Environmental Assessment and Review Framework

May 2017

IND: SASEC Road Connectivity Investment Program

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CURRENCY EQUIVALENTS

(as of 21 October 2016)

Currency unit	–	Indian rupee (INR)
INR1.00	=	$ 0.01496
$1.00	=	INR 66.8349

ABBREVIATIONS

ADB	–	Asian Development Bank
CPCB	–	Central Pollution Control Board
DPR	–	detailed project report
E&S	–	environment and social
EA	–	executing agency
EAC	–	Expert Appraisal Committee
EARF	–	environmental assessment and review framework
EIA	–	environmental impact assessment
EMP	–	environmental management plan
EMOP	-	environmental monitoring plan
GOI	–	Government of India
GRC	–	grievance redress committee
GRM	–	grievance redress mechanism
IA	–	implementing agency
ISC	-	Implementation support consultants
MoEFCC	–	Ministry of Environment, Forests and Climate Change
MoRTH	–	Ministry of Roads Transport and Highway
NH	–	national highway
PD	–	Project Director
PIU	–	Project Implementation Unit
ROW	–	right of way
SH	–	state highway
SPCB	–	State Pollution Control Board
SPS	–	ADB Safeguard Policy Statement, 2009
WBPWD	–	West Bengal Public Works Division

WEIGHTS AND MEASURES

km	–	kilometer
m	–	meter

NOTE

In this report, "$" refers to US dollars.

CONTENTS

I. INTRODUCTION

1. ADB has a regional cooperation program in four South Asian countries: Bangladesh, Bhutan, India and Nepal, called South Asia Subregional Economic Cooperation (SASEC[1]), which has been supporting regional cooperation in the transport sector through SAARC[2] and BIMSTEC[3] over a decade. Major contributions in this regard include assisting the SAARC Regional Multimodal Transport Study (SRMTS)[4] and BIMSTEC Transport Infrastructure and Logistics Study (BTILS).[5] A series of SASEC Trade Facilitation and Transport Working Group meetings have endorsed ADB preparation of a project to improve the most critical corridors connecting Nepal, India, Bangladesh and Bhutan in the northern part of West Bengal, so called the "chicken neck" area of India. Further, to initiate connectivity between South Asia and South East Asia and as a follow on activity of the BTILS, strategic roads connecting Bangladesh, India and Myanmar are also being improved.

2. The proposed Multi tranche Financing Facility (MFF) will upgrade high priority trade corridors comprising of National Highways (NH) and State Highways (SH) connecting five countries: Bangladesh, Bhutan, India, Myanmar and Nepal in the north eastern part of India including North Bengal. Given the large scale of the program and the need to carefully study priority corridors particularly in the India - Bangladesh - Myanmar region, a MFF approach is proposed to finance the project.

3. While approximately seven road corridors were identified for financing under the program, initially two sample subprojects[6] (AH-2 and AH-48) in West Bengal were prepared as part of tranche 1 which was approved in April 2014. A combined Environmental Impact Assessment (EIA) report was prepared for these two subprojects as they are located in environmentally sensitive areas, and fall under category A according to the ADB Safeguard Policy Statement. Subsequently the Imphal-Kancup-Tamenglong state highway (ITK SH) subproject in Manipur state was prepared as a non-sample subproject of tranche 1 and approved in March 2016. This subproject was also environment category A as it included 90 km of greenfield road construction of the total of 103km in hilly terrain. In accordance with this EARF and the SPS an EIA report was prepared for the subproject.

4. The scope of tranche 2 has been defined as shown in table 1 and is currently being prepared for board approval in accordance with the requirements of this EARF. All tranche 2 subprojects will be prepared prior to board approval. It is expected that the MFF will have one more tranche. The draft scope of tranche 3 is provided in table 1. Given this, the purpose of this EARF is to guide procedures for the selection, environmental assessment and implementation of environment safeguards for subprojects under tranche 3 and ensure compliance to relevant laws and policies of the Government of India and the ADB Safeguard Policy Statement (SPS) 2009.

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[1] South Asia Economic Cooperation (SASEC). Member countries are Bangladesh, Bhutan, India and Nepal

[2] South Asian Association for Regional Cooperation (SAARC). Member countries are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka

[3] Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC). Member countries are Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand

[4] SAARC Secretariat. 2007. *Regional Multimodal Transport Study*. Kathmandu.

[5] ADB. 2008. *Final Report of RETA6335: BIMSTEC Transport Infrastructure and Logistics Study*. Manila.

[6] Tranche 1 followed a sector loan approach

Table 1: List of Subprojects and Potential Subprojects

Tranche	Subprojects		
Tranche 1	AH-2 (37.3km)	AH-48 (90.6km)	Imphal-Kangchup-Tamenglong state highway in Manipur (103.0km)
Tranche 2	AH-1: Imphal-Moreh Priority section (Imphal to Khongkhang village (65.7km)	Mechi Bridge (1.5 km)	Additional financing for Imphal-Kangchup-Tamenglong state highway in Manipur
Tranche 3	Imphal-Moreh AH-1 last mile (about 30 km)	Imphal-Moreh Alternate Road (about 62 km)	

II. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

5. The Government of India's Environmental Legal Framework comprises a set of comprehensive acts and regulations aimed at conserving various components of the biological and physical environment including environmental assessment procedures and requirements for public consultation. The policies and requirements which are most relevant in the context of this program are provided in table 2 below.

Table 2: Summary of Environmental Legislation Applicable to the Proposed Program

Act	Objective	Responsible Institution
1. Environment (Protection) Act (1986) and Rules (1986)	To protect and improve the overall environment	MoEFCC
2. Environmental Impact Assessment (EIA) Notification under Environmental Protection Rules (2006, 2009, 2011, 2013) and relevant Office Memorandums (OM)	To provide guidance on environmental clearance requirements and clarification on related specific technical issues	MoEFCC
3. Wildlife Protection Act (1972 and amended in 1993)	To protect wild animals and birds through the creation of National Parks and Sanctuaries	MoEFCC
4. The Water (Prevention and Control of Pollution) Act 1972 (Amended 1988) and Rules 1974	To provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water.	CPCB
5. Ground Water Rules of 2002	To regulate the extraction of ground water	State Ground Water Board
6. The Air (Prevention and Control of Pollution) Act, 1981(Amended 1987) and Rules 1982	To provide for the prevention, control and abatement of air pollution, and for the establishment of Boards to carry out these purposes.	CPCB and Road Authorities

Act	Objective	Responsible Institution
7. Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008 (Amended 2009),	To provide for the handling and management of hazardous waste.	CPCB
8. The Forest (Conservation) Act 1980 (Amended 1988) and Rules 1981 (Amended 2003)	To protect and manage forests	MoEFCC
9. Central Motor Vehicle Act (1988) and Rules (1988)	To control vehicular air and noise pollution. To regulate development of the transport sector, check and control vehicular air and noise pollution.	State Transport Department
10. Ancient Monuments and Archaeological Sites and Remains Act (1958)	Conservation of Cultural and historical remains found in India.	Archaeological Dept. GOI
11. Labour Act	To ensure engagement of labourers of legal age and provision of safe and healthy working environment	Labour Commissioner

