# Environmental Assessment and Review Framework (Updated)

March 2016

# SRI: Additional Financing of Local Government Enhancement Sector Project

Prepared by the Ministry of Provincial Councils and Local Government for the Asian Development Bank.

## CURRENCY EQUIVALENTS

(as of 22 March 2016)

| | | |
|---|---|---|
| Currency unit | – | Sri Lankan rupee/s (SLRe/SLRs) |
| SLRe1.00 | – | $0.00689 |
| $1.00 | – | SLRs145.05 |

## ABBREVIATIONS

| | | |
|---|---|---|
| ADB | - | Asian Development Bank |
| AF | - | Additional Financing |
| BPL | - | below poverty line |
| CEA | - | Central Environmental Authority |
| CKD | - | chronic kidney disease |
| DCCCRM | - | Department of Coast Conservation and Coastal Resource Management |
| DSC | - | Design and Supervision Consultants |
| EDP | - | Economically Displaced Person |
| EDP | - | Economically Displaced Person |
| EIA | - | environmental impact assessment |
| EMP | - | environmental management plan |
| EPL | - | Environmental Protection License |
| FGD | - | Focus Group Discussion |
| IEE | - | initial environmental examination |
| IGS | - | Income Generating Schemes |
| IOL | - | Inventory of Losses |
| GRC | - | Grievance Redress Committee |
| GRM | - | grievance redress mechanism |
| LGESP | - | Local Government Enhancement Sector Project |
| LGIIP | - | Local Government Infrastructure Improvement Project |
| MIS | - | Management Information System |
| MPR | - | Monthly Progress Report |
| MPCLG | - | Ministry Provincial Councils and Local Government |
| NGO | - | nongovernment organization |
| NIRP | - | National Involuntary Resettlement Policy |
| O&M | - | operation and maintenance |
| PAM | - | project administration manual |
| PMU | - | project management unit |
| PPTA | - | project preparatory technical assistance |
| PMC | - | Project Management Consultants |
| SPCU | - | subproject coordination unit |
| SPS | - | Safeguard Policy Statement |

## GLOSSARY

| | | |
|---|---|---|
| *Pradeshiya Sabha* | – | Local authorities established under the Pradeshiya Sabhas Act Number 15 of 1987. Smallest political unit in periurban and rural areas. |

## NOTE

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

**CONTENTS**

# I. INTRODUCTION

## A. Background

1. Asian Development Bank (ADB) approved the Local Government Enhancement Sector Project (LGESP) on 29 September 2011 and the project became effective on 29 November 2011. LGESP is a key infrastructure initiative of the Government of Sri Lanka which aims to improve the effective delivery of local infrastructure and services by local authorities in less-developed areas of Sri Lanka through the provision of improved water supply, sanitation, roads and bridges, drainage infrastructure, solid waste management, and public facilities.[1] LGESP includes institutional strengthening and capacity building of the central, provincial and local agencies enabling to enhance the productivity of the local service delivery.

2. The purpose of the proposed additional funding is to further improve the initiatives of LGESP. The additional financing is required to implement the schemes of providing safe drinking water to the identified areas affected by Chronic Kidney Diseases (CKD) in Central, North Central, North Western and Uva Provinces and to take up development initiatives in additional 29 *Pradeshiya Sabhas* which are not covered under two ADB assisted projects, i.e., Local Government Infrastructure Improvement Project and the current project, LGESP, for initiatives of infrastructure improvement and institutional strengthening. The additional financing would also cover strengthening of capacity building and/or institutional strengthening activities taken up under the current project for all local authorities covered both under current and additional financing.

## B. Purpose of Environmental Assessment and Review Framework

3. LGESP uses a sector investment approach and in accordance with ADB's Safeguard Policy Statement (SPS), 2009, an environmental assessment and review framework (EARF) has to be prepared to specify the requirements that will be followed in relation to subproject screening and categorization, assessment, and planning, including arrangements for meaningful consultation with affected people and other stakeholders and information disclosure requirements and, where applicable, safeguard criteria that are to be used in selecting subprojects and/or components to be funded under LGESP.

4. This is the updated EARF.[2] It aims to provide guidance on safeguard screening, assessment, institutional arrangements, and processes to be followed for components of the project, where design takes place after ADB Board approval. The subproject selection will be in accordance with the environmental project selection criteria as outlined in this EARF. This EARF provides guidance towards environmental assessment and reporting requirements to comply with both ADB and government policies. Ministry of Provincial Councils and Local Governments (MPCLG) will agree with ADB on screening and categorization, environmental assessment, preparation and implementation, monitoring, and reporting.

5. LGESP is classified as category B for environment as per ADB SPS. During implementation the subprojects taken up for implementation were classified as 'C' based on the Rapid Environment Assessment. However, Environmental Management Plans (EMPs) were

[1] Public facilities include public markets and health centers.

[2] This is an updated version of the EARF originally posted in June 2011 available on http://www.adb.org/projects/documents/local-government-enhancement-project-. The EARF is prepared based on the ADB Safeguard Policy Statement (2009), and the Government of Sri Lanka laws and rules.

prepared and included in all bid and contract documents to ensure environmental safeguards during subproject implementation.

6. It is expected that potential impacts of subprojects to be funded under the additional financing will be of similar or lesser nature. Three IEEs for sample subprojects to be funded under the additional financing have been prepared and they indicate no significant impacts are anticipated for the subprojects and there are no sensitive and protected areas in and around the proposed facilities. Any impacts foreseen are minimal and can be mitigated through proper facility design, setting, good high-quality construction and operations and maintenance (O&M) practices as documented in the EMPs. Thus, the EARF will support the integration of these measures and practices in the project design and contract documents.

7. All environmental documents will be endorsed and approved by MPCLG and cleared by ADB.

## C. Project Components

8. The project will consist of three components. Component 1 covers physical investment for improvement of water supply systems in identified CKD affected areas of Central Province, North Central Province, North Western Province and Uva Province; Component 2 covers local infrastructure and basic service delivery improved in 29 local authorities to be funded under additional financing; and Component 3 covers local government policy reform and capacity building supported in all the project local authorities.

### 1. Component 1 – Water Supply Systems in CKD - affected areas improved.

9. This component will include development and expansion of water supply systems for the areas affected by CKD of four provinces (Central, North Central, North Western and UVA) to provide safe drinking water. The schemes include development of new water supply systems and expansion of existing systems mostly run by National Water Supply and Drainage Board. Facilities such as water intakes, water treatment plants, overhead tanks, transmission mains and distribution network are eligible for financing.

### 2. Component 2 – Local Government Infrastructure Service Delivery Improvement

10. Social, environmental and economic infrastructure will be improved in the newly participating 29 local authorities which are generally as follows:

(i) **Water Supply and Sanitation:** Activities will focus on improving the efficiency and management of existing community-based water supply systems,[3] and developing *Pradeshiya Sabhas* staff supervision over O&M of the facilities. The main technical options for new water supply are (i) groundwater wells with hand pumps, (ii) rainwater harvesting, (iii) piped systems with overhead tank, and (iv) gravity pipe system.

