

# Environmental Assessment and Review Framework

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## Georgia: Sustainable Urban Transport Investment Program

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## ABBREVIATIONS

ADB	-	Asian Development Bank
AM	-	Accountability Mechanizm
AP	-	Affected Person
CWRD	-	Central and West Asia Region Department
EA	-	Executing Agency
ERU	-	Environmental and Resettlement Unit
EARF	-	Environmental Assessment and Review Framework
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
GRC	-	Grievance Redress Committee
GRP	-	Grievance Redress Procedure
IA	-	Implementing Agency
IEE	-	Initial Environmental Examination
MDDP	-	Municipal Development and Decentralization Project
MDF	-	Municipal Development Fund
MFF	-	Multi-tranche Financing Facility
MLARO	-	Municipal Land Acquisition and Resettlement Office
MoE	-	Ministry of Environmental Protection and Natural Resources
NGO	-	Non-Governmental Organization
REA	-	Rapid Environmental Assessment

## NOTE

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



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## I. INTRODUCTION

1. This document is the Environmental Assessment and Review Framework (EARF) for the Georgia Sustainable Urban Transport Investment Program -SUTIP (the Program). The Program was developed as the Government's response to the transportation problems in urban areas, which include large traffic volumes causing increasing delays, as a result of previous under-investment in infrastructure maintenance and expansion.
2. This paper is prepared to adequately address the ADB Safeguard Policy Statement (SPS) (2009) requirements and is fully endorsed by the Georgian government. The objective of preparing this EARF is to provide a formal structure through which the environmental impacts of new and amended subprojects can be assessed and mitigated by the Executing Agency in the future, in compliance with the ADB policy.
3. The Program is financed by the Asian Development Bank (ADB) under a Multitranches Financing Facility (MFF), and is aimed at promoting a sustainable, integrated, socially- affordable and cost-efficient urban transport system in cities of Georgia, to energize the economy and improve the quality of life of citizens. Projects will involve rehabilitation and repair of existing infrastructure (mainly roads and the underground railway), provision of new facilities (roads, tunnels, junctions, bridges, a Metro extension, etc) and capacity building.
4. The impact of the Investment Program is improved urban environment, local economy, and living conditions within urban areas. It will expand economic growth, create job opportunities, and improve environmental sustainability. The expected outcome is to improve the efficiency, reliability, and affordability of urban transport services in relevant cities.
5. The outputs of the Program are:
  - (i) urban transport infrastructure extended, rehabilitated, and improved by MDF and relevant municipalities;
  - (ii) institutional and management capacity of MDF and relevant municipalities strengthened; and
  - (iii) skilled and experienced units established to oversee the management and the implementation of the program in MDF and the relevant municipalities.
6. Investment Program consists of Tranches 1, 2,3, 4 and 5;
7. **Tranche 1 (Approved):** - On 05 August, 2010 MFF - Sustainable Urban Transport Investment Program Tranche 1 Loan and Project agreements were signed between Georgia and Asian Development Bank. The Tranche 1 will improve urban environment, local economy and living conditions within urban areas. The Tranche comprises (i) the upgrading of 20 km of road between Zugdidi and Mestia for year-round access to the Mestia urban area and heritage site, (ii) a 1.5-km Tbilisi metro extension to the university district, and (iii) a 2-km coastal improvement project in Anaklia to limit erosion and protect urban infrastructure.
8. The following sub-projects are active under the Tranche 1 currently:<sup>1</sup>

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<sup>1</sup> Sub-project Road improvements in Mestia has been completed.

- **Extension of Tbilisi Metro Line 2 and Creation of University Station**
- **Anaklia coastal improvement -Phase 1**

9. **Tranche 2: (Approved)** On 24 July, 2012 MFF - Sustainable Urban Transport Investment Program Tranche 2 Loan and Project agreements were signed between Georgia and ADB. Tranche 2 will: Improve urban environment and local economy; create better living conditions within urban areas. At loan approval, Project 2 comprised two subprojects: (i) the section 1 (km 0-4) and section 3 (km 10.5-17.1) of the international standard Tbilisi-Rustavi Urban Road Link.

10. Currently both subprojects have been completed. However, both are still under the warranty period and so are active under this Tranche:

- **Modernization of Tbilisi-Rustavi Urban Road Link – (sections 1 and 3)**

11. **Tranche 3: (Approved)** On 19 December, 2013 - Sustainable Urban Transport Investment Program Tranche 3 Loan and Project agreements were signed between Georgia and ADB. The Tranche 3 will improve the urban transport system and infrastructure in urban areas and comprises two subprojects: (i) section 2 (km 4.0-10.8) of the international standard Tbilisi-Rustavi Urban Road Link; and (ii) phase 2 of Anaklia Coastal Improvement; both of which are in line with components of the Investment Program. These investments will improve the urban environment, strengthen economic and tourism development, and regional integration.

12. The following sub-projects are active under the Tranche 3 currently:

- **Anaklia Coastal Improvement Project – Phase II**
- **Modernization of Tbilisi-Rustavi Urban Road Link – Section 2**

13. **Tranche 4: (Approved):** Tranche 4 was approved in Q4, 2015 and consists of 3 components: (a) urban infrastructure (Batumi coastal protection (5 km) to defend urban infrastructure and roads against severe erosion (b) institutional effectiveness, and (c) program management facility (consulting services for capacity building, individual consultants and audit). The physical works for Component (a) are on-going in 2017.

14. The following sub-project is active under Tranche 4:

- **Batumi coastal protection**

15. **Tranche 5: (Not approved yet):** Tranche 5 is anticipated to be approved in Q4, 2017 and will consist of rehabilitation, repair, and replacement of infrastructure of the Tbilisi Metro. Elements will include: (i) replacement of low and medium voltage power transmission cabling; and (ii) rehabilitation of ventilation system, including the installation of ventilation fans replacing missing and worn out equipment. This Tranche is being completed as a Category C project and so will not require completion of an initial environmental examination (IEE) or environmental impact assessment (EIA).

16. No change in the footprint of the metro will occur; only replacement of fans and cables will be conducted. A due diligence report has been completed by the executing agency which identified waste generation, transportation of large project components, and general construction pollution as the key potential impacts associated with the project. While impacts are considered minimal, to mitigate any risks, the project will follow a strict environmental code of practice in line with best international standards. Furthermore, prior to contract award, the environmental issues

will be revisited to determine whether any additional management or mitigation is required or whether the project categorization needs to be reconsidered. This EARF will apply if any unforeseen impacts occur during construction.

17. Municipal Development Fund of Georgia (MDF) is the Executing Agency (EA) implementing the Program and is therefore responsible for compliance with ADB procedures, including environmental and social safeguards. This EARF assesses the requirements of Georgian environmental law and ADB safeguards policy, and describes the procedures MDF will follow to ensure that projects comply with both. It also provides guidance on various related matters including: anticipated impacts of project activities; procedures for stakeholder consultation; information disclosure and grievance redress; accountability mechanism; institutional arrangements and responsibilities; and monitoring and reporting. Before Program appraisal this EARF will be translated into Georgian and distributed to all interested stakeholders; and the English version will be posted on the ADB website.

## II. OUTSTANDING SAFEGUARD ISSUES

18. As a result of the Office of the Compliance Review Panel (OCRP) investigation into the Tbilisi-Rustavi Urban Link (section 2) subproject under SUTIP Tranche 3, a number of safeguard issues were identified due to acknowledged noncompliance with SPS 2009. Of key concern in this case was the alignment of a new section of the road which would pass adjacent to several tower blocks. According to the OCRP investigation, vibration caused during construction of the road could affect the structural integrity of these buildings and during operation, noise levels are expected to exceed IFC/WB EHS guidelines as required by SPS 2009.<sup>2</sup>

19. A corrective action plan was prepared to address the identified issues and this was subsequently endorsed by the board on 30 June 2017. The responsibility for completing the action plan rests with the project team in collaboration with the PIU and under advisement of SDCC. Key tasks as part of this corrective action plan have been undertaken as detailed below:

- Ecological Assessment of the Mtkvari River to establish baseline, assess impacts and to identify mitigation measures required.
- Completion of a detailed noise modelling assessment.
- Vibration modelling and impact assessment.
- Detailed consultation focusing on vulnerable groups.

20. The results of these studies will be used to inform the decision-making process for mitigation measures to be implemented to execute the project in compliance with SPS 2009,

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<sup>2</sup> The below summarizes the conclusions arrived at by CRP as a result of their investigation. The CRP found noncompliance with environment section of ADB's Safeguard Policy Statement as: (i) The Project during operation will create noise impacts on people living in a densely populated area above allowed standards; (ii) Vibration impacts have to be properly assessed considering the Annexes (voluntary additions) which make up a significant proportion of the buildings likely to be affected; (iii) Impacts on vulnerable and disadvantage groups were not assessed and no mitigation measures have been designed; (iv) Insufficient targeted consultations were conducted with vulnerable groups especially vision impaired people; (v) Ecological impacts of the project on the Mtkvari River were not assessed; (vi) The project has not been appropriately classified for environmental impacts.

which will include detailed consultation with the APs. Final measures will be defined by end November 2017.

21. Key lessons learned as part of the CRP review under Tranche 3 include:
- Using IFC/WB EHS Guidelines as the standard for noise levels and not national standards;
  - Ensuring consultation is ‘meaningful’ so that a significant proportion of affected persons are consulted during project preparation and their views are considered;
  - Effort is made to identify vulnerable groups and then to subsequently consult with them fully on the proposed project;
  - All project impacts are fully assessed as part of the impact assessment process and where primary baseline data is needed to make an assessment, this data should be collected;
  - Vibration modelling includes all structures and additions that could be affected by construction activities; and
  - Any changes in project design are communicated to the safeguards team to ensure that they are also assessed and any additional mitigation needed, can be included.