6. In addition to the acts and regulations listed above guidance for conducting environmental assessment can be taken from the Environmental Impact Assessment Guidance Manual for Highways 2010 issued by MoEFCC and the IRC Guidelines for Environmental Impacts Assessment (IRC:104-1988) of highway projects issued by MoRTH. The following requirements are particularly important and need special attention in order to avoid any delays for a project:

(i) As per provisions of the EIA Notification 2006 (amended in 2009, 2011 and 2013), all expansion of national highways that are longer than 100km and involve additional right of way or land acquisition greater than 40m on existing alignment and 60m on realignment or bypass fall under category A and require environmental clearance from the Ministry of Environment and Forests at the central level

(ii) Under the same notification all new state highways, or expansion of existing state highway in hilly terrain (above 1000 m amsl and or ecologically sensitive areas) fall under category B projects and require Environmental Clearance from State Environmental Impact Assessment Authority at the state level

(iii) Further, under the same notification, it is stated that any category B project will be treated as category A if located in whole or in part within 5 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; and (iv) interstate boundaries and international boundaries.

(iv) Bridges are not included in the EIA notification, 2006. In a recent Supreme Court order (reference weblink), it was further reiterated that bridges do not require an environmental clearance.

(v) As per the Forest Conservation Rules (1981, amended 2003) a forestry clearance from Department of Forests is required for diversion of forest land for non-forest purpose. Processing of the forestry clearance entails two stages: stage I and stage II. Amongst other requirements stage I clearance requires the applicant to make payments for compensation of forestry land that will be acquired and trees that will be cut under the project. Accordingly timely allocation of budget for this purpose by the applicant is necessary to expedite the clearance process.

(vi) Cutting of trees in non forest land requires a tree cutting permit from the local forestry department. All trees cut under a project must be compensated by compensatory afforestation as required by the Forest Department.[7]

(vii) As per Office Memorandum (OM) issued by MOEF on 19 March 2013 the grant of environmental clearance for linear projects including roads has been delinked from the forestry clearance procedure. Hence, after receipt of environmental clearance construction works may commence on sections/parts of a linear project that do not require forestry clearance. Construction works may commence on sections requiring forestry clearance only after receipt of the respective clearance.

(viii) Placement of hot-mix plants, quarrying and crushers, batch mixing plants, discharge of sewage from construction camps requires No Objection Certificate (Consent to Establish and Consent to Operate) from State Pollution Control Board prior to establishment.

(ix) Permission from Central Ground Water Authority is required for extracting ground water for construction purposes, from areas declared as critical or semi critical from ground water potential prospective by them.

7. 6Updates on the EIA notifications and new OM's issued by MoEFCC can be seen on the MoEFCC website: http://moef.nic.in/divisions/iass/Cir/Circulars.html. This must be continuously monitored and necessary revisions must be made in implementing applicable environment safeguard requirements.

8. Government of India has signed many international treaties and framed laws, regulations and guidelines to meet country's obligations under these treaties. Relevant International Treaties are:

- **Kyoto Protocol to the United Nations Framework Convention on Climate Change** (Rectified by India in 1997): The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions. This amount to an average of five per cent against 1990 levels over the five-year period 2008-2012.

- **Convention Concerning the Protection of the World Cultural and Natural Heritage (Rectified by India in 1972):** The most significant feature of the 1972 World Heritage Convention is that it links together in a single document the

[7] In Chhattisgarh State, permission would be required for cutting the trees in non-forest areas (road side trees) from District authorities.

concepts of nature conservation and the preservation of cultural properties. The Convention recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two**.**

- **Convention on Biological Diversity (Rectified by India in 1994):** It is an international treaty which considered as a key document for "sustainable development". This entered into force in 1993 to develop national strategies for the conservation and sustainable use of biological diversity. It has 3 major goals i.e. (1) conservation of biodiversity (2) sustainable use of its components; and (3) fair and equitable sharing of benefits arising from genetic resources. As an impact of this convention, the year "2010" was considered as "International Year of Biodiversity".

- **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Rectified by India in 1976):** It is a multilateral treaty to protect endangered plants and animals which is also known as "Washington Convention". It was opened for signature in 1973, and entered into force in 1975, in order to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species in the wild. This treaty protects about 5,000 species of animals and 29,000 species of plants by listing them in 3 specific "appendices" namely "Appendix I", "Appendix II" and "Appendix III".

- **Convention on the Conservation of Migratory Species of Wild Animals (CMS) (India is signatory since 1983):** This treaty is also known as "Bonn convention". It aims to conserve terrestrial, marine and avian migratory species throughout their range. This having 119 parties and the depository is the government of the Federal Republic of Germany. This treaty facilitates the cooperation of different countries to protect the migratory species. There are 176 threatened migratory species are conserved under this treaty.

- **Ramsar Convention on Wetlands of International Importance (Ratified by India in 1982):** It is an international treaty for the conservation and sustainable utilization of wetlands by recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific, and recreational value. It was signed in 1971 and came into force in 1975. Currently, The Ramsar List of Wetlands of International Importance (Ramsar Sites) includes 2,122 sites having an area of 507,470,800 acres.

9. Environmental capacity of the Executing Agency (EA) and Implementing Agency (IA) will need to be strengthened and clear responsibilities assigned. Table 3 shows the EA and IA for subprojects under tranches 1 and 2 and anticipated EA and IA for tranche 3.

Table 3: Subproject wise EA and IA

Subproject	EA	IA	PIU
Tranche 1			
1. AH-2: Panitanki (Nepal border) – Fulbari (Bangladesh border) (Sample subproject)	MORTH	Siliguri PWD	Siliguri office

2. AH-48: Jaigaon (Bhutan border) – Changrabandha (Bangladesh border) (Sample subproject)			Mainaguri office
3. Imphal-Kanchup-Tamenglong (IKT) (Manipur) (Non-sample subproject)	Manipur PWD	Manipur PWD	PIU, Manipur PWD
Tranche 2			
4. AH-1: Imphal–Moreh Priority section (Imphal – Khongkhang)	MORTH	NHIDCL	NHIDCL Imphal branch office
5. Mechi river bridge			NHIDCL – Gangtok Branch Office
Tranche 3			
6. Imphal-Moreh AH-1 last mile	MORTH	NHIDCL	NHIDCL – Imphal Branch Office
7. Imphal-Moreh Alternate Road			

10. A safeguards focal person will be appointed at the EA level and an Environmental Focal Person (EFP) at the IA and/or PIU level for each subproject. Preparation of environment safeguard documents for tranche 3 will be carried out by the PIU with the support of ADB consultants. Monitoring on implementation of environment safeguards will be carried out by the PIU with the support of the Implementation Support Consultant[8] (ISC), Construction Supervision Consultant (CSC[9]) and/or Authority Engineer[10]. For environment category A projects, an external monitoring agency will be engaged to conduct third party monitoring on implementation of environment safeguards. For each subproject, an initial coordination cum training workshop will be conducted by the IA with technical support from ADB to clarify roles and responsibilities of each party for complying with the requirements of this EARF, the respective Environmental Impact Assessment (EIA) or Initial Environmental Examination (IEE), Environmental Management Plan (EMP), Environmental Monitoring Plan (EMOP) and any Corrective Action Plan (CAP). Continued on the job training will be conducted by the ISC or ADB as necessary during project implementation.