(ii) **Roads and Bridges:** Subprojects will involve rehabilitation and repair of existing tertiary roads and bridges within the rural area, traffic management

[3] The MPCLG clarified that only small-scale water supply schemes which could be operated and maintained by respective local authorities will be financed under this component of LGESP.

improvements, and procurement of equipment to keep the local-level road systems in good condition.

(iii) **Drainage Improvements:** Drainage subprojects will involve rehabilitation of existing drains and culverts through the elimination of blockages, obstructions, and encroachments on existing drainage paths. Subprojects, where necessary, can also involve construction of new drains to serve areas previously not covered, and construction of missing links. Special attention to be drawn to manage water retention areas properly.

(iv) **Solid Waste Management:** Subprojects will primarily improve and strengthen collection and disposal in *Pradeshiya Sabha* areas. Subprojects will provide for the procurement of small garbage trucks, pushcarts, and communal garbage bins in order to improve the storage and collection of wastes. The subproject may include the construction of sanitary landfill sites in an environmentally acceptable manner. Communal landfill sites will be developed if agreement is reached within the *Pradeshiya Sabhas* and with all stakeholders concerned, to facilitate controlled disposal of the waste.

(v) **Public Facilities:** The subprojects will involve rehabilitation and improvement of public facilities. Examples are health care centers, public toilets, and public markets (pola).

### 3. Component 3 – Local Government Policy Reforms and Capacity Building

11. Amongst various initiatives required for improved performance of local authorities, effective and sustained delivery of local authority services will require that the infrastructure provided under the project be operated in a much more effective and efficient manner, that own source funding of all services be very substantially enhanced. These will require a variety of actions which are expected to range from conduct of community consultations and institutional surveys to preparation and implementation of legislation and regulations, reorganization of departments, modernization of human resource management systems and improvement of financial management systems. Support will be provided under the project for the necessary measures.[4] This component will address overall capacity building of the provincial councils, local authorities and the executing agency on enabling their capacities for enhanced service delivery.

12. While the project will involve improvement of urban infrastructure and services in the *Pradeshiya Sabhas*, long-term sustainability of the assets created, and effective planning and management of urban basic services in general, requires that key urban management issues be addressed by LGESP.

13. Management of the implementation of LGESP is being undertaken by the Project Management Unit (PMU) in the MPCLG and the Subproject Coordination Units (SPCUs) in each of the seven Provincial Councils. The PMU is being assisted by the Project Management Consultants (PMC), whereas SPCUs is being supported by the Design and Supervision Consultants (DSC). Provision has been made under LGESP for funding the costs of PMU and

[4] The proposed project management and capacity development include: (i) safeguards compliance studies; (ii) community awareness programs; (iii) compost marketing studies; (iv) support for migration to a double entry accounting basis system in *Pradeshiya Sabhas*; (v) support for preparation computerized data base for property tax system and payments through cash; (vi) water utility reform program focusing on asset management improvement; and (vii) exposure visits to projects abroad with best practices in implementation of projects with best safeguard compliance.

SPCUs, as well as the cost of consultants[5] to provide assistance in project management and related capacity building. Such support is considered essential to the implementation of the project, particularly in light of the lack of experience of the local authorities in effective project implementation.

14. The PMC and DSC have safeguards staff with expertise in environmental assessment and management to train, build capacity, and monitor the safeguards work overseen under the PMU and SPCUs. Environmental management training programs with specific modules on ADB and government environmental assessment, monitoring, and reporting procedures have been provided to PMU and SPCUs through an on-job training and refresher workshops would be required to cover the recently joined staff and improve the assessment and monitoring systems based on lessons learnt.

## II. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

### A. Environmental Legislation

15. **Environmental Impact Assessment.** The requirement for Environmental Assessment in Sri Lanka is established by the National Environment Act No. 47 (1980), and the amendment to the act 1988, Act No. 56 Section 23A, for Environmental Protection License (EPL) procedure and the environmental impact assessment (EIA) regulation under Part 4C, under the provision of section 23Z. The procedures are defined in the EIA. Regulations Gazzette No. 772/22 (1993). The regulations specify activities for which environmental assessment is mandatory. Those activities that could occur in subprojects under the additional financing are as follows:

(i) Construction of any solid waste disposal facility having a capacity exceeding 100 tons per day;
(ii) Projects that fall within 100 meters (m) from the boundaries of or within any area declared under (a) the National Heritage Wilderness Act No. 3 of 1988; (b) the Forest Ordinance (Chapter 451); and (c) whether or not such areas are wholly or partly within the Coastal Zone as defined in the Coast Conservation Act No. 57 of 1981; and
(iii) Projects that fall within sensitive area(s).

16. Sensitive areas are defined in the EIA Regulations as:

(i) Any erodable area declared under the Soil Conservation Act (1951, 1953);
(ii) Any flood area declared under the Flood Protection Ordinance (1924, 1955);
(iii) Any flood protection area declared under the Land Reclamation and Development Corporation Act (1968, 1982);
(iv) Any reservation beyond the full supply level of a reservoir;
(v) Any archaeological reserve, ancient or protected monument as defined or declared under the Antiquities Ordinance (1965);
(vi) Any area declared under the Botanic Gardens Ordinance (1928, 1973);
(vii) Areas within, or less than 100 m from the boundaries of, any area declared under the Forest Ordinance and National Heritage and Wilderness Act (1988);
(viii) Areas within, or less than 100 m from the boundaries of, any area declared as a Sanctuary under the Fauna and Flora Protection Ordinance (1937);

[5] PMC and DSC.

(ix) Areas within, or less than 100 m from the high flood level contour of, a public lake as defined by the Crown Lands Ordinance (1947, 1949, 1956) including those declared under Section 71 of the Ordinance;
(x) Areas 60 m or less from the bank of a public stream as defined in the Crown Lands Ordinance, with a width of more than 25 m at any point; and
(xi) Areas declared under the Urban Development Authority Act No 41 of 1978 and Act No. 4 of 1982 section 29 (this indicates in its definition that laws are valid to the areas of the Local Authorities).

17. The requirement for EIA and the level of study required are determined by the Central Environment Authority (CEA) after submission by the proponent of a Project Information Document, plus supporting information, if relevant. There are two possible outcomes:

(i) **Categorical Exclusion:** The activity is not on the list of prescribed projects in the EIA regulations, is not in or near a sensitive area, has not been the subject of public protest, and it is clear from the Project Information Document and supporting information that the project will have no significant environmental impacts. Environmental clearance is granted (with or without conditions) and the project may proceed; and
(ii) All other projects require Environmental Assessment and the CEA establishes a Scoping Committee to decide on the level of study (IEE or EIA) and prepare Terms of Reference. Alternatively, if the project lies wholly within the jurisdiction of a single government agency, CEA may refer the project to this authority (as the Project Approving Agency) to administer the EIA process. A Technical Review Committee reviews the completed IEE or EIA report and recommends whether environmental clearance shall be granted; the final decision is made by CEA.