### III. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

22. This section reviews the provisions for environmental protection in the laws of Georgia. It also discusses the potential implications of the international treaties to which the Republic of Georgia is a party. Finally, the administrative framework for environmental management is also described.

#### A. National legislation and ADB policy

##### 1. Environmental Laws and Policies of Georgia

23. Georgian legislation comprises the Constitution, environmental laws, international agreements, subordinate legislation, normative acts, presidential orders and governmental decrees, ministerial orders, instructions and regulations. Along with the national regulations, Georgia is signatory to a number of international conventions, including those related to environmental protection. Below is the list of laws relevant to environmental protection:

<b>Framework Legislation</b>	
1995	Constitution of Georgia (as amended 04.10.2013) Reg. No - 010.010.000.01.001.000.116
1996	Environmental Protection (as amended 26.12.2014 ) Reg. No - 360.000.000.05.001.000.184
<b>Permitting Legislation</b>	
2005	Licensing and Permitting (as amended 18.09.2014) (as amended 28.06.2017) Reg. No: 300.310.000.05.001.001.914
2007	Environmental Impact Permit (as amended 26.12.2016) Reg No - 360.160.000.05.001.003.078
2007	Ecological Expertise (as amended 01.06.2016) Reg. No - 360.130.000.05.001.003.079
2013	Regulation on EIA (as amended 15.05.2013 by the Decree No 31 of MoENRP)

<b>Specific Environmental Laws</b>	
1994	Soil Protection (as amended 16.07.2015) Reg. No - 370.010.000.05.001.000.080
1996	System of Protected Areas (as amended 17.02.2016) Reg. No - 360.050.000.05.001.000.127
2007	on Status of the Protected Areas (as amended 17.02.2016) Reg. No - 360.050.000.05.001.003.060
2014	Waste Management Code 01.06.2017 Reg. No -360160000.05.001.017608
1996	Minerals (as amended 26.12.2015) Reg. No - 380.000.000.05.001.000.140
1997	Wildlife (as amended 01.06.2017) Reg. No - 410.000.000.05.001.000.186
1997	Water Protection (as amended 26.12.2015) Reg. No - 400.000.000.05.001.000.253
1997	Transit and Import of Hazardous Waste within and into the Territory of Georgia as amended 11.03.2011) Reg. No - 300230000.05.001.016218
1998	Pesticides and Agrochemicals as amended 08.05.2012) Reg. No - 340120000.05.001.016723
1999	Atmospheric Air Protection as amended 01.06.2017) Reg. No - 420.000.000.05.001.000.595
1999	Forest Code as (amended 01.06.2017) Reg. No - 390.000.000.05.001.000.599
2003	Red List and Red Data Book of Georgia (as amended 01.06.2017) Reg. No - 360.060.000.05.001.001.297
<b>Other Relevant Laws</b>	
2007	On Cultural Heritage (as amended 26.12.2014) Reg. No - 450.030.000.05.001.002.815
2007	On Public Health (as amended 01.06.2017) Reg. No - 470.000.000.05.001.002.920
2005	On Fire Protection and Safety 24.06.2005 Reg. No - 140.060.000.05.001.000.355

## **2. Framework Legislation**

### **(a) The Constitution of Georgia 1995 (last amended in 2013)**

24. The Constitution of Georgia is the supreme legal document establishing general principles concerning environmental protection. Article 37 states: "Everyone shall have the right to live in a healthy environment and enjoy natural and cultural surroundings. Everyone shall be obliged to care for the natural and cultural environment." In Constitution are formed the basic requirements about the need of environmental protection and information accessibility for people about environmental conditions.

25. Also, the Constitution of Georgia states that the legislation of Georgia shall correspond to universally recognized principles and rules of international law. An international treaty or agreement of Georgia unless it contradicts the Constitution of Georgia, the Constitutional Agreement, shall take precedence over domestic normative acts (change is added by the Constitutional Law of Georgia of 30 March 2001).

26. *This means that conditions of the legal agreement between Georgia and ADB for the provision of Additional Financing for East West Highway Corridor Improvement Project prevail over the national legislation in case of contradiction.*

**(b) Law of Georgia on Environmental Impact Permit 2007 (Last amended in 2016)**

27. The Law gives a complete list of activities subject to ecological examination (Article 4, Chapter II) and defines environmental examination through the EIA process as an obligatory step for obtaining authorization for implementation of the planned development. The legislation sets out the legal basis for issuance of environmental permits, including implementation of an ecological examination, public consultations and community involvement in the processes. According to the established procedure the granting permission for, or refusal to issue, a permit is based on the findings of the EIA report and associated environmental documentation presented to the MoENRP by the project proponent. Paragraph 6 of the law requires the applicant to organize and undertake public consultation of the EIA report prior submission of the final version of the document to the MoENRP.

28. The objects of environmental assessment are the activities on the list under clause 1 of article 4 of the given Law.

29. Specific provisions of the law that may affect the project(s) are discussed later in this chapter.

30. *In line with the requirements of the presented Law, MDF shall apply for and obtain the environmental impact permit from the Ministry of Environment and Natural Resources Protection of Georgia, which will be an integral procedure for the issuance of Construction Permit by the Ministry of Economy and Sustainable Development for works under the project.*

**(c) Law of Georgia on Licenses and Permits 2005 (Last amended in 2017)**

31. The Law regulates activities which may result in increased hazard to human life or health, involves interests of importance to the State or public, or connected to consumption of State resources. The Law defines the full list of activities which require licenses and permits, and sets out the rules for granting, amending and abolishing licenses and permits.

32. *By using this law, the MDF identifies the Project category and the list of all documents and stages which are necessary to receive the ecological expertise.*

**(d) Law of Georgia on Ecological Expertise 2007 (Last amended in 2016)**

33. The Law makes an ecological examination obligatory for issuance of development permits. According to the Law the independent expert opinion is mandatory to adopt a decision on the issuance of an Environmental Impact Permit. The ecological expertise is the responsibility of the MoENRP, which undertakes expert examination in accordance with the provisions on the Procedure of Conducting State Ecological Expertise, and the normative-technical and methodological guidance documents and the procedure established under law, through a commission of experts.

34. *The Ministry of Environment and Natural Resources Protection, in line with the requirements of the given Law, will identify and invite all independent experts, whose conclusions will be used to fix the compliance of the EIA document with the requirements of the Georgian legislation, normative acts and standards.*

### 2.1.1. Requirements for Environmental Assessment in Georgia

35. The EIA is defined under the Georgian Law as: “studying and examination procedure of the planned activities is designed to protect separate components of the environment, human, as well as landscape and cultural heritage. EIA study, identifies and describes the direct and indirect impacts on human health and safety, herbage and animals, soil, air, water, climate, landscape, ecosystems and historical monuments, or all the above factors unity, among the factors that influence the cultural values (cultural heritage) and the social - economic factors”.

36. The law requires that the EIA or its accompanying information shall include:

- A layout (indicating a distance) of the place where the project shall be implemented;
- Volume and classes of emissions expected of stationary pollution sources and hazardous substances discharged and emission and a project of hazardous substances discharged and emission standards allowed to limit);
- A short summary on the activities (as a technical summary)
- A full schedule of the technological cycle to the administrative body issuing a permit even the activity includes commercial and/or state secret.

37. The law also requires that wherever relevant, the EIA process shall take into account the environmental principles as listed in Section 3.1.2. This is particularly important for those aspects of the environment for which specific laws, regulations and standards have not been enacted.

### 3. The EIA Process

38. The Law of Georgia on Environmental Impact Permit sets the legal basis for issuance of an environmental permit, including implementation of an ecological examination, public consultations and community involvement in the processes. Granting of permission or refusal to issue a permit is based on ecological examination of environmental documents submitted to the MoENRP by the project proponent.

39. Article 6 of the Environmental Impact Permit Law requires the project proponent to organize a public hearing of the EIA prior to submission of the final version documentation to the MoENRP.

40. According to Article 6, the developer is obliged to carry out public discussion of the EIA before its submission to an administrative body responsible for issuing a permit. Where an activity requires a construction permit this must be done before initiating stage 2 of the process for issuing a construction permit.