III. ANTICIPATED ENVIRONMENTAL IMPACTS

11. The investment program involves improvement of existing national highways, state highways and other types of roads. Improvements may entail: geometric correction, improvement to proper two lane standard, expansion to four lane standard in some sections, construction of bridges, construction of cross and longitudinal drainage structures, junction improvements and construction of new road in some sections.

12. Of the three tranche 1 subprojects (AH-48, AH-2 and IKT), AH-48 totalling about 97km is anticipated to have potential significant irreversible environmental impacts on wildlife as it passes through a protected area (Jaldhapara National Park) for approximately 2.6 km, government reserved forests for approximately 2 km and includes construction of two new bypass roads. One of the two bypasses falls within 10 km of the Buxa Tiger Reserve. The section passing through

[8] The ISC is a consultancy firm that supports the PIU to oversee and manage the implementation of environment safeguards.

[9] CSC is the consultant that supervises the contractor's works following the item rate system. They are responsible for ensuring that civil works are carried out in accordance with the item rates agreed on in the contract agreement

[10] Authority engineer is the supervising consultant for contractors following the Engineering Procurement and Construction (EPC) modality. They are responsible for reviewing the detailed design prepared by the contractor and ensuring that the civil works are carried out in accordance with the approved design.

the national park includes some elephant corridors. AH-02 which is 37.3 km long has some ad-hoc elephant crossing areas. IKT involves construction of 97km of green field road construction in hilly terrain. As per notification issued by MoEFCC on 22 August 2013 (see para 6(i)), both AH-48 and AH-02 which are national highways do not require an environmental clearance. However, IKT requires an environmental clearance for road sections which are located above an elevation of 1000m. Forestry clearance and wildlife clearance for diversion of forest land to non-forest purpose is required for AH-48 for some sections that pass through the national park and government reserved forests. IKT requires forestry clearance for some sections passing through reserved forests as well.

13. Tranche 2 subprojects: Mechi river bridge (1.6km) and Imphal – Moreh Priority section (65.68km) are anticipated to have short term reversible environmental impacts. Since construction of the Mechi river bridge is taking place across an international border and a river potential impacts entail disruption of the river hydrology, water pollution and creation of social and health issues due to the need for the Indian contractor's workers to also work on the Nepal side. Nepali environmental, health and safety laws and regulations also need to be followed. The Nepal Environmental Protection Rules (EPR) will also need to be followed. Hence an environmental clearance or IEE approval is required from the Government of Nepal. The Imphal Moreh Priority section subproject requires forestry clearance for diversion of forest land for 3 sections passing through reserved forests.

14. Tranche 3 subprojects: Imphal – Moreh last mile and the Alternate Route are anticipated to also trigger A categorization under environment safeguards as a section of both roads pass through the Yangoupokpoi Wildlife Sanctuary. Both roads which already existing may require proper biodiversity mitigation and enhancement measures. Under the national rules both roads are expected to require forestry clearance, wildlife clearance and may trigger environmental clearance as well.

15. Processing of forestry clearance is a time consuming and beauracratic process. However, construction may commence on the project sections that do not require forestry clearance. Dedicated efforts by the executing agency (MoRTH) and Implementing Agency or Project Implementation Unit (PIU) will be required to expedite processing of the forestry and wildlife clearances. Other potential issues after award of contract works but before start of physical works are delays in obtaining permits for establishment and operation of facilities such as hot mix plants, batching plant, stone crushing plants and others.

16. Significant on site environmental impacts during construction mainly concern forestry and wildlife related issues in the West Bengal subprojects (tranche 1) and the last mile of the Imphal – Moreh subproject (Tranche 3). Tree removal will be required and disturbances to wildlife and wildlife movement may occur both during and after construction. Compensatory tree plantation will be carried out for every tree removed in collaboration with the local forestry department and local Panchayat. Specific procedures such as stoppage of works when animals (eg. elephants) come in the vicinity of the construction works will be included in the Environmental Management Plan (EMP) as relevant. Construction time restrictions will also be enforced in sections with important wildlife species.

17. Other impacts during construction entail typical road construction issues such as generation of dust from earthworks; noise and exhaust from operation of equipments/machinery/vehicles; generation of construction waste as well as wastes from construction and worker camps; water contamination and water supply issues; occupational health and safety issues with the workers and local communities; issues of erosion and siltation

and removal of trees. Mitigation measures to address these which will be covered in the EMP will include but not be limited to: wet spraying to control dust; limiting working hours to minimize disturbance; regular maintenance of vehicles and securing of Pollution under control (PUC) certificates; reuse or proper disposal of construction debris; maintenance of proper hygiene and safety standards and facilities in the camps and working areas; development and implementation of an erosion control and silt management measures.

18. Key benefits of the project will be better regional connectivity and enhanced trade through better quality and wider roads with better road safety. Therefore an increase in traffic volumes can be expected. Given this the main long term environmental impact can be expected to be increased greenhouse gas and air pollution emissions and noise levels and community road safety risks from the increased traffic.

IV. ENVIRONMENTAL ASSESSMENT FOR SUBPROJECTS

19. All succeeding subprojects for tranche 3 will follow the environmental assessment procedures to meet the requirements of the ADB SPS, MoEFCC and the respective Indian Road Congress (IRC) guidelines as detailed in the following paragraphs. Any subproject which is not subjected to these procedures will not be put forward for consideration or inclusion under the investment program. These procedures will be implemented by the respective executing agency (EA) with the support of the implementing agency (IA).

A. Screening and Classification

20. Each subproject will be initially screened to understand the nature and significance of anticipated environmental impacts by using the ADB Rapid Environmental Assessment (REA) checklist. Following the initial screening the respective EA will propose and ADB will confirm the environmental categorization of each subproject as A, B or C in accordance with the ADB SPS. Categorization as A or B under the criteria of the EIA notification 2006, of MoEFCC will also be determined and intimated to ADB.

21. Tranche 1 subprojects (AH-2, AH-48 and Imphal-Tamenglong Road) are categorized as A under ADB SPS criteria but AH-2 and AH-48 do not require environmental clearances from MoEFCC as per the amendment of the EIA notification of 22 August 2013. However since Imphal-Tamenglong road subproject involves construction of green field alignment in hilly terrain (some part is located above 1000 m msl) environmental clearance from state level EIA Agency is required for this subproject.

22. Tranche 2 subprojects (Mechi river bridge and Imphal – Moreh Priority section) are categorized as B under ADB SPS criteria. Both subprojects do not require an environmental clearance under GOI. However, since the Mechi river bridge subproject partly falls in Nepal, an environmental clearance or IEE approval is required from the Ministry of Physical Infrastructure and Transport (MOPIT).

B. Environmental Selection Criteria

23. The following Criteria shall be applied for selection of subproject roads for tranche 3:

(i) The subprojects selected will be part of priority roads that will enhance regional connectivity within SASEC and/or BIMSTEC countries.

