engineering/Planning with at least 10 years of experience. Previous experience in reviewing/auditing EIAs and obtaining EC at Centre and State levels for infrastructure projects will be essential.
5. The Senior Social specialists will have a Masters in Social Development and allied areas with at least 10 years of experience in the preparation/assessment of Resettlement Action Plans (RAP) and Indigenous Peoples Development Plans (IPDP).
6. These two specialists will work closely with specialists provided by PMC-I during the planning, conduct and closure of the annual environmental and social audit.
7. The audit will check whether the procedures as stipulated in the EMS have been followed, whether the outcomes (e.g. reports) have been satisfactory, whether the decisions taken were appropriate and whether the actions recommended were taken in full and on timely basis.
8. The tasks to be completed shall be as follows.
 - **Task 1:** Verify whether the procedures as per the EMF have been followed at ESMU/RREC for all sub-projects that have been appraised and financed.
 - **Task 2:** Design audit recording sheet for sub-projects in consultation with ESMU/RREC that would meet RREC's as well as donor requirements. See **Annex 14** as a sample. Provide the format to ESMU/RREC to compile data on all sub-projects that are appraised and financed.
 - **Task 3:** Analyze data compiled by ESMU/RREC following the audit recording sheet. Request additional information if needed to complete assessment

- **Task 4:** Develop audit programme by identifying projects that will be assessed through data alone and through field visits as per the approach outlined in EMF document.
 - **Task 4:** Conduct field visits as per the agreed audit programme. Complete audit recording sheets by adding field observations
 - **Task 5:** Prepare report for ESMU/RREC with suitable appendices, summarizing observations, corrective actions needed as relevant for each sub-project that is audited, make suggestions for improvements at ESMU/RREC as well as at Lead Banks/SPVs and recommend updation in the EMF where appropriate
9. Fees to PMC will be paid on lump sum basis for providing the above service, ESMU/RREC will provide the data, do required coordination with Lead Banks/SPVs, provide office space, office support such as computers, stationary and communication facilities. All field travel for work will be reimbursed following the norms as applicable at RREC.