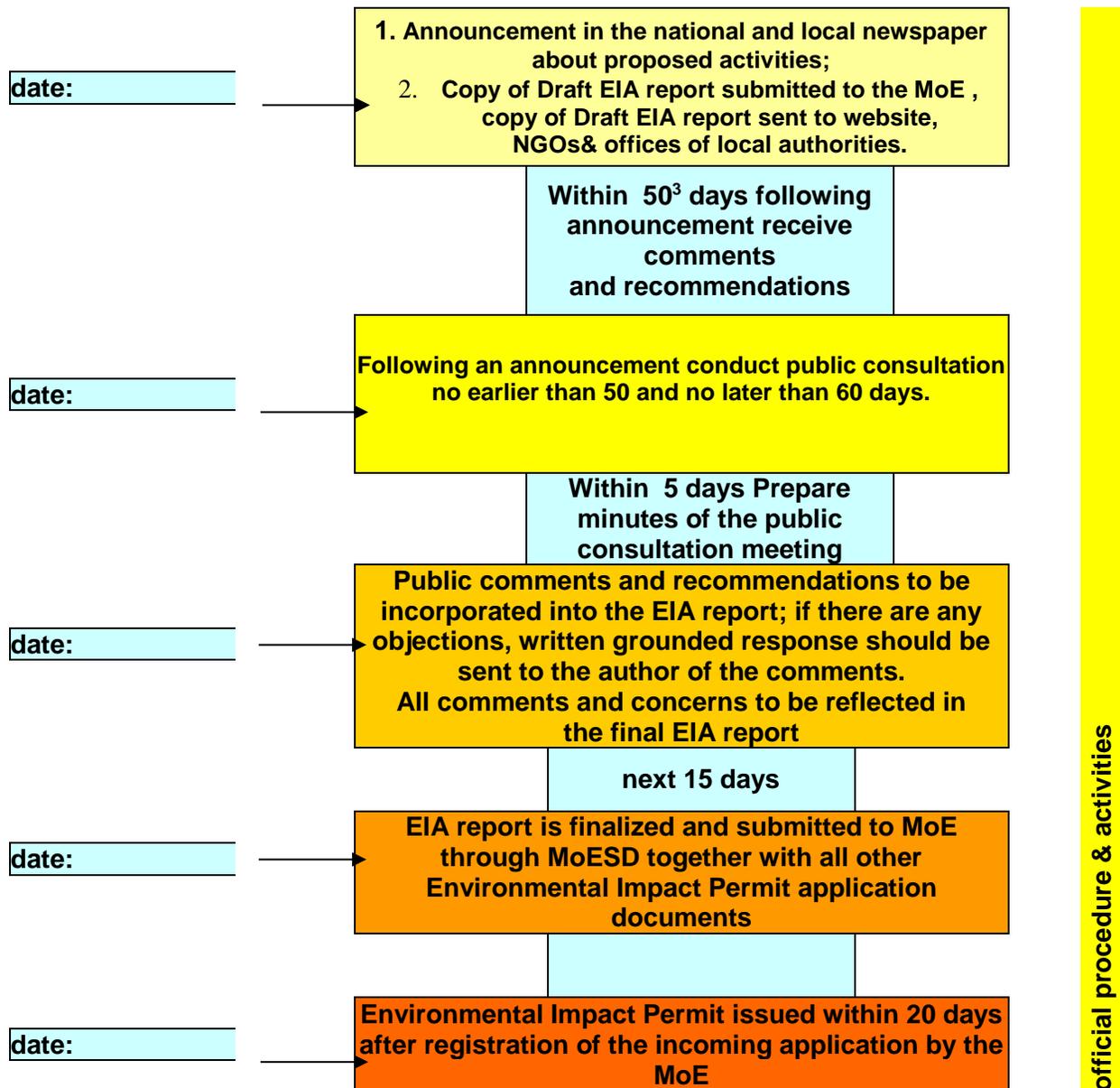
41. The permit application/issuance procedure for the Project, including EIA coordination, establishment of the timeframes for information disclosure and public review and discussion in accordance with Georgian Law will include the following steps:

- **Step 1:** The project proponent publishes information on the Project in central and regional newspapers. The advertisement has to include the project title, location, place and the date, time and venue of public disclosure meeting(s). It will also identify locations where the ESIA can be reviewed and where comments may be submitted.

- **Step 2:** Within one week after publishing the information in the newspapers, the project proponent will submit the EIA report (hard copy and electronic version) to the MoENRP. A period of 45 days is allowed for public comments on the EIA. Between 50 and 60 days after publication, the project proponent will hold a series of meetings to receive comments from stakeholders (which may include government agencies, local authorities, NGOs, community members). Within five days of the meetings, the project proponent will submit minutes of the meetings (summary of comments and discussions) to the MoENRP.
- **Step 3:** All comments received from the stakeholders at the meeting or in writing will be reviewed and addressed in the final version of the ESIA. A copy of all written comments, the minutes together with a comment-response section will be included in the final ESIA as an Appendix. The final ESIA will be submitted to the MoENRP and made available to the public, along with a project location map, an executive summary, and the any necessary reports on emissions and allowable limits. The permit is to be issued or denied within 20 days from registration of the submission.

42. Procedures for obtaining the permit are described in the Law of Georgia on the Construction Permit. The administrative body responsible to issue the permit is the Ministry of Economy and Sustainable Development. Under the law, the Ministry is required to ensure involvement of other ministries including the MoENRP in the permitting process. For the projects subjected to the construction permit, the construction permit incorporates elements of environmental impact permit.

43. Environmental impact permit is also required for running asphalt and concrete batching plant. License for use of natural resources, if own quarries are to be used, is also required. The authority responsible for issuing the license is MoENRP. All other issues such as temporary disposal of inert construction waste and unusable asphalt are regulated with the local municipal authorities and require a formal agreement with them.



**Fig. 2.1. Disclosure and Environmental Impact Permit Procedure**

**4. Other Environmental Laws**

**(a) Law of Georgia on Water 1997 (Last amended in 2015)**

44. The Law regulates the use of water resources, determines the rights and responsibilities of water users, and regulates water abstraction and discharges. Consistent with the legislation, water within the territory of Georgia owned by the State can be abstracted only for consumption. Any actions directly or indirectly violating the State ownership rights for water are prohibited.

<sup>3</sup> Project will be implemented according to the IFI guidelines and disclosure period of ESIA respectively will be extended up to 120 days.

45. Under the current law requirements no license is required for water abstraction from surface water. However, license is needed for abstraction of groundwater.

46. The law regulates the water intake and water discharge processes. In case of discharge of the water the developer by Environmental Impact Permit might be required to submit Maximum Permissible Discharge Documents calculating the volumes of the discharge and impact on environment.

47. In order to meet the requirements of the said law, the actions, which will help avoid, reduce or manage the pollution or strong negative impact on the river(s) in the project zone must be identified.

**(b) Law of Georgia on Soil Protection 1994 (Last amended in 2015)**

48. The Law aims at ensuring preservation of integrity and improvement of soil fertility. It defines the obligations and responsibility of land users and the State regarding the provision of soil protection conditions and ecologically safe production. The Law sets the maximum permissible concentrations of hazardous matter in soil and restricts the use of fertile soil for non-agricultural purposes, the execution of any activity without prior striping and preservation of top soil, open quarry processing without subsequent re-cultivation of the site, terracing without preliminary survey of the area and approved design, agricultural activities that could lead to overgrazing, wood cutting, damage of soil protection facilities, and any activity that could potential deteriorate soil quality (e.g. unauthorized chemicals/fertilizers, etc.).

49. The law sets general basis for the protection of soil from erosion, contamination, sedimentation, sanitization, secondary swamping, etc., regulation of the open extraction of natural resources and construction materials, impact from human economic activity. The Law sets up norms and standards for allowable concentration limits of pollutants in the soil to ensure human health and better environment.

50. The requirements of the said law regulate the rules of topsoil removal, storage and further management.

**(c) Law of Georgia on Protection of Ambient Air 1999 (Last amended in 2017)**

51. The Law regulates protection of the ambient air from adverse anthropogenic impact within the whole Georgian territory (Part I, Chapter I, Article 1.1). Adverse anthropogenic impacts are any human induced effect on atmospheric air causing or capable of causing a negative impact on human health and environment (Part II, Chapter IV, and Article II.I).

52. Main competences of governmental authorities in the field of ambient air protection (a) Development of environmental monitoring (observation) system; (b) Development and implementation of common policies and strategies; and (c) Development of integrated ambient air pollution control.

53. According to the Law, the inventory on emissions of air pollutants from stationary pollution sources is obligatory for physical and legal entities. The special inventory report is to be prepared for 5 years for each source of the atmospheric air pollution and each type of a harmful substance. During preparing the EIA, a full inventory on emissions (in case of existence) is to be carried out and maximum permissible concentrations or temporarily agreed permissible concentrations of the

emitted harmful substances for stationary pollution sites are to be set. Maximum permissible concentration is an amount of permitted emissions of air pollutants from stationary pollution sources. Temporarily agreed permission concentrations can be approved for five years (maximum) without prolongation. The Maximum permissible concentration of the emitted harmful substances for stationary pollution sites is approved for 5 years for each source of the atmospheric air pollution and each type of a harmful substance.

54. Registration of emissions from stationary pollution sources comprises:

- self-monitoring of emissions;
- state emission registration system.

55. Self-monitoring of emission of pollutants from stationary pollution sources means that economical actor (operator) shall conduct adequate self-monitoring of pollutant emissions from stationary pollution sources. It includes:

- emission measurements (assessment)
- registration of emissions
- reporting of emissions

56. State emission registration system is a system of compilation, processing and analysis of emission reporting documentation. The MoENRP of Georgia conducts state registration of emissions.

**(d) Law of Georgia 'On the system of the protected areas' 1996 (Last amended in 2016)**

57. The Law defines the categories of 'protected areas' and specifies the frames of activities admissible in the given areas. The permitted actions are defined by considering the designation of the areas and in accordance with the management plans and provisions of the international conventions and agreements to which Georgia is a party. As a general requirement, the following activities are prohibited in the protected areas:

- (a) Disturbance or any other changes of the natural ecosystems
- (b) Demolition (destroy), arrest, disturbance, damage (invalidation) of any natural resource with the purpose of its exploitation or any other purpose
- (c) Damage of the natural ecosystems or species by reason of the environmental pollution
- (d) Bringing and breeding foreign or exotic species of living organisms
- (e) Bringing explosives or toxic materials to the area

58. According to the given Law, all kinds of economic and entrepreneurship activities are admissible in the support zone provided they do not hamper the functioning of the protected areas.