(ii) As much as possible all efforts will be made to avoid subprojects passing through or near eco sensitive areas such as designated wild-life sanctuaries, national parks, notified ecological sensitive areas or area of internationally significance (e.g., protected wetland designated by the Wetland Convention). If absolutely unavoidable, project passing through critical habitat areas can be selected only (i) if no alternatives are available, (ii) there are no measurable adverse impacts, or likelihood of such, on the critical habitat that could impair its high biodiversity value or ability to function (iii) the subproject is not anticipated to lead to a reduction in the population of any recognized endangered or critically endangered species or a loss in area of the habitat concerned such that the persistence of a viable and representative host ecosystem be compromised (iii) any lesser impacts can be mitigated to achieve no net loss of biodiversity (iv) a comprehensive analysis demonstrates the overall benefits from the project substantially outweigh the project costs, including environmental costs (v) Any conversion or degradation can be appropriately mitigated and (vi) the respective wildlife agency supports the subproject.

(iii) As much as possible subprojects or sections passing through reserved forests where enough ROW is not available must be avoided. If absolutely unavoidable, project passing through reserved forests can be selected only (i) if no alternatives are available, (ii) mitigation measures can be designed to achieve no net loss of biodiversity (iii) a comprehensive analysis demonstrates the overall benefits from the project substantially outweigh the project costs, including environmental costs (iv) Any conversion or degradation can be appropriately mitigated.

(iv) As much as possible subprojects passing through or near cultural heritage designated by UNESCO or declared as archeologically protected by GOI must be avoided. If absolutely unavoidable, project passing through or near such sites be selected only (i) if no alternatives are available, (ii) consultation is undertaken with the community and regulatory agencies entrusted with protecting the cultural heritage and they support the subproject(iii) the overall benefits from the project substantially outweigh the anticipated cultural heritage loss.

C. Environmental Assessments and Environmental Management Plans

24. The preparation of succeeding EIA's for Category A subprojects and IEE's for category B subprojects will be guided by the objective of ensuring the environmental soundness, sustainability and integration of environmental considerations into the project decision making process. Environmental impacts will be avoided, and where not possible, minimized, mitigated, offsetted and positive impacts will be enhanced through implementation of the EMP. Sample outline of an EIA and IEE is provided in Appendix 1 and 2 respectively.

25. The EIA or IEE study will be conducted in accordance with the requirements of ADB's SPS 2009 as well as MoEFCC, where required. In cases where environmental assessment reports are required for both ADB and MoEFCC two separate reports will need to be prepared, since the procedures and timeline for preparation of environmental assessment reports for ADB and MoEFCC are different. However data collection and analysis and public consultations maybe carried out together to the extent possible to fulfill the needs of both ADB and MoEFCC. It must also be ensured there is no conflict between assessments and measures within the separate reports. For category A subprojects, the EIA report must be prepared in a manner that the draft

EIA can be disclosed on the ADB website at least 120 days before approval of the respective subproject by ADB.

26. The EIA or IEE study should clearly identify and describe the area of impact, provide an assessment of potential impacts and mitigation measures with reference to current baseline data, and involve public consultations with affected people and other relevant stakeholders. It should include a comprehensive and practical EMP and EMOP and clear institutional arrangements for implementing them. The conclusion of the study should clearly state whether (a) the EIA is the completed environmental assessment or (b) further assessment work is required and will be incorporated in a revised EIA. For example, some project roads may need continued or follow up monitoring of biodiversity related issues during project construction. In such cases this must be stated accordingly in the EIA.

27. In accordance with the requirements of ADB's SPS while preparing the EIA or IEE the following issues (but not limited to these) must be investigated:

i) Potential impacts on biodiversity including modified, natural, critical habitat and protected areas and necessary measures to minimize, mitigate and offset impacts.
ii) Landslide, erosion, slope stability issues and necessary engineering and bioengineering measures to address them (Inputs for this section can be taken from the Slope Protection Study)
iii) Potential waste issues including excavated spoil, hazardous materials and wastes and appropriate measures for their disposal, treatment and other forms of management.
iv) Potential impacts on air and water quality and noise levels and expected changes in comparison to baseline levels and national/international standards with recommendations for appropriate mitigation measures where necessary
i) Climate change risk for the project including estimation of greenhouse gas (GHG) emissions that will be generated or reduced by the component and recommendations for adaptation and mitigation as relevant
ii) Occupational Health Safety issues and measures for the construction workers.
iii) Community Health and Safety issues for local communities in and around the project site particularly with respect to access to construction works and road safety.
iv) Cumulative and Induced Impacts of the project in light of existing environment, ongoing development projects and planned projects in the near future
v) Potential impacts on physical and cultural resources and measures to avoid, minimize or mitigate impacts.
vi) Grievance Redressal Mechanism to address concerns and grievances of the affected people in the course of the project cycle.
vii) For category A projects an analysis of alternatives on location and/or technical design of respective subprojects will also need to be carried out

28. For subprojects following the Engineering, Procurement and Construction (EPC) modality the final detailed design will be prepared by the contractor. Hence, updating of the EIA/IEE, EMP and EMOP where necessary as well as implementation of the EMP and EMOP during construction will be included under the contractor's tasks. For cases where the contract awards are based on other modalities such as item rates, necessary clauses on environment safeguards will be included in the main text of the contract documents and the EMP matrix from the final EIA or IEE will be attached to the bidding documents. Hence, the contractor will be required to include the costs for implementing the environmental clauses and EMP in their bid.

V. CONSULTATION, INFORMATION DISCLOSURE AND GRIEVANCE REDRESS MECHANISM

A. Consultation

Meaningful public consultations must be held early on and continuously throughout the project development stage to allow the incorporation of relevant views of the stakeholders in the final subproject design, mitigation measures, implementation issues, and enhance the distribution of benefits. The design informing the EIA/IEE and detailed design produced by the contractors must be shared with the affected people and key stakeholders to ensure that all their relevant concerns have been incorporated. Stakeholders should include project beneficiaries, local affected people, government bodies, and non-governmental organizations. Consultations must be carried out in an environment free of coercion or intimidation and may be done through meetings, focus group discussions, interviews, hearings which will start with the description of the subproject design and initial identification of potential impacts. For Category A projects ADB must participate in the consultations and at least two rounds of consultation must be held. The consultations must encourage women participation and engage as many stakeholders as possible. All consultations conducted must be documented clearly in the EIA or IEE report with details on date, venue, issues discussed, total number of male and female participants etc. The findings of the EIA or IEE must be shared in a form or nature that is accessible and understandable by the affected persons and relevant stakeholders or necessary recommendations and guidelines made for sharing such kind of information at a later stage.