18. **Clearances, Licenses and Permits.** There are further compliance requirements prescribed by other certain legislation, in particular the Coast Conservation (Amendment) Act, No. 49 of 2011, which requires clearance by the Department of Coast Conservation and Coastal Resource Management (DCCCRM) for any development activity or structure in the coastal zone.[6] If the CEA or DCCCRM requires any additional environmental studies, the local authorities and/or concerned agencies will be responsible for conducting these, and complying with any conditions set by these agencies in granting approval. The Coastal Zone Management Plan is also taken up for revision and the project will consider this as and when approved.

19. An EPL from CEA, in particular the treatment plants and sewerage networks, is required for the operation of the completed facilities.

20. No development or encroachment of any kind is permitted in archaeological reserves declared under the Antiquities Ordinance No. 9 of 1940 as amended (Section 34). The Director General of Archaeology is empowered to conduct an Archaeological Impact Assessment of areas that may be affected by development or other projects proposed by the government or any person.

[6] The coastal zone is defined in the Coast Conservation Act No. 57 of 1981 “as the area lying within a limit of 300 m landward from mean high water line. In the case of rivers, streams, lagoons or any other body of water connected to the sea, either permanently or periodically, the landward boundary extends to a limit of 2 kilometers (km) measured perpendicular to the straight base line drawn between the natural entrance points thereof and includes waters of such rivers, streams and lagoons or any other body of water so connected to the sea.”

21. No construction activities are permitted in national reserves (under the jurisdiction of the Department of Wildlife Conservation – see the Fauna and Flora Protection Ordinance No. 2 of 1937, as amended) and forest reserves (under the jurisdiction of the Forest Department – see the Forest Ordinance of 1907 as amended). Sanctuaries, also declared under the Fauna and Flora Protection Ordinance, may include privately-held land. Clearance from the Department of Wildlife Conservation if construction is proposed in sanctuaries. Construction within 1 mile (1.6 km) radius of a national reserve, sanctuary or buffer zone needs permission from the Department of Wildlife Conservation (see the Fauna and Flora Protection Ordinance No. 2 of 1937, as amended). Any development activity within a fishery reserve[7] requires the permission and approval of the Director of Fisheries and Aquatic Resources (see the Fisheries and Aquatic Resources Act No. 2 of 1996). Any construction taking place in close proximity to a forest reserve must be approved and cleared by the Forest Department.

22. Using paddy land for a purpose other than agricultural cultivation without the written permission of the Commissioner General is a punishable offence under the Agrarian Development Act No. 46 of 2000 (Section 32). Subprojects requiring conversion of paddy lands will not be considered under LGESP.

23. In addition to environmental clearance, approval from the local authorities and CEA for site clearance; and consent from all relevant *Pradeshiya Sabhas*, Provincial Councils, and Divisional Secretaries shall be obtained before construction begins.

24. Clearance shall be obtained for the proposed development activities, if the area is declared under the Urban Development Authority Act or Sri Lanka Land Reclamation and Development Corporation (SLLR&DC) Act.

25. The Sri Lanka Standards Institute is the National Standard Body of Sri Lanka, established under the Bureau of Ceylon Standards Act No. 38 of 1964. All applicable standards by Sri Lanka Standards Institute which must be complied with are presented in **Appendix 1**.

26. A summary of Government environmental compliance requirements applicable to LGESP is presented in **Table 1**.

**Table 1: Summary of Environmental Compliance Requirements Applicable to LGESP**

| | Subproject | Subcomponent | Applicable Legislation | Statutory Requirement | Authorizing Body |
|---|---|---|---|---|---|
| 1 | Water Supply | All subcomponents in sensitive areas | NEA | EC | CEA |
| | | All subcomponents falling within the coastal zone | Coast Conservation Act | Clearance | CCD |
| | | All subcomponents that require site clearance | Municipal Councils Ordinance No. 29 of 1947, the Urban Councils Ordinance No. 61 of 1939 and the *Pradeshiya Sabha* Act No. 15 of | Clearance | Municipal Councils, Urban Councils and *Pradeshiya Sabhas* |

[7] Certain areas adjoining earmarked reservoirs and water bodies can be declared as a fishery reserve with the concurrence of the Ministry of Wildlife and Natural Resources.

| | Subproject | Subcomponent | Applicable Legislation | Statutory Requirement | Authorizing Body |
|---|---|---|---|---|---|
| | | | 1987 as amended | | |
| | | All subcomponents that require cutting of trees | Felling of Trees (Control) Act No 9 of 1951 | Tree-cutting Permit | Forest Department |
| | | All subcomponents within a 1 mile (1.6 km) radius of a national reserve, sanctuary, or buffer zone | Fauna and Flora Protection Ordinance No. 2 of 1937 as amended | Clearance | Department of Wildlife Conservation |
| | | All subcomponents in close proximity of a reserve forest | Forests Ordinance No. 16 of 1907 as amended | Clearance | Forest Department |
| | | All subcomponents in and around fishery reserves | Fisheries and Aquatic Resources Act No. 2 of 1996 | Clearance | Director of Fisheries and Aquatic Resources |
| | | All subcomponent in proximity of archaeological reserves | Antiquities Ordinance No. 9 of 1940 as amended | Clearance | Department of Archaeology |
| | | All subcomponent in and around irrigation development | Irrigation Development Act | Clearance | Director, Irrigation Department |
| | | All subcomponent in and around UDA declared areas | UDA Act No. 41 1978 and No. 4 of 1982 | Clearance | Regional Director UDA |
| 2. | Sanitation | Sewage network of more than 1 km length | NEA | EC | CEA |
| | | All subcomponents in sensitive areas | NEA | EC | CEA |
| | | All subcomponents falling within the coastal zone | Coast Conservation Act | Clearance | CCD |
| | | All subcomponents that require site clearance | Municipal Councils Ordinance No. 29 of 1947, the Urban Councils Ordinance No. 61 of 1939 and the *Pradeshiya Sabha* Act No. 15 of 1987 as amended | Clearance | Municipal Councils, Urban Councils and *Pradeshiya Sabhas* |
| | | All subcomponents that require cutting of trees | Felling of Trees (Control) Act No. 9 of 1951 | Tree-cutting Permit | Forest Department |
| | | All subcomponents within a 1 mile (1.6 km) radius of a national reserve, sanctuary, or buffer zone | Fauna and Flora Protection Ordinance No. 2 of 1937 as amended | Clearance | Department of Wildlife Conservation |
| | | All subcomponents in | Forests Ordinance | Clearance | Forest |