**(e) Waste Management Code 2015 (Last amended in 2017)**

59. The purpose of this Code is to establish a legal framework in the field of waste management to implement measures that will facilitate waste prevention and its increased re-use as well as environmentally safe treatment of waste.

60. The objective of this Code is to protect the environment and human health through:

- a) The prevention or reduction of waste and its adverse impact;
- b) The establishment of effective mechanisms for waste management;

- c) The reduction of damage caused by the consumption and the more efficient use of resources.

61. In line with the requirements of the said law, the Construction Contractor must hire a duly qualified environmental manager who will be obliged to develop Waste Management Plan and submit it to MoENRP for approval. In line with the requirements of the Waste Code, the Construction Company is obliged to control the process of managing the originated waste through the final disposal of the waste.

**(f) Law on Compensation for Damage Arisen from the Use of Hazardous Materials 1999 (Last amended in 2010)**

62. The Law specifies how charges for the use of and/or harmful impact on the environment are to be calculated and levied by the MENRP.

**(g) Law on Hazardous Chemical Substances 1998**

63. This Law regulates handling of dangerous chemical substances, but it has been stopped by the law of Georgia “on the control technical danger” which regulates processes when activity contains possibility of issue of explosion and intoxication which appears (represents) the increased risk for health of people and environment.

**(h) The Law on Minerals 1996 (Last amended in 2015)**

64. The Law establishes the requirement to obtain a license according to the procedures established under this law and the Law on Licensing and Permits (June 25, 2005). According to the current system all quarries and borrow pits require to obtain a license.

65. If the Construction Contractor opens his own quarries of inert materials, a relevant license will be necessary to obtain. Particular attention must also be paid to the restoration of the quarries.

**(i) The Wildlife Law 1996 (Last amended in 2017)**

66. The law mandates the MoENRP to regulate wildlife use and protection overall territory of the country, including existing protected areas. The law empowers the MoE to issue hunting permits and licenses, declare hunting areas, control poaching, etc. Potential poaching by the workers should be controlled also during construction works. This law also determines activities on protected areas by the corresponding structural units.

**(j) The Law on Red List and Red Book of Georgia 2003 (Last amended in 2017)**

67. The Law establishes the legal basis for the preparation and approval of the Red List and Red Data Book to provide these instruments for the protection and restoration of threatened species of flora and fauna. The new **Red List of Georgia** was approved in May 2006 and is as such legally enforceable. The Red List is organized in accordance with the guidelines and principles of the International Union for the Conservation of Nature (IUCN). According to article 4 of the law: „any type of activity is forbidden, including hunt, cutting and others, besides special occasions (events) fixed by law“.

**(k) Forest Code of Georgia 1999 (Last amended in 2017)**

68. The Law establishes legal grounds for protection, restoration, and forth use of the Georgian Forest Fund and its resources. The Law defines property rights to the forests of Georgia, the principles for the protection and use of forest resources and establishes the procedures for their use and the requirement to obtain a license.

69. **Article 38** of the Forestry Code establishes the modes of protection of the state forest fund:

- Aiming at protecting the present state of the state economic forest fund and its biodiversity, originality of intact forests and relict, endemic and other valuable plant species, the general or special mode of protection of the state economic forest fund has been introduced by considering the priority functionality, historical, cultural and other values of the forest
- The mode of protection of the protected territories of Georgia is defined under the Georgian Law 'On the system of protected territories'.

70. **Article 39** specifies the special limitations to certain types of activity defined by the special mode of protection:

(1) The following activities are prohibited in the state economic forests and lands where a special mode of protection is applied:

- Cutting of a principal use;
- Activities of the first and second categories as defined by the Law of Georgia 'On environmental permits', except the programs for rehabilitation of the protected areas and founding the hunting firms.

71. In case if some area of the forest massif are to be cut down within the scope of the project, this process must be accomplished by full observance of the requirements of the Law. The territory needed by the project will be necessary to remove from the forest fund. In addition, the full inventory and other actions will be needed.

**(l) The 'Law of Georgia on Cultural Heritage' 2007 (Law amended in 2014)**

72. Was approved in May of 2007. Article 14 of the Law specifies the requirements for 'large-scale' construction works. According to this Article, a decision on career treatment and or extraction on the whole territory of Georgia, as well as on construction of an object of a special importance as it may be defined under the legislation of Georgia, is made by a body designated by the legislation of Georgia based on the positive decision of the Ministry of Culture and Monument Protection of Georgia. The basis for the conclusion is the archeological research of the proper territory to be carried out by the entity wishing to accomplish the ground works. The entity wishing to do the ground works is obliged to submit the Ministry the documentation about the archeological research of the territory in question. The preliminary research should include field-research and laboratory works. In case of identifying an archeological object on the territory to study, the conclusion of the archeological research should contain the following information: (a) a thorough field study of the archeological layers and objects identified on the study territory by using modern methodologies, and (b) recommendations about the problem of conservation of the identified objects and planning of the construction activity on the design territory, on the basis of the archeological research.

## 2.1.2 International and National Environmental Standards and Norms

73. In accordance with the Law of Georgia on Public Health, the environmental qualitative norms are approved by Decrees of the Minister of Labor, Health and Social Affairs of Georgia (Decrees Nos. 297/N of 16.08.2001, including the changes made to it by further decrees of the Ministry Nos. 38/N of 02.24.2003, 251/N of 09.15.1006, 351/N of 12.17.2007). The quality of atmospheric air (pollution with hazardous matter) is also defined by the order of the Minister of Environment Protection and Natural Resources (#89, 23 October 2001) on approval of the rule for calculation of index of pollution of atmospheric air with hazardous pollution.

### 5. Ambient Air Quality Standards

74. Georgian and IFC guidelines for ambient air quality guidelines are presented in Table 1 and Table 2.

**Table 1. Georgian Standards for Ambient Air Quality**

Substance	Maximum permissible concentration (MAC) mg/m <sup>3</sup> /average time
Nitrogen dioxide	0.085/30 minutes
	0.04/24 hours
Sulphur dioxide	0.5/ 30 minutes
	0.05/24 hours
Carbon Oxide	5.0/30 minutes
	3.0/24 hours
Inorganic dust	0.3

**Table 2. IFC Ambient Air Quality Guidelines**

	Averaging Period	Guideline value in µmg/m <sup>3</sup>
<b>Sulfur dioxide (SO<sub>2</sub>)</b>	24-hour	125 (Interim target-1) 50 (Interim target-2) 20 (guideline)
	10 minute	500 (guideline)
<b>Nitrogen dioxide (NO<sub>2</sub>)</b>	1-year	40 (guideline)
	1-hour	200 (guideline)
<b>Particulate Matter PM<sub>10</sub></b>	1-year	70 (Interim target-1) 50 (Interim target-2) 30 (Interim target-3) 20 (guideline)
	24-hour	150 (Interim target-1) 100 (Interim target-2) 75 (Interim target-3) 50 (guideline)
<b>Particulate Matter PM<sub>2.5</sub></b>	1-year	35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline)
	24-hour	75 (Interim target-1) 50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)
<b>Ozone</b>	8-hour daily maximum	160 (Interim target-1) 100 (guideline)

*World Health Organization (WHO) Air Quality Guidelines Global Update, 2005. PM 24-hour value is the 99th percentile. Interim targets are provided in recognition of the need for a staged approach to achieving the recommended guidelines.*

75. In general, Georgian standards for ambient air correspond to international IFC/WB standards, however in relation with particular substances there can be minor differences and in that case more stringent standards are applicable.

## 6. Water Quality Standards

76. The values of Maximum Admissible Concentrations of the harmful substances in surface and groundwater are provided in the Environmental Quality Norms approved by the Order#297N (16.08.2001) of the Ministry of Labor, Health and Social Protection (as amended by the Order No 38/n of the same Ministry of 24.02.2003). The admissible level of pollutants in surface and groundwater is given in Table 3 below.

**Table 3. Georgian Standards for Water Quality**

No	Description	Maximum Permissible Concentration
<b>Surface Water</b>		
1.	pH	6.5-8.5
2.	Diluted oxygen, mg/l	4 – 6
3.	Chlorides, mg/l	350
4.	Oil products, mg/l	0.3
5.	Zinc (Zn <sup>2+</sup> )	1g/kg
6.	Lead (Pb total) mg/l	23,0
7.	Chrome (Cr <sup>6+</sup> ) mg/l	32,0
8.	Cadmium (Cd, total) mg/l	6,0
<b>Ground Water</b>		
	TDS, mg/l	
	Sulphates, mg/l	250
	Chlorides, mg/l	250
	Sodium, mg/l	200
	Calcium, mg/l	140
	Magnesium, mg/l	85
	Total coliforms, in 250 ml	Inadmissible

## 7. Noise Level Standards

77. Admissible noise standards of IFC and Georgian national standards for the residential area are similar. The standards about the noise are allowed according to the Decree # 297/N of the Ministry of Health, Labor and Social Affairs of Georgia on Affirmation the Qualitative Norms of the Environment, issued on August 16, 2001 and Resolution No 398 of the Government of Georgia August 15, 2017 Technical Regulations – “On the norms of acoustic noise in the premises of buildings and areas of the residential houses and social/public establishments”. There are defined as the admissible norms of noise as the maximum of the admissible norms for several zones of the territories. For the residential areas the standard requirements for noise are given in the Table 4.

78. For IFC noise impacts should not exceed the levels presented in Table 4 or result in a maximum increase in background levels of 3 dB at the nearest receptor location off site.