B. Information Disclosure

29. For all subprojects, disclosing the environmental document to the public will be the responsibility of the respective EA. The EA will be responsible for ensuring that all environmental assessment documentation, including environmental due diligence (where necessary) and monitoring reports, are properly and systematically kept as part of the subproject-specific record. All environmental documents are subject to ADB's Communication Policy 2011 and ADB SPS 2009. Therefore, these should be made available on request. The findings of the EIA or IEE must be shared locally in a form or nature that is accessible and understandable by the affected persons and relevant stakeholders as well as being disclosed online on the ADB website. For the case of category "A" subprojects, the draft EIA report will be disclosed to the public through the ADB website, 120 days before the approval of the respective subproject for ADB financing. The draft EIA report will also be made available to all stakeholders as part of the consultation process required under the SPS 2009. The IEE report for category B projects will need to be disclosed to the public through the ADB website before the approval of the respective subproject for ADB financing. For category A projects at least semi-annual monitoring reports and for category B projects, at least annual monitoring reports need to be disclosed to the public through the ADB website.

C. Grievance Redress Mechanism (GRM)

30. Grievances related to the implementation of the project, particularly regarding the environmental management plan will be acknowledged, evaluated, and responded to the complainant with corrective actions proposed using understandable and transparent processes that are gender responsive, culturally appropriate, and readily accessible to all segments of the affected people. The responsible agency for addressing the grievances along with proper timelines will be clearly indicated. Records of grievances received, corrective actions taken and

their outcomes will be properly maintained and form part of the environmental monitoring report to ADB.

31. Depending on the nature and significance of the grievances or complaints, the GRM will comprise procedures to address grievances at the project site level, IA level, EA level and the Grievance Redress Committee (GRC). Most serious complaints which cannot be addressed at the EA level will be forwarded to the GRC. The GRC will comprise members from the EA, IA, ISC, contractor, local community and local forestry authority.

32. During preparation of EIA/IEE or at least during pre-construction stage the local communities in the project area will be informed on the grievance redress procedure and the contact persons for lodging complaints. Provisions shall also be made for lodging complaints at the respective EA's website.

33. All the parties involved in project implementation i.e. contractor, engineer, and employer will maintain complaint registers at their following respective offices:

- Contactor's main site offices i.e. office of the Project Manager,
- Supervision Consultant's or Authority Engineer's main site office i.e. office of the Engineer's Representative; and
- Executive Engineer's office i.e. Employer's field office.

34. Environment complaints will be received through the Grievance Focal Point (GFP), these will be designated personnel from within the community and appointed by the community, who will be responsible for receiving the Environmental complaints. The Contractor will record the complaint in the onsite Environmental Complaints Register (ECR) in the presence of the GFP.

35. All public complaints regarding environmental issues received by GFP will be entered into the register with specific details such as name and address of the person or representative of the community registering a complaint, the details of complaint, and time. The Executive Engineer and Engineer's Representative will immediately communicate the details of the complaint to the Contractor. The Environment and Safety Officer (ESO) of the contractor will promptly investigate and review the environmental complaint and implement appropriate corrective actions to mitigate the cause of the complaints. The Engineer's Representative will decide on the exact time frame within which the action will be taken on case-to-case basis depending on the nature and sensitivity of the same. However, in all the cases, it will be responsibility of the contractor to take action immediately upon receiving any complaint. The contractor will report to Engineer's Representative about the action taken on the complaint, within 48 hours of receiving the complaint, for his further intimating to PIU and the Executive Engineer. The person making a complaint would be intimated by the complaint receiving person or his representative, about the action taken, within 48 hours, along with his/her feedback. Figure 1 shows the proposed Grievance Redress Mechanism.

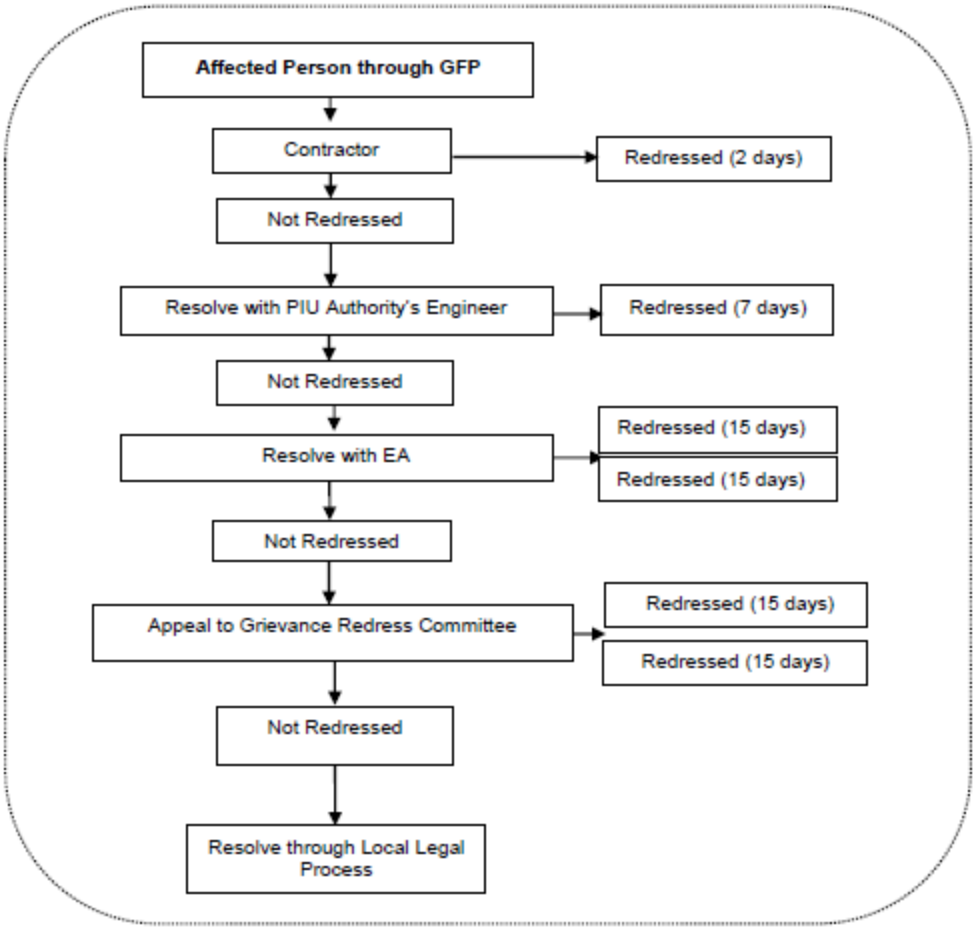

Figure 1: Grievance Redress Mechanism

INSTITUTIONAL ARRANGEMENT FOR IMPLEMENTING EARF AND RESPONSIBILITIES

36. The EA with the support of the respective IA for each subproject will be responsible for ensuring that all components of this EARF are complied with during implementation of the entire investment program.

37. Immediately after identification of a subproject for inclusion under the investment program, an officer within the EA will be designated to serve as the overall authority and authorized signatory for formal approval and endorsement of all reports, forwarding letters, communications and any document related to environment safeguards under the project. The IA or PIU will be directly responsible for implementing the detailed requirements of the EARF, EIA or IEE and EMP at the project office and site level. Similarly within the IA an Environmental Focal Person (EFP) will be appointed immediately after identification of a subproject for inclusion in the investment program. The designated person at the EA and EFP at the IA level will be supported by environmental specialists under Implementation Support Consultants (ISC). Supervision of the construction works of EPC contractors will be carried out by the Authority Engineer who will include an Environment Specialist in their team. For category A and B subprojects an external monitoring agency such as a consultancy firm or NGO will be engaged to conduct third party monitoring of environment safeguards implementation. For cases where one subproject has more

than one EA and IA, the respective EA's and IA's will work closely together to ensure environment safeguards requirements of the respective subproject are met on a proper and timely basis.