| | Subproject | Subcomponent | Applicable Legislation | Statutory Requirement | Authorizing Body |
|---|---|---|---|---|---|
| | | close proximity of a reserve forest | No. 16 of 1907 as amended | | Department |
| | | All subcomponents in and around fishery reserves | Fisheries and Aquatic Resources Act No. 2 of 1996 | Clearance | Director of Fisheries and Aquatic Resources |
| | | All subcomponent in proximity of archaeological reserves | Antiquities Ordinance No. 9 of 1940 as amended | Clearance | Department of Archaeology |
| 3. | Roads and Bridges | All subcomponents in sensitive areas | NEA | EC | CEA |
| | | All subcomponents falling within the coastal zone | Coast Conservation Act | Clearance | DCCCRM |
| | | All subcomponents that require site clearance | Municipal Councils Ordinance No. 29 of 1947, the Urban Councils Ordinance No. 61 of 1939 and the *Pradeshiya Sabha* Act No. 15 of 1987 as amended | Clearance | Municipal Councils, Urban Councils and *Pradeshiya Sabhas* |
| | | All subcomponents that require cutting of trees | Felling of Trees (Control) Act No. 9 of 1951 | Tree-cutting Permit | Forest Department |
| | | All subcomponents within a 1 mile (1.6 km) radius of a national reserve, sanctuary, or buffer zone | Fauna and Flora Protection Ordinance No. 2 of 1937 as amended | Clearance | Department of Wildlife Conservation |
| | | All subcomponents in close proximity of a reserve forest | Forests Ordinance No. 16 of 1907 as amended | Clearance | Forest Department |
| | | All subcomponents in and around fishery reserves | Fisheries and Aquatic Resources Act No. 2 of 1996 | Clearance | Director of Fisheries and Aquatic Resources |
| | | All subcomponent in proximity of archaeological reserves | Antiquities Ordinance No. 9 of 1940 as amended | Clearance | Department of Archaeology |
| 4. | Drainage Improvements | All subcomponents in sensitive areas | NEA | EC | CEA |
| | | All subcomponents falling within the coastal zone | Coast Conservation Act | Clearance | DCCCRM |
| | | All subcomponents that require site clearance | Municipal Councils Ordinance No. 29 of 1947, the Urban Councils Ordinance No. 61 of 1939 and | Clearance | Municipal Councils, Urban Councils and *Pradeshiya Sabhas* |

| | Subproject | Subcomponent | Applicable Legislation | Statutory Requirement | Authorizing Body |
|---|---|---|---|---|---|
| | | | the *Pradeshiya Sabha* Act No. 15 of 1987 as amended | | |
| | | All subcomponents that require cutting of trees | Felling of Trees (Control) Act No. 9 of 1951 | Tree-cutting Permit | Forest Department |
| | | All subcomponents within a 1 mile (1.6 km) radius of a national reserve, sanctuary, or buffer zone | Fauna and Flora Protection Ordinance No. 2 of 1937 as amended | Clearance | Department of Wildlife Conservation |
| | | All subcomponents in close proximity of a reserve forest | Forests Ordinance No. 16 of 1907 as amended | Clearance | Forest Department |
| | | All subcomponents in and around fishery reserves | Fisheries and Aquatic Resources Act No. 2 of 1996 | Clearance | Director of Fisheries and Aquatic Resources |
| | | All subcomponent in proximity of archaeological reserves | Antiquities Ordinance No. 9 of 1940 as amended | Clearance | Department of Archaeology |
| 5. | Solid Waste Management | Any solid waste disposal facility having a capacity exceeding 100 tons per day | NEA | EC | CEA |
| | | All subcomponents in sensitive areas | NEA | EC | CEA |
| | | All subcomponents in Wetland/paddy areas and flood protection areas | Agrarian Services Act No. 58 of 1978 and SLLR&DC Act No. 15 of 1968/1982 | Clearance | Commissioner Agrarian Services Director General, SLLR&DC |
| | | All subcomponents falling within the coastal zone | Coast Conservation Act | Clearance | DCCCRM |
| | | All subcomponents that require site clearance | Municipal Councils Ordinance No. 29 of 1947, the Urban Councils Ordinance No. 61 of 1939 and the *Pradeshiya Sabha* Act No. 15 of 1987 as amended | Clearance | Municipal Councils, Urban Councils and *Pradeshiya Sabhas* |
| | | All subcomponents that require cutting of trees | Felling of Trees (Control) Act No. 9 of 1951 | Tree-cutting Permit | Forest Department |
| | | All subcomponents within a 1 mile (1.6 km) radius of a national reserve, | Fauna and Flora Protection Ordinance No. 2 of 1937 as amended | Clearance | Department of Wildlife Conservation |

| | Subproject | Subcomponent | Applicable Legislation | Statutory Requirement | Authorizing Body |
|---|---|---|---|---|---|
| | | sanctuary, or buffer zone | | | |
| | | All subcomponents in close proximity of a reserve forest | Forests Ordinance No. 16 of 1907 as amended | Clearance | Forest Department |
| | | All subcomponents in and around fishery reserves | Fisheries and Aquatic Resources Act No. 2 of 1996 | Clearance | Director of Fisheries and Aquatic Resources |
| | | All subcomponent in proximity of archaeological reserves | Antiquities Ordinance No. 9 of 1940 as amended | Clearance | Department of Archaeology |
| 6 | Public Facilities | All subcomponents in sensitive areas | NEA | EC | CEA |
| | | All subcomponents falling within the coastal zone | Coast Conservation Act | Clearance | DCCCRM |
| | | All subcomponents that require site clearance | Municipal Councils Ordinance No. 29 of 1947, the Urban Councils Ordinance No. 61 of 1939 and the *Pradeshiya Sabha* Act No. 15 of 1987 as amended | Clearance | Municipal Councils, Urban Councils and *Pradeshiya Sabhas* |
| | | All subcomponents that require cutting of trees | Felling of Trees (Control) Act No. 9 of 1951 | Tree-cutting Permit | Forest Department |
| | | All subcomponents within a 1 mile (1.6 km) radius of a national reserve, sanctuary, or buffer zone | Fauna and Flora Protection Ordinance No. 2 of 1937 as amended | Clearance | Department of Wildlife Conservation |
| | | All subcomponents in close proximity of a reserve forest | Forests Ordinance No. 16 of 1907 as amended | Clearance | Forest Department |
| | | All subcomponents in and around fishery reserves | Fisheries and Aquatic Resources Act No. 2 of 1996 | Clearance | Director of Fisheries and Aquatic Resources |
| | | All subcomponents in proximity of archaeological reserves | Antiquities Ordinance No. 9 of 1940 as amended | Clearance | Department of Archaeology |
| | | All subcomponents related to Crematorium facilities | NEA | Clearance | CEA |

CCD= Coastal Conservation Department, CEA = Central Environment Authority, DCCCR = Department of Coast Conservation and Coastal Resource Management = EC = Environmental Clearance, NEA = National Environment Act, UDA = Urban Development Authority.