**Table 4. Georgian Standards for Noise Levels**

Time	The average allowed size of noise (DCB)	The maximum allowed norms of noise (DCB)
7am – 11 pm	55	70
11pm – 7am	45	60

**Table 5. IFC Noise Level Guidelines**

Receptor	One hour $L_{aeq}$ (dbA)	
	Daytime 07:00 – 22:00	Nighttime 22:00 – 07:00
Residential; institutional; educational	55	45
Industrial; commercial	70	70

79. As it shown in the tables 4 and 5 the both (IFC and GEO) standards envisage the same level of admissible threshold of equivalent noise: 45 dbA for nighttime and 55 dbA for daytime.

## **8. ADB Policy**

80. Superseding the previous safeguard policies (the Involuntary Resettlement Policy, 1995, the Policy on Indigenous Peoples, 1998, and the Environment Policy 2002), ADB, has adopted a comprehensive Safeguard Policy Statement in 2009 (SPS) (2009). This Statement describes common objectives of ADB's safeguards, lays out policy principles, and outlines the delivery process for ADB's safeguard policy. It applies to all ADB-financed, ADB-administered projects, and their components including investment projects funded by a loan, grant or other means.

81. According to ADB SPS (2009) and Operational Manual FI (2010), the process of determining a project's environment category is to prepare a Rapid Environmental Assessment (REA). REA requires the completion of the environmental categorization form prior to the project initiation. REA uses sector-specific screening checklist, taking into account the type, size, and location of the proposed project; sensitivity and vulnerability of environmental resources in project area; and the potential for the project to cause significant adverse environmental impacts. A project is classified as one of the four environmental categories (A, B, C, or FI) based on the most environmentally sensitive component. Categories are as follows:

82. **Screening and Categorization.** ADB will carry out project screening and categorization at the earliest stage of project preparation when sufficient information is available for this purpose. Screening and categorization is undertaken to (i) reflect the significance of potential impacts or risks that a project might present; (ii) identify the level of assessment and institutional resources required for the safeguard measures; and (iii) determine disclosure requirements.

83. **Environment Categorization.** ADB uses a classification system to reflect the significance of a project's potential environmental impacts. A project's category is determined by the category of its most environmentally sensitive component, including direct, indirect, cumulative, and induced impacts in the project's area of influence. Each proposed project is scrutinized as to its

type, location, scale, and sensitivity and the magnitude of its potential environmental impacts. Projects are assigned to one of the following four categories:

**(i) Category A.** A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment is required.

**(ii) Category B.** A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination is required.

**(iii) Category C.** A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed.

**(iv) Category FI.** A proposed project is classified as category FI if it involves investment of ADB funds to or through a FI (paras. 65-67).

84. **Information Disclosure:** In line with ADB's Public Communications Policy, ADB is committed to working with the borrower/client to ensure that relevant information (whether positive or negative) about social and environmental safeguard issues is made available in a timely manner, in an accessible place, and in a form and language(s) understandable to affected people and to other stakeholders, including the general public, so they can provide meaningful inputs into project design and implementation. ADB will post the following safeguard documents on its website:

- (i) for environment category A projects, draft environmental impact assessment reports at least 120 days before Board consideration;
- (ii) draft environmental assessment and review framework, draft resettlement Frameworks and/or plans, and draft Indigenous Peoples planning frameworks and/or plans before project appraisal;
- (iii) final or updated environmental impact assessments and/or initial environmental examinations, resettlement plans, and Indigenous Peoples plans upon receipt;
- (iv) environmental, involuntary resettlement, and Indigenous Peoples monitoring reports submitted by borrowers/clients during project implementation upon receipt.

#### IV. ANTICIPATED ENVIRONMENTAL IMPACTS

85. While there would be numerous positive benefits in terms of improving quality of life of people as well as raising standards of both individual and public health, the subprojects implemented under the Investment Program may also induce certain negative impacts. It is therefore required that environmental impacts are identified and assessed as part of the planning and design process, and that action is taken to reduce those impacts to acceptable levels. This is done through the environmental assessment process, which is an integral part of ADB's lending operations and project development and implementation process.

86. ADB Environmental Assessment Guidelines (EAG), 2003, prescribes that an environmental assessment should evaluate impacts due to the location, design, construction and operation of the project. Construction and operation are the two activities in which the project interacts physically with the environment, so they are the two activities during which the environmental impacts occur. In many projects there are certain effects that, although they will occur during either the construction or operation stage, should be considered as impacts primarily due to the location or design of the project, as they would not occur if an alternative location or

design was chosen. For example, if a groundwater resource was depleted by excessive abstraction this would be an impact of both the location and design, because groundwater may not be depleted if the design had used surface water to augment the supply, and the specific aquifer would not have been depleted if the well field was located elsewhere.

87. ADB's Rapid Environmental Assessment (REA) Checklists are used to identify impacts, assess their likely significance and examine how negative impacts may be mitigated. The checklists comprise a series of questions regarding the location and potential impacts of a project, which are derived from ADB experience in implementing projects in the sector. Impacts are identified and assessed in the responses to each question. Template is provided in Appendix 1.

88. Rapid Environmental Assessment (REA) checklists determine the project environmental category, presents anticipated environmental impacts and broad mitigation measures of the Investment Program subprojects. Most impacts will result from considerable construction activities in urban and heavily populated areas. Almost all of the design impacts can generally be mitigated while there can be significant impacts if the components are located in environmentally sensitive areas. Therefore it is important that the Investment Program avoids encroachment into such sensitive areas.

89. The checklists indicate that the most of the environmental and social risks occur during the construction stage, which is as expected as these are major construction projects, conducted in heavily populated urban areas, often in locations where there are already traffic and transportation problems. Most construction impacts are however temporary, related to the construction process itself, and can be mitigated by relatively straightforward measures that are common practice at sites of urban construction. These include:

- (i) Reducing dust by using wheel washes, watering site roads and covering loose material when carried on trucks (including removal of waste soil and delivery of sand);
- (ii) Reducing noise, dust and visual intrusion by retention of existing mature trees erecting barrier fences around sites and sensitively timing the works;
- (iii) Preparing and implementing pollution prevention and abatement plans to reduce risks of accidental spills of toxic materials and to contain and treat any spills that do occur;
- (iv) Preparing and implementing traffic management plans to avoid exacerbating congestion problems and maintain vehicle and pedestrian safety in the vicinity of sites; etc.
- (v) Preparing waste management plan ensuring proper management of produced waste- avoid any access to drainage water, immediate removal from the working sites, placement of the waste in secondary protective basins, transferring produced waste only to a certified contractor.

90. There are certain other construction impacts that are related to a particular project for example Coastal Protection, working in water and bridge construction, may require more site-specific mitigation measures. Anticipated Site-specific Environmental Impacts related to the construction and operational phase of coastal protection projects, bridge construction projects and projects requiring working in water along with their required mitigation measures are briefly described below:

- (i) Avoid use of hydrocarbons or chemicals within the vicinity of surface water sources;
- (ii) Where possible avoid refueling within 50m of surface water sources;

- (iii) Clean up any oil based products in or near the waterways to avoid water contamination;
- (iv) Prepare a Spill Response Plan in case of spills,
- (v) Presence of spill containment and clean-up equipment during all fueling and fluid replacement or top-up activities;
- (vi) Fuelling of vessels and equipments at shore mooring locations where spill containment equipment is present before the start of fueling;
- (vii) Monitoring of sensitive sites and species during construction phase and no works implementation during sensitive periods to avoid stress of migratory bird species during autumn migration and wintering and fish during migration for spawning;
- (viii) Monitoring water quality during the extraction/nourishment period (for coastal projects) and during construction period , in order to verify the absence of impact on seawater quality
- (ix) Monitoring of water quality during construction for key parameters
- (x) Ensuring terrestrial sites are located appropriately with secondary containment for hydrocarbons and chemicals that may be stored there
- (xi) Ensuring riparian and coastal habitat is retained as far as possible within the project works area.

91. Construction impacts that are related to other projects of the Program, which also may require site-specific mitigation measures include:

- (i) Amending designs where necessary to retain as many of the existing mature roadside trees as possible, because of their ecological and aesthetic value;
- (ii) Reducing waste disposal by re-using excavated material where possible and planning routes to disposal sites to limit disturbance to road-side residents;
- (iii) Careful site selection and design to avoid or minimize the acquisition of privately-owned land, demolition of occupied buildings and relocation of households and businesses.

92. Once the schemes are operating, they should all have beneficial environmental and social impacts by improving particular elements of the transportation system of the city, and thus contributing to overall reductions in: travel times; traffic congestion; economic losses; exposure to noise and exhaust gases, etc. There may also be certain negative impacts, which will need to be reduced by action in the design and procedures for operation of the facilities. These include:

- (i) Increased noise and vibration from new roads and metro lines, so routes will need to avoid susceptible buildings, historical locations and other sensitive areas (e.g. schools, hospitals);
- (ii) Increased numbers of pedestrians at transportation hubs, so designs should include safety features such as aerial walkways, subways, roadside barriers and effective signage;

93. It should be noted that in cases where roads are being resurfaced and improved as is also covered in this MFF, impacts may actually be positive. Where roads are resurfaced for example, during operation noise will be reduced, driving will be more efficient and car damage as well as risk of accident will also be reduced.

## **V. ENVIRONMENTAL ASSESSMENT FOR PROJECTS AND COMPONENTS**

### **A. Existing MDF procedure**

94. Subprojects prepared for investment under the Investment Program must comply with

Georgia national legislation and ADB SPS (2009). If the environmental criteria shown in table 1 below are followed in the selection and development of subprojects, then most should have relatively minor environmental impacts, and the procedure for environmental assessment should then be straightforward and can be modeled on the approach adopted during projects implementation. The principal steps in each process are described below.