A. Responsibilities of the Executing Agency

38. The EA's responsibilities will mainly be focussed on addressing national or state level environment safeguard issues and decisions concerning the subprojects. Specific responsibilities on environment safeguards at the EA level are:

i. Ensure that all environment safeguard requirements as given in this EARF, ADB SPS 2009, and applicable laws and rules under MoEFCC (as given in table 2, not an exclusive list) are being complied with during all stages of respective subprojects under the loan.
ii. Reviewing and approving all environment safeguards related documents such as EIA or IEE, monitoring reports etc. prepared for subprojects under the investment program with recommendations and clarifications from the IA where necessary.
iii. Timely endorsement and signing of key documents and forwarding to the respective agency such as those required for processing of environmental clearance, forestry clearance etc. and disclosure on ADB website.
iv. Taking proactive and timely measures to address any environment safeguards related challenges at the national or state level such as delays in processing of clearances (during pre-construction stage), significant grievances (during construction stage)
v. Ensure effective implementation of the Grievance Redress Mechanism (as given in section V.C) and all relevant concerns and complaints are effectively addressed.
vi. Recruiting an external monitor to conduct third party environmental monitoring for category A and B subprojects

B. Responsibilities of the Implementing Agency and/or Project Implementation Unit (PIU)

39. The IA or PIU's responsibilities will mainly be focussed on implementing environment safeguard requirements in accordance with this EARF, the EIA or IEE and EMP at the project and site level. Specific responsibilities on environment safeguards at the IA level\ are:

i. Where necessary hire an environmental consultant to prepare IEE or EIA report including EMP as may be required.
ii. Ensure that the consultant follows all procedures for conducting the environmental assessment as given in section IV.C.
iii. Review the budgetary needs for complying with the Government's and ADB's requirements on environment safeguards and ensure the proposed budget is in line with table 3.
iv. Prepare forms, reports and all documents etc. for processing of environmental, forestry and related clearances in a timely manner and submit them for further review and signing to the authorized officer in the respective EA office.
v. If any problems or long delays are encountered when processing the clearance documents, immediately alert the authorized officer at the EA level and seek ways resolve the problem at the soonest.
vi. Provide necessary support to the consultants preparing the environmental assessment reports to facilitate smooth and efficient preparation of documents, conduction of meetings, conduction of public hearings etc. required by ADB, MOEF, SPCB, Forestry Department, Wildlife Board etc.

vii. Review the EIA or IEE reports including EMP and EMOP prepared by the consultant and provide comments if necessary.
viii. After receipt of satisfactory EIA or IEE report including EMP and EMOP and approval of the reports by ADB forward the respective reports to the respective EA for further endorsement and forwarding to ADB for disclosure on the ADB website.
ix. Ensure that all necessary regulatory clearances are obtained prior to commencing any civil work of the respective contract package or road section;
x. Ensure that for Engineering Procurement and Construction (EPC) based contracts updating of the EIA/IEE, EMP and EMOP based on detailed design and implementation of the EMP is included under the contractor's responsibilities.
xi. Ensure that the EMP which include required mitigation measures and monitoring requirements with defined Bill of Quantity (BOQ), forms part of bidding document for the case of item rate based contracts.
xii. Ensure that contractors have access to the EIA or IEE report including EMP and EMOP of the subprojects.
xiii. Ensure that contractors understand their responsibilities to mitigate environmental problems associated with their construction activities.
xiv. Ensure and Monitor that all required permits, no objection certificates etc. are obtained by the contractor for establishment and operation of equipment and facilities (as given in table 1).
xv. With the support of the EFP of the contractors and ISC ensure that the contractor implements the EMP including EMOP as given in the respective EIA or IEE report.
xvi. In case of unanticipated environmental impacts during project implementation stage, with the support of ISC prepare and implement an updated EMP to account for such impacts after seeking concurrence from ADB. The updating shall be carried out after due consultation with the stake holders and concerned government agencies.
xvii. In case during project implementation a subproject needs to be realigned, review the environmental classification and revise accordingly, and identify whether supplementary IEE or EIA study is required. If it is required, prepare the TOR for undertaking supplementary IEE or EIA and hire an environment consultant to carry out the study.
xviii. Ensure that construction workers work under safe and healthy working environment;
xix. Ensure effective implementation of Grievance Redress Mechanism (as given in section V.C) to address affected people's concerns and complaints.
xx. Submit semi-annual reports for category A subprojects and annual reports for category B subprojects on the implementation of all environment safeguard requirements including the EMP and EMOP under the respective subproject to ADB and make these reports available for public disclosure as appropriate.

C. Responsibilities of the Implementation Support Consultant (ISC)

40. The ISC will support the IA to implement their responsibilities.

D. Responsibilities of the Authority Engineer (AE)/Consultant Supervision Consultant (CSC)

41. The AE is the supervising authority for contractors that follow the EPC modality. They are also responsible for reviewing and approving the detailed engineering design prepared by the

EPC contractor. The CSC is the supervising authority for contractors following item rates. Other than the difference mentioned above, the following are the responsibilities of the AE and CSC:

i. Review the EIA or IEE and EMP to understand the background environmental issues of the respective subproject
ii. Review and approve the revised EMP and other required sub-plans such as traffic management plan, health and safety plan, waste management plan etc. prepared by the contractor
iii. Conduct regular site inspections and monitor implementation of the EMP and EMOP by the contractor
iv. Provide on-site training and technical guidance to the contractor workers as necessary
v. Review the monthly reports prepared and submitted by the contractor
vi. Where necessary identify the need for corrective actions and issue official notices to the contractor to implement the corrective actions with clear timeline
vii. If there are any complaints or grievances, facilitate consultations with the respective complainant and ensure the grievances are addressed in accordance with the GRM system as given in the section V, C
viii. Regularly convene meetings to discuss progress or issues on environment safeguards to ensure that all parties (contractor, PIU, ISC) are on the same page on requirements and milestones for environment safeguards
ix. Based on the site inspections and review of reports submitted by the contractor prepare semi-annual (for category B subprojects) and annual (for category A subprojects) Environmental Monitoring Reports for review and approval by the PIU/ISC. These reports will be further forwarded to ADB for disclosure on their website

E. Responsibilities of the External Monitor

42. An External Monitor is required only for category A subprojects to conduct third party monitoring of environment safeguard activities The following are the responsibilities of the External Monitor:

i. Review the EIA or IEE and EMP to understand the background environmental issues of the respective subproject
ii. Conduct third party monitoring of the implementation of the EMP and EMOP by the contractor and supervisory activities of the AE/CSC through periodic site visits and review of environment safeguard related documents maintained by the contractor, AE/CSC and PIU/ISC
iii. Advise the PIU on the need for corrective actions if any
iv. Implementation additional environmental enhancement activities as recommended in the respective EIA report
v. Based on the observations from the site visits and review of documents and monitoring reports prepared by the contractor and AE/CSC prepare semi-annual reports for submission to the PIU and onward to ADB for disclosure on the ADB website