27. **Table 2** summarizes the application procedures for the main environmental permits, and **Appendix 2** and **3** illustrate the process of obtaining Environmental Clearance and a DCCCRM Permit.

**Table 2: Summary of Procedure for Obtaining Required Environmental Permits**

| Legislation | Regulatory Agency | Summary of Procedure | Time scale |
|---|---|---|---|
| **1. CEA – EIA/IEE Clearance (See Appendix 2)** | | | |
| National Environmental Act No. 47 of 1980 and amended Act No. 56 of 1988; Government Gazette No. 772/22 of 24th June 1993 and No. 859/14 of 23rd February 1995 | CEA | 1. Proponent to submit Project Information Document to CEA | During Feasibility Stage<br><br>36 days |
| | | 2. CEA to designate PAA | |
| | | 3. PAA to issue Scoping; Issue of TOR for the EIA/IEE | |
| | | 4. Proponent to conduct the environmental assessment and submit report to PAA | About 60 to 90 days |
| | | 5. PAA to check adequacy | 14 days |
| | | 6. For EIA, report will be open for public comments | 30 days |
| | | 7. TRC to review report and forwarding comments | 36 days |
| | | 8. PAA to recommend to CEA issuance of Clearance | |
| **2. DCCCRM Permit (See Appendix 3)** | | | |
| Under Section 5, 14, 15 and 16 of Coast Conservation Act No. 57 of 1981 | DCCCRM | 1. Proponent to submit application to DCCCRM | During Feasibility Stage<br><br>About 14 days |
| | | 2. CCD to issue TOR for EIA/IEE | |
| | | 3. Proponent to conduct the environmental assessment and submit report to DCCCRM | About 60 to 90 days |
| | | 4. For EIA, DCCCRM will (i) invite Coast Conservation Advisory Council for comments; and (ii) open report for public comments | 120 days (maximum) |
| | | 5. DCCCRM to review comments | |
| | | 6. DCCCRM to issue permit | |
| **3. Environmental Protection License** | | | |
| National Environmental Act No. 47 of 1980 amended by Acts No. 56 of 1988 and No. 53 of 2000; Gazette Notification No. 1533/16 dated 25.01.2008 | CEA | 1. Proponent to submit application to CEA | Minimum of 30 days prior to the commencement of operation<br><br>14 days |
| | | 2. CEA to conduct field inspection and verification from relevant authorities | |
| | | 3. CEA to prepare Inspection Report with Recommendations | 14 days |
| | | 4. TRC to review report | |
| | | 5. Proponent to pay license fee | |
| | | 6. CEA to issue EPL | |
| **4. Archeological Impact Assessment Survey** | | | |
| Under Section 47 read with Section 43(b) of Antiquities | Department of Archaeology | 1. Proponent to submit application to Department of Archaeology. | During Feasibility |

| Legislation | Regulatory Agency | Summary of Procedure | Time scale |
|---|---|---|---|
| (Amendment) Act No. 24 of 1998; Gazette Notification No. 1152/14 dated 04.10.2000 | | 2. Department of Archaelogy Regional Office to conduct preliminary observation and submit report.. | Stage<br><br>About 30 days |
| | | 3. (i) If there are no antiquities according to the recommendation and observation report, land will be released for the project. | |
| | | (ii) If the preliminary observation report has proposed to carry out an archaeological impact assessment survey, steps will be taken to conduct the survey including scoping with other agencies. | 30 days |
| | | 4. Department of Archaeology to call for quotations and award contract for AIA survey | |
| | | 5. Selected agency to conduct AIA survey and submit report to Department of Archaeology | 42 days |
| | | 6. Department of Archaeology to submit AIA report to Minister in charge of approval | About 30 days |
| | | 7. Department of Archaeology to issue approval | |
| **5. Clearance from Department of Forest Conservation** | | | |
| Under the ordinance enacted in 1907 No. 16, and subsequent amendment No. 23, 1995 and No. 65 of 2009. | DFC | 1. Proponent to submit application to DFC | During Feasibility Stage |
| | | 2. District Forest Office along with the DFC officials to conduct preliminary observation and submit report to Conservator General of DFC for approval | About 60 days |
| | | 3. (i) If the project is located within the core protected area, the application will be rejected; | 60 days |
| | | (ii) If the project will utilize resources from the forest (timber or related) the application will be rejected (even if it is located outside the boundary and the buffer); | |
| | | (iii) If the project is outside the boundaries and buffers of any Forest Reserves, DFC's consent will be released. | |
| | | (iv) DFC will refer to CEA if the proposed activities will cause negative impacts on forest | 30 days |

| Legislation | Regulatory Agency | Summary of Procedure | Time scale |
|---|---|---|---|
| | | conservation areas and there will be extraction of resources involved. | |
| | | - Under NEA, EIA will be conducted<br>- DFC will become the project approving agency | 116 days |
| | | DFC will release the approval with the concurrence of the CEA. | |

AIA = Archaeological Impact Assessment, CEA = Central Environmental Authority, PAA = Project Approving Agency, DCCCRM = Department of Coastal Conservation and Coastal Resource Management, DFC = Department of Forest Conservation, EIA = Environmental Impact Assessment, EPL = Environment Protection License, IEE = Initial Environmental Examination, NEA = National Environment Act, SLLR&DC = Sri Lanka Land Reclamation and Development Corporation, TOR =Terms of Reference, TRC = Technical Review Committee, UDA= Urban Development Authority.

## B. Applicable International Environmental Agreements

28. In addition to national rules and regulations, international conventions such as the International Union for Conservation of Nature and Natural Resources (IUCN), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on Migratory Species of Wild Animals (CMS) and Ramsar Convention on Wetlands of International Importance are applicable for selection and screening of subprojects under restricted/sensitive areas. Sri Lanka is a party to these conventions.

29. **International Union for Conservation of Nature and Natural Resources.** The IUCN Red List of Threatened Species (also known as the IUCN Red List or Red Data List), founded in 1963, is a comprehensive inventory of the global conservation status of plant and animal species. The IUCN is an authority on the conservation status of species. A series of Regional Red Lists are produced by countries or organizations, which assess the risk of extinction to species within a political management unit. The IUCN Red List is set upon precise criteria to evaluate the extinction risk of thousands of species and subspecies. These criteria are relevant to all species and all regions of the world. The aim is to convey the urgency of conservation issues to the public and policy makers, as well as help the international community to try to reduce species extinction.