95. MDF presently conducts environmental assessment at three stages in a typical project cycle: identification; appraisal; and implementation.

96. **Project Identification: Preliminary Environmental Assessment.** Projects proposed for MDF funding are screened to ensure that those with adverse impacts that cannot be effectively mitigated are excluded from financing. The process consists of three steps as follows:

- (i) A desk-study is conducted using available documents to examine whether the likely area of impact of the project is near any protected areas, resorts, or other restricted or highly sensitive locations;
- (ii) Evidence is collected to determine whether the project violates any environmental laws or regulations;
- (iii) The potential impacts of the project are then examined along with design alternatives and mitigation measures, to determine whether there are any adverse impacts that cannot be avoided or mitigated. If that is the case or mitigation is deemed unfeasible at a reasonable cost within the limits set by the local government's borrowing capacity, the project is declared ineligible or local government is directed to other possible financing sources.

97. The results of the environmental screening are summarized via statements such as "no significant environmental impacts are anticipated", possible adverse impacts can be effectively mitigated", "the proposed subproject would violate existing environmental regulations", "the project will lead to positive environmental impacts", etc. The written comments of the evaluation include a brief description of the affected environment, potential impacts, and recommendations on:

- (i) the involvement of environmental consultants;
- (ii) the need to consider alternative locations, technical approaches and/or other solutions; (iii) the need for specific prevention and mitigation measures; and
- (iii) the desired level of environmental assessment and public involvement in future stages.

98. **Final Appraisal: Environmental Assessment.** During the appraisal stage, MDF conducts a more detailed assessment of the impacts of projects, which involves the following:

- (i) Visiting the project site to conduct a field assessment, and participating in public hearings and consultations;
- (ii) Comparing results and recommendations of the preliminary environmental assessment with the final project documentation and ascertaining that all necessary environmental permits (land use, resources use, waste disposal, sanitary inspection, etc) and approvals have been or can be obtained;
- (iii) Preparing the environmental assessment including, where needed, an environmental management plan (EMP);
- (iv) Consulting stakeholders and disclosing relevant information on the project's environmental impacts in a form and manner that is understandable to those consulted;
- (v) Examining project documentation to ensure that: (a) the environmental assessment was performed in accordance with regulations and that it followed

- the recommendations of the preliminary environmental assessment; (b) the documentation includes all necessary permits and approvals required at appraisal stage; (c) appropriate prevention and mitigation measures have been planned and necessary resources have been allocated; and (d) project documentation and the findings of site visits have been disclosed to the public and the project does not draw public objections;
- (vi) Making recommendations on the level and mechanisms of environmental monitoring to be conducted during construction and subsequent operation of the project facilities.

99. **Project Implementation: Environmental Management Plan.** The Environmental Management Plan (EMP) documents the impacts identified in the IEE report, the actions required to mitigate those impacts to acceptable levels in accordance with the Georgian legal requirements and the ADB safeguard policy, and the monitoring activities that are to be undertaken as part of the project to confirm that the mitigation actions have been effective in achieving their objectives or to initiate corrective actions required.

100. The EMP also details the institutional arrangements and capacities that currently exist, or that will be put in place as part of the project implementation, to ensure that the environmental due diligence (including the EMP) has comprehensively considered both the national and ADB requirements for environmental protection, has identified all likely environmental impacts and proposed appropriate mitigation measures, and has the systems in place to ensure that effective procedures for environmental monitoring and control of the project impacts and mitigation measures are implemented throughout the life of the project.

101. Prior to the start of construction, the EMP should be converted into Site Specific Environmental Management Plan (SEMP) to ensure that all necessary detail and key information such as locations for quarries, construction camps and waste facilities is included, as much of this may not have been available during preparation of the EMP.

102. The main institutions that are involved in implementation of the EMP/SEMPs and monitoring are the executing agency (EA), the Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environmental and Natural Resources Protection and Municipal Authorities. Ministry of Environmental and Natural Resources Protection has the authority for periodic audits but should not be considered as a party responsible for monitoring according to this IEE and EMPs;

103. The Environmental and Social Specialists of the MDF, are responsible for management of the environmental and social aspects associated with development of all donor funded projects for which MDF is the responsible EA.

104. The SC of works commissioned by MDF is responsible to establish strong field presence in the Project area and keep a close eye on the course of works. Along with ensuring consistency with the design and ensuring quality of works, the supervisor is mandated to track implementation of EMP by the contractor and reveal any deviations from the prescribed actions.

105. Construction contractor is obligated to follow EMP/SEMP and good construction practice. In order to meet this obligation, a contractor shall establish environmental management team and procedures.

## **B. Environmental Assessment procedure for this Program**

106. The existing MDF environmental assessment procedure was designed to comply with both national law and the safeguard policies of the major lenders (including the World Bank and ADB). It therefore requires only minor adjustment to comply with the updated ADB procedure as described in the Safeguard Policy Statement (2009). The approach to environmental assessment to be adopted in this program is thus as follows.

107. The avoidance of negative impacts (by sensitive site selection, amending features of the design, etc) is a key facet of environmental assessment, as it both protects the environment and can save considerable time, effort and cost downstream in a project, by avoiding the need for difficult and costly environmental mitigation and compensation measures. It is important therefore that environmental impacts are taken into account throughout the development of projects/ subprojects, beginning in the earliest stages and that the decisions are made on the basis of environmental criteria, as well as feasibility and cost. The following guidelines or criteria are formulated, such that if they are taken into account in selecting and developing subprojects, it should reduce their environmental impacts.

108. **Environmental criteria for project/subproject selection.** Projects and subprojects will be selected based on compliance with the criteria set out in Table 1, which are derived from the preliminary environmental assessment of proposed Tranche 1 projects in Appendix 1. Additional criteria will be added if IEE/EIA studies or preliminary assessments of other projects identify additional environmental or social risks.

109. **Exclusion Criteria for all projects:** Following projects cannot be implemented under the Investment Program:

- (i) Projects likely to violate (non-conformity with) the national legislations in general, and particularly the environmental Laws including norms, guidelines, standards, etc. during the project life cycle (design, construction and operation);
- (ii) Projects located in notified Protected Areas (Strict Nature Reserves, National Parks, Managed Nature Reserves, Natural Monuments and Protected Landscapes);
- (iii) Projects leading or likely to lead to any damage/loss to protected monuments;
- (iv) Projects with irreversible impacts which cannot be mitigated to acceptable levels;
- (v) Projects involving water abstraction/waste water disposal into water bodies/rivers that are in any international dispute.

110. Following guidelines and selection criteria shall be followed in implementation of projects to avoid/minimize likely impacts:

- (i) Avoid private land acquisition and involuntary resettlement by using government land and/or taking all possible measures in design and selection of site or alignment
  - If unavoidable, minimize the impacts by reducing the land requirement through alternative design or technology, or select site with less affected persons and where impacts will be less significant.
- (ii) Avoid cutting of trees by appropriate site selection and best site layout design
  - If unavoidable, select site with less tree cover and without mature treesConsult the Ministry of Sports, Culture and Heritage when the project is located near places of historical significance to ensure that the project sites are located where there is a low risk of chance finds

**Table 6: Environmental criteria for project selection**

<b>Project Selection Criteria</b>
<ul style="list-style-type: none"> <li>• Projects should be located entirely on Government-owned land wherever possible, to avoid impacts related to involuntary resettlement;</li> <li>• If it is not possible to locate all project components or construction activities on Government land, designs should minimize the acquisition of privately-owned land, buildings and businesses;</li> <li>• Projects that involve significant resettlement impacts (where 200 or more people are physically displaced from housing and/or lose 10% or more of their income-generating assets) should first be avoided wherever possible with alternative design;</li> <li>• Projects, project components or construction activities should be as much as possible avoided or mitigated when they are located in areas that are protected under Georgian law (e.g. for their importance to biodiversity or physical cultural resources) or areas that are sensitive for other reasons (e.g. cemeteries, buildings for religious worship, etc);</li> <li>• Projects must not subject buildings and their inhabitants to unacceptable levels of noise or vibration during either construction or operation (unacceptable noise would be levels above ambient noise standards; unacceptable vibration is vibration with the potential to cause structural damage);</li> <li>• Projects must not damage any nationally protected monuments or other important locations or artefacts and designs must ensure that any such items that are located in or near the project area are retained in an appropriate context (in terms of appearance, access, noise/vibration, etc) when the project is operating;</li> <li>• Designs should incorporate measures to re-use waste (from excavation and demolition) in project construction to the maximum extent possible;</li> <li>• Designs should also incorporate measures to avoid the loss of mature trees by retaining as many existing trees as possible.</li> <li>• If, during the implementation of a project, the contractor encounters chance-finds, such chance- finds shall be dealt with according to Ministry of Culture regulations.</li> </ul>

111. **Screening and classification.** MDF will screen all potential projects using REA checklists provided by ADB (see Appendix 1); and on the basis of the screening will classify projects according to the categorization given in ADB’s Safeguard Policy Statement (2009). This is as follows:

Category A: Projects likely to have significant adverse environmental impacts, which are irreversible, diverse or unprecedented and may affect an area larger than the location subject to physical works. An Environmental Impact Assessment (EIA) is required;

Category B: Projects with adverse environmental impacts that are less significant than those of Category A projects, are site-specific, generally not irreversible, and in most cases can be mitigated more readily than for Category A projects. An Initial Environmental Examination (IEE) is required;

Category C: Projects with minimal or no adverse environmental impacts. No environmental assessment is required, although environmental implications are reviewed.