F. Responsibilities of the contractor

43. For ensuring that EMP is properly implemented, Contractor shall appoint a full time qualified and experienced Environmental and Safety Officer (ESO) from the commencement to completion of the project. The Contractor is responsible for implementing the following environment safeguards activities:

i. Review and update the EMP and EMOP if necessary after contract award
ii. Prepare all sub-plans such as traffic management plan and safety plan etc. as required by the respective IEE/EIA and EMP for approval by the respective CSC/AE
iii. Implement the EMP
iv. Obtain all clearances and permits (eg. Operation of hot mix plant, batching plant, use of ground water etc.) required for construction on a timely basis
v. Conducting periodic environmental and safety training for contractor's engineers, supervisors and workers
vi. Collect environmental monitoring data in accordance with the respective EMOP and include it in monthly monitoring reports
vii. Maintain a complaints register and immediately respond to any complaints or grievances filed against the project in accordance with the GRM (section V, C)
viii. Prepare and submit monthly reports to CSC on status of implementation safeguard measures

G. ADB's Responsibilities

44. ADB is responsible for the following:
(i) Review REA checklist and endorse or modify the tranche classification proposed by the EA
(ii) Review EIA or IEE reports and disclose the draft and final reports on the ADB website as required;
(iii) Issue subproject's approval based on EIA or IEE reports;
(iv) Monitor implementation of the EMP through due diligence missions;
(v) Provide assistance to the EA and IA of subprojects, if required, in carrying out its responsibilities and for building capacity for safeguard compliance;
(vi) Review the environmental monitoring reports submitted, approve and disclose them on the ADB website;
(vii) Monitor overall compliance of the subprojects to this EARF; and
(viii) If necessary provide further guidance to the IA on the format, content, and scope of the EIA or IEE reports and annual and/or semi-annual monitoring reports for submission to ADB.

45. Budget requirements for implementing this EARF includes costs for i) screening and categorization and preparation of IEE/EIA reports including EMP and EMOP for each sub-project, and (ii) institutional and capacity building activities. Table 4 serves as a guide on the allocation and planning of budget for implementing the requirements of this EARF. The budget amount provided are rough estimates and maybe adjusted based on the scope and needs of each tranche and subproject.

Table 4: Budget Plan for each Subproject

No.	Activity	Budget Source	Approximate amount (US$)	Budget Purpose	Remarks
1	Screening, categorization, preparation of IEE/EIA, EMP and EMOP	ADB TA	$80,000.00	Consultant fees including costs for surveys and field investigations	

No.	Activity	Budget Source	Approximate amount (US$)	Budget Purpose	Remarks
2	Institutional and Capacity Building (i) Designation of of authorized officer for environment safeguards (ii) Recruitment/ appointment of EFP (iii) Training workshops	 (i) EA (ii) IA (iii) ADB and EA/IA	 (i) (ii) Included in project management budget under government contribution (ii) $5,000 per subproject	 (i) (ii) Salary for authorized officer and EFP (iii) Logistical costs for training and resource person fees	

VII. MONITORING AND REPORTING

46. The IA has the responsibility for undertaking environmental due diligence and monitoring the implementation of environmental mitigation measures for all sub-projects under respective tranches. The due diligence report as well as monitoring implementation of the environmental management plan needs to be documented systematically. ADB must be given access to undertake environmental due diligence for all sub-projects, if needed.

47. Implementation of the EMP will be monitored by the IA and AE/CSC. Category A subprojects will also include third-party monitoring by an external monitor. The IA through the EA will submit at least semi-annual monitoring reports for category A and at least annual monitoring reports for category B projects to ADB. This includes semi-annual monitoring reports also from the external monitor. The monitoring reports will document progress made in EMP implementation, with particular attention to compliance with each component of EMP. Sample of an environmental monitoring report is provided in appendix 3.

48. Monitoring during construction will also be the responsibility of the IA. Monitoring will relate to compliance with construction contracts, effectiveness of mitigation measures, and complaints and the state and health of nearby environmental resources (also known as ‘ambient environmental monitoring’). Ambient monitoring will follow the approach to selecting quantitative standards, as recommended in the ADB’s SPS 2009.

49. Monitoring during operation with annual reporting should be conducted on an as-needed basis in accordance with the procedures set out in the respective EIA or IEE.

APPENDIX 1: OUTLINE OF AN ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REPORT

1. An environmental impact assessment (EIA) report is required for all environment category A projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks.

2. A typical EIA report contains the following major elements. The substantive aspects of this outline will guide the preparation of environmental impact assessment reports, although not necessarily in the order shown.

A. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

B. Introduction

This section provides a brief background of the project, its rationale and context within the overall development of the respective country or state or region. It also briefly describes the technical scope and environmental category of the project of the project and the scope, purpose of the EIA and methodology adopted to prepare it.

C. Policy, Legal, and Administrative Framework

This section discusses the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project-relevant international environmental agreements to which the country is a party.

D. Description of the Project

This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project's layout and components, the project site, and the project's area of influence.

E. Description of the Environment (Baseline Data)

This section describes relevant physical, biological, and socioeconomic conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

F. Anticipated Environmental Impacts and Mitigation Measures

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media, and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies climate change related risks to the project and recommends suitable adaptation measures for incorporation in the project design; estimates GHG emissions

expected from the project and suitable mitigation or offset measures; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, transboundary, induced and cumulative impacts as appropriate.

G. Analysis of Alternatives

This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

H. Information Disclosure, Consultation, and Participation

This section:

(i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders with details on numbers of people, men, women vulnerable people etc. that were consulted;

(ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and

(iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

I. Grievance Redress Mechanism

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

J. Environmental Management Plan

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

(i) Mitigation:

(a) identifies and summarizes anticipated significant adverse environmental impacts and risks;

(b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of

contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and

(c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.

(ii) Monitoring:

(a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and

(b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

(iii) Implementation arrangements:

(a) specifies the implementation schedule showing phasing and coordination with overall project implementation;

(b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and

(c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.

(iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

K. Conclusion and Recommendations

This section provides the conclusions drawn from the assessment and provides recommendations.

APPENDIX 2: OUTLINE OF AN INITIAL ENVIRONMENTAL EXAMINATION (IEE) REPORT

1. An initial environmental examination (IEE) report is required for all environment category B projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks.

2. A typical IEE report contains many of the same major elements as an EIA, but may have a narrower scope and depth of analysis. The substantive aspects of this outline will guide the preparation of IEE reports, although not necessarily in the order shown.

A. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

B. Introduction

This section provides a brief background of the project, its rationale and context within the overall development of the respective country or state or region. It also briefly describes the technical scope and environmental category of the project of the project and the scope, purpose of the IEE and methodology adopted to prepare it.