30. **Convention on Migratory Species of Wild Animals (CMS).** CMS was adopted in 1979 and entered into force on 1 November 1983. CMS, also known as the Bonn Convention, recognizes that local authorities must be the protectors of migratory species that live within or pass through their national jurisdictions, and aims to conserve terrestrial, marine, and avian migratory species throughout their ranges. Migratory species threatened with extinction are listed on Appendix I of the Convention. CMS Parties strive towards strictly protecting these species, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them. Migratory species that need or would significantly benefit from international cooperation are listed in Appendix II of the Convention, and CMS encourages the Range States to conclude global or regional agreements.

31. **Convention on International Trade in Endangered Species of Wild Fauna and Flora.** It is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. CITES were first formed, in the 1960s. Annually, international wildlife trade is estimated to be

worth billions of dollars and to include hundreds of millions of plant and animal specimens. The trade is diverse, ranging from live animals and plants to a vast array of wildlife products derived from them, including food products, exotic leather goods, wooden musical instruments, timber, tourist curios and medicines. Levels of exploitation of some animal and plant species are high and the trade in them, together with other factors, such as habitat loss, is capable of heavily depleting their populations and even bringing some species close to extinction. Many wildlife species in trade are not endangered, but the existence of an agreement to ensure the sustainability of the trade is important in order to safeguard these resources for the future. Because the trade in wild animals and plants crosses borders between countries, the effort to regulate it requires international cooperation to safeguard certain species from over-exploitation.

32. **Ramsar Convention on Wetlands of International Importance 1971.** The Convention on Wetlands of International Importance, called the Ramsar Convention, is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The Ramsar Convention is an international treaty for the conservation and sustainable utilization of wetlands The Ramsar Convention is the only global environmental treaty that deals with a particular ecosystem. According to the Ramsar list of Wetlands of International Importance, there are five designated wetlands in Sri Lanka which are required to be protected. Activities undertaken in the proximity of Ramsar wetlands shall follow the guidelines of the convention. Sri Lanka presently has six sites designated as Wetlands of International Importance, with a surface area of 32,372 hectares (**Appendix 4**). There are no designated wetlands reported within the assessed subproject areas during project preparation.

33. United Nations Educational, Scientific and Cultural Organization **(UNESCO) World Heritage Convention.** The most significant feature of the 1972 World Heritage Convention is that it links together in a single document the concepts of nature conservation and the preservation of cultural properties. The Convention recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two. The convention defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List. The convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage. The States Parties are encouraged to integrate the protection of the cultural and natural heritage into regional planning programs, set up staff and services at their sites, undertake scientific and technical conservation research and adopt measures which give this heritage a function in the day-to-day life of the community. It also encourages States Parties to strengthen the appreciation of the public for World Heritage properties and to enhance their protection through educational and information programs.

34. In subsequent subprojects, if any floral and faunal habitation, listed under Ramsar, IUCN, CMS, CITES, or UNESCO World Heritage Sites are reported within the subproject influence area, then the responsibility for taking necessary actions in accordance with these international conventions will lie with the executing and implementing agencies.

## A. ADB Policy

35. ADB requires the consideration of environmental issues in all aspects of ADB's operations, and the requirements for environmental assessment are described in ADB SPS, 2009. This states that ADB requires environmental assessment of all ADB investments.

36. **Screening and categorization.** The nature of the environmental assessment required for a project depends on the significance of its environmental impacts, which are related to the type and location of the project; the sensitivity, scale, nature, and magnitude of its potential impacts; and the availability of cost-effective mitigation measures. Projects are screened for their expected environmental impacts, and are assigned to one of the following four categories:

(i) **Category A.** Projects could have significant adverse environmental impacts. An EIA is required to address significant impacts.
(ii) **Category B.** Projects could have some adverse environmental impacts, but of lesser degree or significance than those in category A. An IEE is required to determine whether significant environmental impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report.
(iii) **Category C.** Projects are unlikely to have adverse environmental impacts. No EIA or IEE is required, although environmental implications are reviewed.
(iv) **Category FI.** Projects involve a credit line through a financial intermediary or an equity investment in a financial intermediary. The financial intermediary must apply an environmental management system, unless all projects will result in insignificant impacts.

37. ADB Rapid Environmental Assessment (REA) Checklists will be used for the screening and categorization.

38. **Environmental Management Plan.** An EMP, which addresses the potential impacts and risks identified by the environmental assessment, shall be prepared. The level of detail and complexity of the EMP and the priority of the identified measures and actions will be commensurate with the project's impact and risks.

39. **Public disclosure.** ADB will post thee safeguard documents on its website as well as disclose relevant information in accessible manner in local communities:

(i) for environmental category A projects, draft EIA report at least 120 days before Board consideration;
(ii) final or updated EIA and/or IEE upon receipt; and
(iii) Environmental monitoring reports submitted by the Project Management Unit (PMU) during project implementation upon receipt.

## C. Institutional Capacity

40. MPCLG, with inputs from the Provincial Councils, is responsible for the preparation of each subproject environmental assessment report and monitoring of safeguards issues. MPCLG and the Provincial Councils have successfully ensured the environmental management and monitoring under the ADB-funded Local Government Infrastructure Improvement Project and ongoing LGESP.

41. The executing and implementing agencies of the project require capacity building measures basically to increase the awareness amongst the senior officials of the executing agency, members of National Steering Committee and Senior officials and elected representatives of the *Pradeshiya Sabhas* for (i) a better understanding of the project-related environmental issues; and (ii) strengthen their role in implementation of mitigation measures and subsequent monitoring. Measures to create awareness on these, the subproject execution

wherever necessary are observed under the current project. **Table 5** provides suggested training programs. The primary focus of the training is to create awareness on importance of the issue at senior level staff and to conduct refresher courses for project staff to conduct impact assessments and carry out environmental monitoring and implement the EMP. After participating in such training and awareness programs the senior officials and elected representatives will be able to support the project staff on these issues and the recently recruited staff of project and *pradeshiya sabhas* who are trained, shall be able to make environmental assessments for their respective subprojects, conduct monitoring of environmental plans, understand government and ADB requirements for environmental assessment, management, and monitoring (short and long term), and incorporate environmental features into future subproject designs, specifications, and tender and/or contract documents and carry out necessary checks and balances during project implementation.

## III. ANTICIPATED ENVIRONMENTAL IMPACTS

42. Preliminary lists of subprojects to be financed under the additional financing have been identified and attached as **Appendix 10.** It is likely that future subprojects will seek to replicate the subprojects in the ongoing LGESP, and are thus expected to be category B and C due to the low-impact nature of such works. No category A type of works (with significant impacts) are anticipated. Subprojects projected to have potentially significant adverse environmental impacts (categorized as A) will not be considered for implementation under this Project. For small-scale infrastructure and service improvement subprojects it is anticipated that impacts will be temporary and of short duration. The anticipated environmental impacts and mitigation measures are provided below in Table 3. These are indicative impacts, and will need to be further explored during the detailed design stage.