112. **Preparation of Initial Environmental Examinations (IEE).** For Category B projects an

IEE will be prepared in accordance with the requirements of ADB's Safeguard Policy Statement (2009). The IEE will be undertaken as part of the Feasibility Study and the environmental assessment team will work closely with the technical planning and design group to ensure that environmental considerations are integrated into the project design.

113. An IEE study deals with the same issues as an EIA (see below), but is narrower in scope and issues may be covered in less detail. An IEE examines the project's potential negative and positive impacts and recommends measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental performance. As mitigation is relatively straightforward the IEE may not require a comprehensive analysis of project alternatives or as detailed an Environmental Management Plan (EMP) as an EIA, and may involve less public consultation. Stakeholders will however be consulted at least once (when the draft final IEE report has been produced), and may be involved at an earlier stage if deemed necessary by MDF and/or ADB.

114. **Preparation of Environmental Impact Assessments (EIA).** If Category A projects are approved for financing, an EIA will be conducted of each, in accordance with the requirements of ADB's Safeguard Policy Statement (2009). The EIA will be undertaken in the Detailed Design stage, or if carried out earlier during the Feasibility Study, the assessment and its findings will be reviewed during the detailed design and revised if necessary to reflect any changes in the project or to revise interpretations as a result of more information becoming available.

115. An EIA examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" situation), and recommends measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental performance. The EIA is a more comprehensive and detailed study than an IEE and as mitigation is generally more complex, an EIA should always include an Environmental Management Plan (EMP) setting out in detail how each mitigation measure will be provided and monitored. An EIA also requires a greater degree of consultation, as stakeholders are involved at an early stage in deciding the scope of the EIA study, as well as determining its outcome and the nature of the mitigation at draft final report stage.

## **VI. CONSULTATION, DISCLOSURE AND GRIEVANCE REDRESS**

116. For both Category A and B investments, MDF will consult with persons and groups likely to be affected by the proposed development, plus local non-governmental organizations and other stakeholders. For category B projects at least one consultation will be conducted, when the draft IEE has been prepared, with the aim of informing stakeholders about the project, its potential impacts and likely mitigation. For Category A projects there will be at least one further consultation at the beginning of the EIA study, to involve stakeholders in determining the scope of the EIA and allow them to raise any issues of particular local concern. In all cases, additional consultations will be held (with particular groups or individuals, or with all stakeholder representatives) if considered necessary by MDF and/or ADB. The consultation process and its outcome will be documented in the environmental assessment report, which will explain how relevant comments from stakeholders were addressed in project design and will give a justification for any comments not acted upon.

117. Relevant project documents will be disclosed to the public following ADB requirements and normal MDF procedure. For Category B investments the final IEE report will be posted on MDF and ADB websites, and hard copies will be available for consultation at the MDF office. For

Category A investments the draft EIA (including the draft EMP) will be posted on ADB and MDF websites and hard copies will be available at the MDF office and at the project site, at least 120 days before the loan is considered by the ADB board. These documents will be substituted by the final EIA when completed, and new or updated EIA reports if prepared to reflect significant changes in the project during design or implementation. Environmental monitoring reports (prepared during project implementation, see below) will also be added in due course. All documents provided locally will be in the Georgian language.

118. All efforts will be made to avoid dissatisfaction by stakeholders (in particular persons affected directly by the project) by sensitive site selection applying the criteria set out in Table 1, effective consultation and disclosure as described above, and by responding promptly and appropriately to stakeholder concerns. Stakeholders may still wish to raise concerns and complaints about the project's environmental performance, so MDF has established a grievance redress procedure (GRP) to enable them to do so.

119. MDF has the overall responsibility for the project implementation and environmental compliance. The administrative bodies responsible for the environmental protection are the Ministry of Environmental Protection and Natural Resources and the City Hall. The affected population and stakeholders may send their grievances, related to the project induced environmental impacts and nuisance to PIU or directly to the administrative bodies responsible for the environmental protection.

120. The MoE and city hall are obliged to respond on the grievances, which have been received from population or other interested parties in accordance with the requirements of the Administrative Code of Georgia.

121. However, the PIU will facilitate the response through implementing following grievance redress mechanism. During the public consultation process, the PIU will inform the stakeholders and public that PIU is responsible for environmental compliance and grievance redress. PIU will provide on the public consultation meetings and dispose on the MDF web-site the contact details of the persons responsible for grievance collection and response. Upon the receiving the grievance (in written or oral communication) the PIU will execute following actions:

- (i) send its representatives to check the claims and monitor the situation
- (ii) involves MoE and City Hall when and where appropriate
- (iii) receives expert's conclusion (from MDF personnel, independent experts or MoE/City Hall experts)
- (iv) Submits to the constructing company and operator request on corrective measures
- (v) during 10 days after receiving the grievance informs the affected person or persons about the expert's decision and applied corrective measures
- (vi) In case if the affected stakeholder or person is not satisfied by the response of PIU or administrative bodies, the grievance may be directed to the court.
- (vii) If the complainant is dissatisfied with the decision, they may present further information in support of their case, the subsequent decision of the PIU/MoE and participating municipality is considered final.

## VII. ACCOUNTABILITY MECHANISM<sup>4</sup>

122. The Asian Development Bank (ADB) created the Inspection Function in 1995 to provide an open forum for public scrutiny to ensure that ADB complies with its operational policies and procedures. Building on the Inspection Function and benefiting from intensive public consultations, ADB introduced the Accountability Mechanism in 2003. The Accountability Mechanism encompasses two mutually supportive functions: problem solving and compliance review. An effective Accountability Mechanism to address the grievances of people adversely affected by ADB-financed projects and ensure compliance with ADB operational policies and procedures is fundamental to equitable and sustainable development.

123. The objectives of the Accountability Mechanism will be to provide an independent and effective forum for people adversely affected by ADB-assisted projects to voice their concerns and seek solutions to their problems, and to request compliance review of the alleged noncompliance by ADB with its operational policies and procedures that may have caused, or is likely to cause, them direct and material harm.

124. The Accountability Mechanism complements other problem solving and compliance systems at ADB. It reflects ADB's philosophy that problem prevention and compliance should be maximized in its operations, and also that once problems and noncompliance occur, they should be addressed promptly at the project and operational levels. The Accountability Mechanism is the "last resort" for dealing with problems and noncompliance that were not prevented or solved at the project and operational levels. The design of the Accountability Mechanism also recognizes that ADB has several well developed audit, evaluation, and learning systems to ensure that its operations are conducted in accordance with operational policies and procedures, and deliver the intended results. The Accountability Mechanism complements these systems by serving as a focused mechanism for project-affected people, thereby enhancing ADB's development effectiveness.

125. The Accountability Mechanism is designed to:

- Increase ADB's development effectiveness and project quality;
- Be responsive to the concerns of project-affected people and fair to all stakeholders;
- Reflect the highest professional and technical standards in its staffing and operations;
- Be as independent and transparent as possible;
- Be cost-effective and efficient; and
- Be complementary to the other supervision, audit, quality control, and evaluation systems at ADB.

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<sup>4</sup> ADB's Accountability Mechanism Policy 2012 is available at: <http://www.adb.org/documents/accountability-mechanism-policy-2012>

## VIII. INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

### A. Responsibilities and Authorities

126. MDF the Executing Agency for the program will bear the overall responsibility of ensuring that all funded projects comply with Georgian environmental law and ADB policy and procedure throughout planning, design and implementation stages. This includes:

- (i) Selecting projects for support based on the environmental criteria listed above and any others that may subsequently be added;
- (ii) Preparing the potential impacts of each project using the REA checklists provided in Appendix 1 below, and categorizing each scheme based on the ADB classification system outlined above;
- (iii) Engaging qualified consultants to conduct the environmental assessment during project design or feasibility study, including public consultation, and an EMP if required;
- (iv) Ensuring and reporting that the appropriate level of environmental assessment is conducted and that the assessment is carried out and presented according to ADB requirements;
- (v) Ensuring that all necessary environmental permits and approvals are obtained;
- (vi) Monitoring during construction to ensure that the EMP is fully implemented and that an appropriate response is provided to any unexpected impacts that may occur;
- (vii) Coordinating throughout with ADB's Central and West Asia Department (CWRD) in applying ADB's environmental safeguard procedures.

127. The MoE and its regional offices (within their competence and in cases determined by the Law on Environmental Impact Permit), will be responsible for reviewing EIA documents and environmental permit applications and issuing permits for projects when all conditions are met. MoE may also participate in the environmental monitoring conducted by MDF during project implementation, with the purpose of ensuring compliance with any conditions imposed by the permit.

128. ADB, via CWRD will be responsible for the following:

- (i) Screening and categorizing the potential impacts of each project using the REA Checklists prepared by MDF;
- (ii) Advising borrowers/clients about ADB's SPS 2009 requirements;
- (iii) Determining the feasibility of ADB financing to carry out due diligence and review;
- (iv) Reviewing and approving all EIA reports for Category A projects and selected IEE reports for Category B projects;
- (v) Monitoring, supervising and conducting review missions to monitor implementation of the EMP during project construction and operation;
- (vi) Providing technical guidance and capacity building support to MDF in the implementation of ADB safeguards policy and procedures as necessary;
- (vii) Disclosing all relevant information applying to ADB's environmental safeguard procedures.

## B. Staffing and Budget

129. ADB and MoE will fulfill their responsibilities outlined above as part of their normal work schedule and require no additional provision from the Program in terms of budget or manpower.