C. Policy, Legal, and Administrative Framework

This section summarizes the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project-relevant international environmental agreements to which the country is a party.

D. Description of the Project

This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project’s layout and components, the project site, and the project's area of influence.

E. Description of the Environment (Baseline Data)

This section describes relevant physical, biological, and socioeconomic conditions within the study area, and may be based largely on secondary data if relevant and accurate secondary data is available. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

F. Anticipated Environmental Impacts and Mitigation Measures

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media, and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies

climate change related risks to the project and recommends suitable adaptation measures for incorporation in the project design; estimates GHG emissions expected from the project and suitable mitigation or offset measures; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, transboundary, induced and cumulative impacts as appropriate. It is expected that an IEE will based on less rigorous impact assessment methodologies than an EIA.

G. Information Disclosure, Consultation, and Participation

This section:

(i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders with details on numbers of people, men, women vulnerable people etc. that were consulted;

(ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and

(iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

H. Grievance Redress Mechanism

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

I. Environmental Management Plan

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

(i) Mitigation:

(a) identifies and summarizes anticipated significant adverse environmental impacts and risks;

(b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and

(c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.

(ii) Monitoring:

(a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and

(b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

(iii) Implementation arrangements:

(a) specifies the implementation schedule showing phasing and coordination with overall project implementation;

(b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and

(c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.

(iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

J. Conclusion and Recommendations

This section provides the conclusions drawn from the assessment and provides recommendations.

APPENDIX 3: ENVIRONMENTAL MONITORING REPORT OUTLINE

1. Introduction

(Report Purpose, Brief project background including organizational set up, list of roads, planned project schedule etc., Details on Project Implementation Progress with details on current site works, location, earthworks, vegetation clearing, spoils disposal, establishment of construction camp and other construction related facilities (e.g., concrete mixing plant, asphalt batching plant, crushing plant, etc.), establishment and operation of quarry/borrow areas, etc., including locations, schedules, dates, etc., Schedule of construction activities for the subsequent months)

2. Compliance on Environment Safeguards Requirements

(Status of compliance with ADB loan covenants: provide a list of environmental loan covenants and specify level of compliance)

Status of compliance with government environmental requirements: provide a list of government environmental requirements (permits, etc.) for the project as well as construction-related facilities/ activities and specify level of compliance, indicate any required environmental permit/license/consent obtained to date and to be obtained (including schedule) for the project and construction related facilities/activities)

3. Changes in project scope

(Such as change in alignment or footprint in case of horizontal infrastructure, implementation of additional Project component/s, etc. (with reference to the Project scope identified in the ADB-cleared environmental assessment report , i.e., IEE or EIA) and corresponding safeguard measures undertaken, if applicable)

4. Implementation of Environmental Management Plan

(Indicate the manner by which EMP requirements are incorporated into contractual arrangements, such as with contractors or other parties.

Summary of Environmental Mitigations and Compensation Measures Implemented
Based on EMP; may include measures related to air quality, water quality, noise quality, pollution prevention, biodiversity and natural resources, health and safety, physical cultural resources, capacity building, and others. Provide a table/matrix showing a summary of each environmental mitigation measure specified in the EMP.

EMP Requirement (list all mitigation measures specified in the EMP)	Compliance Attained (Yes, No, Partial)	Comment on Reasons for Partial or Non-Compliance	Issues for Further Action and Target Dates
1.			
2.			
3.			
etc.			

5. Environmental Monitoring Activities

(Compliance Inspections, Summary of Inspection Activities, Mitigation Compliance[11]
Mitigation Effectiveness [12.] Findings of Environmental Monitoring Plan (EMOP) on quality of air, noise, water etc. and Results Assessment[13)]

6. Key Environmental Issues

(Key Issues Identified (e.g., non-compliance to loan covenants, EMP and/or government environmental requirements, insufficient mitigation measures to address Project impacts, incidents, accidents, etc.) Actions Taken and Corrective Action Plan (specify actions taken and corrective action plans to be implemented to address non-compliance and other identified issues. Such action plan should provide details of specific actions to be undertaken to resolve identified issues, responsible persons who will carry out such actions and timeframe/target date to carry out and complete required actions. The action plan could be presented in a tabular/matrix form (see below). Timeframe and responsibilities for reporting to ADB on the progress of implementation of corrective action plan should also be specified under this section.)

Issue	Cause	Required Action	Responsibility	Timing (Target Dates)	Description of Resolution and Timing (Actual)
Old Issues from Previous Reports					
1.					
2.					
New Issues from this Report					
1.					
2.					

7. Complaints:

Details of Complaint/s (Provide details of any complaints that have been raised by the local population and other stakeholders regarding environmental performance and environmental

[11] Overall compliance with mitigation implementation requirements could be described in qualitative terms or be evaluated based on a ranking system, such as the following:
1. Very Good (all required mitigations implemented)
2. Good (the majority of required mitigations implemented)
3. Fair (some mitigations implemented)
4. Poor (few mitigations implemented)
5. Very Poor (very few or no mitigations implemented)

Additional explanatory comments should be provided as necessary.

[12] Effectiveness of mitigation implementation could be described in qualitative terms or be evaluated based on a ranking system, such as the following:
1. Very Good (mitigations are fully effective)
2. Good (mitigations are generally effective)
3. Fair (mitigations are partially effective)
4. Poor (mitigations are generally ineffective)
5. Very Poor (mitigations are completely ineffective)

Additional explanatory comments should be provided as necessary.

[13] Discharge levels should be compared to the relevant discharge standards and/or performance indicators noted in the EMP. Any exceedences should be highlighted for attention and follow-up. In addition, discharge levels could be compared to baseline conditions (if baseline data is available) and described in qualitative terms or be evaluated based on a ranking system, such as the following:
1. Very Good (overall conditions are generally improved)
2. Good (conditions are maintained or slightly improved)
3. Fair (conditions are unchanged)
4. Poor (conditions are moderately degraded)
5. Very Poor (conditions are significantly degraded)

Additional explanatory comments should be provided as necessary.

impacts (complainant, nature of complaint, date complaint was filed, which office received the complaint, etc.)
Action Taken (Document how the complaints were addressed or will be addressed by indicating the following:
i. names and designation of specific staff or officials within the Grievance Redress Committee, executing agency, project management unit, local government, contractor and/or supervision consultant involved in receiving, documenting, and resolving the complaint (s).
ii. specific actions taken to be taken to resolve the complaint and corresponding timeframe

8. Conclusion and Recommendation

Overall Progress of Implementation of Environmental Management Measures[14]
Problems Identified and Actions Recommended
Monitoring adjustment (recommended monitoring modifications based on monitoring experience/trends and stakeholders response)

Appendices

Site Inspection / Monitoring Reports
Source and Ambient Monitoring Results (Laboratory Analysis)
Photographs
Location Map of Sampling Stations
Copies of Environmental Permits/Approvals
Other relevant information/documents

[14] Overall sector environmental management progress could be described in qualitative terms or be evaluated based on a ranking system, such as the following:
1. Very Good
2. Good
3. Fair
4. Poor
5. Very Poor

Additional explanatory comments should be provided as necessary.