**Table 1: Anticipated Environmental Impacts Due to Project Implementation**

| Impact Field | Anticipated Impact on the Environment |
|---|---|
| **Design Phase** | |
| Environmental clearances | Environmental clearances and permits are required (**Table 2**) in order to implement the project. Land allotment letter required. If not pursued on timely basis, this can delay the project. Necessary environmental clearances have to be obtained and follow the guidelines issued by the authorities. |
| Utilities | Telephone lines, electric poles and wires, water pipe (old) existing within right-of-way require shifting without disruption to services. |
| Water supply | Health risk due to closure of existing water supply such as community tanks, water stations, and privately-owned small water pipes. |
| Social and cultural resources | Ground disturbance can uncover and damage archaeological and historical remains. Impact on sites of cultural/religious importance during pipe laying. |
| Construction work camps, hot mix plants, stockpile areas, storage areas, and disposal areas | Locations may cause encroachment/impact either directly or indirectly on adjacent environments. It may also include the impacts on the people who might lose their homes or livelihoods due to the subproject activities. |
| Land for water treatment plant, sewage treatment plant, composting facility, landfill, and public buildings | Land use impact due to conversion of present land use. |
| Traffic | Traffic flow will be disrupted if routes for delivery of construction materials and temporary blockages during construction activities are |

| Impact Field | Anticipated Impact on the Environment |
|---|---|
| | not planned and coordinated. |
| **Construction Phase** | |
| Sources of materials | Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution. |
| Air quality | Emissions from construction vehicles, equipment, and machinery used for excavation and construction resulting to dust and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons. |
| Surface water quality | Mobilization of settled silt materials, run-off from stockpiled materials, and chemical contamination from fuels and lubricants during construction works can contaminate downstream surface water quality. |
| Noise levels | Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people. Operation of heavy equipment and machines in the night time can cause nuisance to the surrounding environment and/or people. |
| Generated muck | Improper disposal of muck from cleaning of drainage canals causing environmental pollution. |
| Ecological resources | Felling of the trees–affect terrestrial ecological balance and affect terrestrial and aquatic fauna/wildlife. |
| Existing infrastructure and facilities | Disruption of service and damage to existing infrastructure located alongside roads, in particular electric poles and community-scheme water supply pipes. |
| Landscape and aesthetics | Solid wastes as well as excess construction materials create unacceptable aesthetic condition. |
| Accessibility | Traffic problems and conflicts in ROW. Roads/people/businesses may be disturbed by repeated trenching. |
| Socioeconomic– Income | Impede the access of residents and customers to nearby shops. Shops may lose business temporarily. |
| Occupational health and safety | Occupational hazards which can arise during construction (e.g., trenching, falling objects, etc.). |
| Community health and safety | Community hazards which can arise during construction (e.g., open trenches, air quality, noise, falling objects, etc.). Trenching on concrete roads using pneumatic drills will cause noise and air pollution. Traffic accidents and vehicle collision with pedestrians during material and waste transportation. |
| Construction waste | Trenching will produce additional amounts of waste soil. And also accumulation of debris waste materials and stockpiling can cause environmental visual pollution. |
| Work camps | Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants. This may cause conflict with residents and problem of waste disposal and disruptions to residents. |
| Social and cultural resources | Risk of archaeological chance finds. Sites of social/cultural importance (schools, hospitals, religious place, tourism sites) may be disturbed by noise, dust, vibration and impeded access. |
| Clean-up operations, restoration and rehabilitation | Impacts on social or sensitive receptors when post construction requirements are not undertaken, e.g. proper closure of camp, disposal of solid waste, and restoration of land after subproject construction. |
| **Operation and Maintenance Phase** | |

| Impact Field | Anticipated Impact on the Environment |
|---|---|
| Occupational health and safety | Exposure of workers to hazardous materials during operation of water treatment plant, operation of sewerage treatment plant and sanitation facilities, drainage cleaning, operations of compost plant and landfill. |
| Wastewater quality | Deterioration of surface and groundwater quality from unmanaged sewage due to improvement in water supply and untreated leachate from compost facility and landfill. |
| Hazardous chemicals | Release of chlorine and flocculants from water treatment plant and sewerage treatment plant causing air, water, and soil pollution |
| Air emissions | Air pollution from gaseous or volatile chemicals used for disinfection processes at the water treatment plant and sewerage treatment plant. |
| General maintenance | Maintenance activities may cause disturbance to sensitive receptors, dusts, and increase in noise level. |
| Community health and safety | Leaking sewers and septic tanks can damage human health and contaminate soil and groundwater. |
| Economic development | Impediments to residents and businesses during routine maintenance. |

## IV. ENVIRONMENTAL ASSESSMENT FOR SUBPROJECTS AND COMPONENTS

### A. Environmental Guidelines for Subproject Selection

43. Based on the preliminary studies conducted during the project preparation stage and the environmental assessment conducted for the three sample subprojects, LGESP is classfied as category B interventions and unlikely to require EIA for any subproject in accordance with the national environmental assessment regulation. However, the EARF recognizes the possibility of Category A subprojects for the following reasons:

(i) the locations, descriptions, and scope of future subprojects are unknown;
(ii) the a priori urban focus of water supply developments can extend into and peri-rural and rural environments potentially affecting valued natural resources and protected areas; and
(iii) pipes crossing or adjacent to the coastal zones or sensitive areas such as buffer zones of protected areas, dry season water extractions from an irrigation reservoir potentially causing resource conflicts, or if the reproductive habitat of a rare animal was at risk of being destroyed or damaged.

44. Subprojects that would directly affect the core and buffer zones of national reserves, protected areas, and highly valued cultural property and fall under Category A shall be strictly avoided or the subproject component(s) causing potential impacts relocated or find suitable alternatives.

45. Regular measurements of water flow and quality from potential water supply sources shall be taken over a one year period. The flow measurements and water quality of the water sources are necessary to determine that the water sources are sufficient to meet the water quality standards and project demand, particularly during the dry season, while allowing a minimum stream flow for downstream and the maintenance of the riparian ecosystem in source streams.

46. Improvement and expansion of coverage of domestic water supply give rise to greater quantities of wastewater. With the current emphasis on environmental health and water pollution issues, there is an increasing awareness of the need to dispose of these wastewaters safely and beneficially. Local authorities implementing water supply subprojects shall: (i) develop and implement a formal septic tank system standard; (ii) control buildings in terms of approving designs and construction; (iii) control the use of soak pits, particularly where ground or surface waters are close to the location of septic tank effluent discharge; and (iv) develop and implement a septic tank maintenance program to educate all involved with such systems.