130. MDF will also perform their responsibilities as part of their normal work schedule. Some financial support from the Program can be allocated to finance assistance and incremental administration. EIA and IEE studies will be conducted by consultants funded by the Program, so budgetary provision will also be needed for this key activity. Support will also be required to enable MDF to monitor implementation of the Environmental Management Plans during the construction stage of each project.

131. The table 3 shows some of the main items which are necessary for the EIA/IEE preparation and EMP implementation for projects classified as Category A & B, requiring Environmental Assessment studies:

**Table 7: Main Items for IEE preparation and EMP implementation**

N	ITEM	SOURCE OF FINANCING
1.	<b>MDF Capacity Building</b> <ul style="list-style-type: none"><li>- Incremental environmental administration;</li><li>- Trainings;</li></ul>	State budget and ADB Loans
2.	<b>Environmental Assessment Study</b> <ul style="list-style-type: none"><li>- Environmental consultants for IEE;</li><li>- International consultants for EIA and specialized study;</li><li>- Surveys’;</li><li>- Public consultation and disclosure</li></ul>	State budget and ADB Loans
3.	<b>EMP implementation and Monitoring</b> <ul style="list-style-type: none"><li>- Environmental monitoring specialists</li><li>- Traveling and</li><li>- Measurements for Environmental monitoring (e.g. noise, air quality)</li><li>- External review by experts for bi-annual monitoring reports (for Category A projects)</li></ul>	State budget and ADB Loans

## IX. MONITORING AND REPORTING

132. During project implementation MDF monitors execution of the EMP as well as the mitigation of any unexpected adverse environmental impacts. If there is a significant change in project scope, MDF ensures that an environmental assessment is triggered, undertaken by the project proponent. MDF prepares a semi-annual monitoring report, which describes EMP implementation and results, compliance with loan covenants and applicable national environmental legislation, and the overall performance of MDF’s environmental management system and any required improvements. Finally, MDF ensures that the EMP is included in tender and contract documents for project.

133. MDF through ERU monitors the performance of consultants conducting the EIA and IEE studies during feasibility study and detailed design stages. MDF submits draft EIA and IEE reports of subprojects to ADB for review and ensures that the consultants address all comments in producing final versions:

- (i) EIA Reports of all Category A subprojects;
- (ii) IEE Reports from each sector (water supply and sewerage) in follow-on tranches;
- (iii) All updated or revised IEEs of Tranche 1 subprojects.

134. MDF also submits EIA and IEE reports and environmental permit applications to MoEPNR when required by Georgian law.

135. MDF monitors the performance of consultants conducting the EIA and IEE studies during feasibility study and design stages, and also monitors implementation of the EMP (mainly by contractors) when the projects are constructed. The status of implementation and outcome of monitoring will be submitted to ADB regularly through biannual Environmental Monitoring Reports (EMRs);

136. **Review and update of EARF.** Prior to the preparation of each PFR, the applicability and relevance of EARF shall be reviewed and updated by ERU to ensure consistency with the country legal framework and ADB's safeguards policies, as amended from time to time. As the Investment Program progresses, this periodic revision or update shall also reflect lessons learnt from the subproject implementation and if required the subproject selection criteria shall be modified to avoid significance impacts. ADB will review the revised EARF, after which it will be formally adopted by the EA.

## **APPENDICES**

## Rapid Environmental Assessment (REA) Checklist

**Instructions:**

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES) for endorsement by the Director, RSES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title:

Sector Division:

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the project area...			
▪ Densely populated?			
▪ Heavy with development activities?			
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site			
• Protected Area			
• Wetland			
• Mangrove			
• Estuarine			
• Buffer zone of protected area			
• Special area for protecting biodiversity			
• Bay			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services.			
▪ deterioration of surrounding environmental conditions due to rapid urban population growth, commercial and industrial activity, and increased waste generation to the point that both manmade and natural systems are overloaded and the capacities to manage these systems are overwhelmed?			
▪ degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watersheds and forests)?			

Screening Questions	Yes	No	Remarks
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable group?			
▪ degradation of cultural property, and loss of cultural heritage and tourism revenues?			
▪ occupation of low-lying lands, floodplains and steep hillsides by squatters and low-income groups, and their exposure to increased health hazards and risks due to pollutive industries?			
▪ water resource problems (e.g. depletion/degradation of available water supply, deterioration for surface and ground water quality , and pollution of receiving waters?			
▪ air pollution due to urban emissions?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical and biological hazards during project construction and operation?			
▪ road blocking and temporary flooding due to land excavation during rainy season?			
▪ noise and dust from construction activities?			
▪ traffic disturbances due to construction material transport and wastes?			
▪ temporary silt runoff due to construction?			
▪ hazards to public health due to ambient, household and occupational pollution, thermal inversion, and smog formation?			
▪ water depletion and/or degradation?			
▪ overpaying of ground water, leading to land subsidence, lowered ground water table, and salinization?			
▪ contamination of surface and ground waters due to improper waste disposal?			
▪ pollution of receiving waters resulting in amenity losses, fisheries and marine resource depletion, and health problems?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during operation and construction?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

### A Checklist for Preliminary Climate Risk Screening

<b>Country/Project Title:</b> <b>Sector :</b> <b>Subsector:</b> <b>Division/Department:</b>
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	Screening Questions	Score	Remarks <sup>5</sup>
<b>Location and Design of project</b>	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?		
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc)?		
<b>Materials and Maintenance</b>	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?		
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s) ?		
<b>Performance of project outputs</b>	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?		

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response, will be categorized as high risk project.

**Result of Initial Screening (Low, Medium, High):** \_\_\_\_\_

**Other Comments:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Prepared by:** \_\_\_\_\_

<sup>5</sup> If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

**APPENDIX  
2:  
OUTLINE OF AN ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

This outline is part of the Safeguard Requirements 1. An environmental assessment report is required for all environment category A and B projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks. A typical EIA report contains the following major elements, and an IEE may have a narrower scope depending on the nature of the project. 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. 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.

**C. 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.

**D. 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.

**E. 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 [Appendix 2, para. 6]), 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 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, and cumulative impacts as appropriate.

## **F. 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.

## **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;
- (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 Recommendation**

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

## **APPENDIX 3: OUTLINE TERMS OF REFERENCE FOR CONSULTING SERVICES FOR ENVIRONMENTAL ASSESSMENT**

### **A. Objectives**

1. The objectives of the services are (i) to conduct an initial environmental examination (IEE) and/or environmental impact assessment (EIA) of the proposed project to identify potential environmental impacts on physical, environmental, ecological, social, cultural, and economic resources, and (ii) to prepare IEE/EIA report(s) along with environmental management and monitoring plans. The duration of an IEE study is about three months and an EIA study about five months.

### **B. Scope of Work**

2. The consultant's scope of work will include the following tasks:

- (i) review prevailing government regulations and donor guidelines governing the assessment and management of environmental impacts of road projects;
- (ii) prepare a scoping document for the environmental studies to be carried out under the project;
- (iii) undertake the IEE/EIA<sup>6</sup> study to assess the direct and indirect environmental impacts of the project including, as necessary (a) ecological impacts (plants and wildlife); (b) soil erosion and desertification; (c) protection of wetland habitat; (d) impact of quarry sites; (e) impact of construction camps on local environment (natural and social); (f) operational traffic safety measures; (g) areas with known archaeological value; and (h) potential spills of hazardous or toxic chemicals and an appropriate response plan for the project;
- (iv) prepare the IEE/EIA report in accordance with ADB's *Safeguard Policy Statement (2009)* and *Public Communications Policy (2005)*;
- (v) assess all potential direct and indirect environmental impacts of the project in the IEE/EIA study and present the assessment and appropriate mitigation and monitoring measures together with their costs in the order of project cycle: pre-construction, construction, and operation;
- (vi) conduct formal public consultations with affected people (at least two consultations for EIA and at least one consultation for IEE). The first consultation aims to gather environmental concerns from affected people and the final consultation aims to share the result of the assessment and the proposed mitigation measures;
- (vii) record in systematic manner the list of people who attended the consultation, the time and locations, and the subjects discussed during consultation and attach the record in the IEE/EIA report as an appendix;
- (viii) solicit and incorporate comments on the draft IEE/EIA reports from ADB, MNP, NGOs, civil society, and other stakeholders and finalize the reports to accommodate inputs from all the stakeholders; and
- (ix) submit the reports to MNP and make presentations as required by MNP to obtain environmental impact clearance certificates or equivalent.

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<sup>6</sup> ADB requires the preparation of and EIA for environment category "A" projects. Environment category "B" projects require an IEE followed by an EIA only if the IEE concludes that an EIA is necessary.

### C. Organization and Staffing

3. The services are expected to be provided by a team comprising one international environmental specialist and national specialists in appropriate disciplines to suit each project and corresponding IEE/EIA.

4. **The International Environmental Specialist** shall at least be graduate of a recognized university in environmental science, environmental engineering, geological science, engineering hydrology, biology, or related discipline and have at least 15 years experience and familiarity with all aspects of environmental management and with significant experience in environmental management and monitoring of projects, environmental assessment and / or implementation of environmental mitigation measures on construction projects. The specialist shall also have experience working in teams of multi-discipline experts and leading a national team of consultants. Candidates with higher degrees in environmental engineering or environmental science or environment management are preferred.

5. Each **National Specialist** shall at least be a graduate of a recognized university in environmental science, environmental engineering, geological science, engineering hydrology, biology, or related discipline with significant experience in environmental management and monitoring of projects, environmental assessment, and/or design and implementation of environmental mitigation measures. A reasonable command of the English language, both spoken and written, is required.