47. For completeness additional criteria[8] that prohibit inclusion of a subproject in the LGESP are as follows:

(i) production or activities involving harmful or exploitative forms of forced labor[9] or child labor;[10]
(ii) production of or trade in any product or activity deemed illegal under Sri Lankan laws or regulations or international conventions and agreements or subject to international phaseouts or bans, such as (a) pharmaceuticals,[11] pesticides, and herbicides,[12] (b) ozone-depleting substances,[13] (c) polychlorinated biphenyls[14] and other hazardous chemicals,[15] (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,[16] and (e) transboundary trade in waste or waste products;[17]
(iii) production of or trade in weapons and munitions, including paramilitary materials;
(iv) production of or trade in alcoholic beverages, excluding beer and wine;[18]
(v) production of or trade in tobacco;[18]
(vi) gambling, casinos, and equivalent enterprises;[18]
(vii) production of or trade in radioactive materials,[19] including nuclear reactors and components thereof;
(viii) production of, trade in, or use of unbonded asbestos fibers;[20]
(ix) commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests; and

[8] Adapted from ADB SPS, 2009. Appendix 6.
[9] Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.
[10] Child labor means the employment of children whose age is below the host country's statutory minimum age of employment or employment of children in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention" (www.ilo.org).
[11] A list of pharmaceutical products subject to phaseouts or bans is available at http://www.who.int.
[12] A list of pesticides and herbicides subject to phaseouts or bans is available at http://www.pic.int.
[13] A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at http://www.unep.org/ozone/montreal.shtml.
[14] A group of highly toxic chemicals, polychlorinated biphenyls are likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.
[15] A list of hazardous chemicals is available at http://www.pic.int.
[16] A list is available at http://www.cites.org.
[17] As defined by the Basel Convention; see http://www.basel.int.
[18] This does not apply to project sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a project sponsor's primary operations.
[19] This does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which ADB considers the radioactive source to be trivial and adequately shielded.
[20] This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

(x) marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats..

48. Therefore, the subprojects are not anticipated to have significant environmental impacts. Subprojects will be primarily designed to improve public and environmental health and quality of life for both poor and non-poor residents. Guidelines for subproject selection in **Table 4** provide further guidance to avoid or minimize adverse impacts during the identification and finalization of subprojects.

**Table 4: Environmental Criteria for Subproject Selection**

| | Components | Environmental Selection Guidelines | Remarks |
|---|---|---|---|
| 1. | Overall Selection Guideline (applicable to all components) | Comply with all requirements of relevant national, state, and local laws, rules, and guidelines. | See Section II of this EARF. |
| | | Site selection process will avoid where possible land acquisition and involuntary resettlement where possible including impacts on vulnerable persons and indigenous peoples. | See Resettlement Framework and Indigenous Peoples Planning Framework. |
| | | Site selection will avoid where possible locations in protected areas, including notified reserved forests or biodiversity conservation hotspots (sanctuary/national park, etc.). | Approval from concerned authority if unavoidable. |
| | | Subproject location shall not result in destruction and/or disturbance to historical and cultural places and/or values. | |
| | | The subproject will avoid where possible, and minimize to extent feasible facilities in locations with social conflicts. | |
| | | The subproject will avoid where possible tree cutting and if any trees have to be removed, will plant two new trees for every one that is lost. | Approval from Forest Department. |
| | | Retain mature roadside trees which are important and/or valuable or historically significant and if any trees have to be removed, plant two new trees for every one that is lost. | |
| | | The subproject will reflect inputs from public consultation and disclosure for site selection. | |
| 2. | Water Supply | Comply with all requirements of relevant national law. Provincial and Local Authority regulations. | See Section II of this EARF. |
| | | Utilise water sources at sustainable levels of abstraction only (i.e. without significant reductions in the quantity or quality of the source overall). | |
| | | Avoid using water sources that may be polluted by upstream users. | |
| | | Avoid water-use conflicts by not abstracting water that is used for other purposes (e.g. irrigation). | |
| | | Locate all new facilities at least 100 m from houses, shops or any other premises used by people, thus establishing a buffer zone to reduce the effects of noise, dust and the visual appearance of the site. | Distance restriction may be reviewed depending on the technology adopted for the treatment of water, site availability and buffer zone planning as well as by-laws of respective local |

| | Components | Environmental Selection Guidelines | Remarks |
|---|---|---|---|
| | | | authorities. |
| | | Locate WTP at sites where there is no risk of flooding or other hazards that might impair functioning of the plant or present a risk of damage to the plant or its environs. | |
| | | Consult the relevant national and/or local archaeological agencies regarding the archaeological potential of proposed sites of WTP, and primary mains, to ensure that these are located in areas where there is a low risk of chance finds. | |
| | | Avoid all usage of pipes that are manufactured from asbestos concrete. | |
| | | Locate pipelines within the ROW of other linear structures (roads, irrigation canals) as far as possible, to reduce the acquisition of new land. | |
| | | Ensure that pipeline routes do not require the acquisition of land from individual farmers in amounts that are a significant proportion of their total land holding (>10%). | |
| | | Ensure that communities who relinquish land needed for pipelines or other facilities are provided with an improved water supply as part of the scheme. | |
| | | Ensure that water supplied to consumers meets national drinking water standards at all times, and confirm this by regular monitoring at the WTP and in domestic premises. | |
| | | Ensure that improvements in the water supply system are combined with improvements in sewerage and drainage to deal with the increased discharge of domestic wastewater. | |
| 3. | Sewerage | Locate STP preferably 250 m from any inhabited areas, in locations where no urban expansion is expected in the next 20 years, so that people are not affected by odour or other nuisance from the plant | Distance restriction may be reviewed depending on the technology adopted for the treatment of waste water, site availability and buffer zone planning**.** |
| | | Avoid locating sewage pumping stations and wet wells within 50 m of any inhabited areas, and within 100m of sensitive sites such as hospitals, schools, temples, etc., to minimize nuisance impacts from odour, rodents, etc. | |
| | | Locate STP at sites where there is a suitable means of disposal for the treated wastewater effluent (e.g. into a natural water course or irrigation canal) or provide a means of disposal (e.g. new irrigation canal) as part of the scheme | |
| | | Locate STP at sites where there is no risk of flooding or other hazards which might impair functioning of the plant and present a risk of damage to the plant or its environs | Flood statistics data of the project area needs to be reviewed. |
| | | Subproject will be implemented only with consent of CEA. | |

| | Components | Environmental Selection Guidelines | Remarks |
|---|---|---|---|
| | | Lay new sewerage pipes within existing roads to avoid land acquisition and involuntary resettlement impacts. | See Resettlement Framework. |
| | | Technology selection shall meet national wastewater discharge standards. | See Appendix 1 for Sri Lanka Standards Institution Environmental Standards |
| | | Ensure no immediate downstream drinking water intakes. | Survey downstream users and treat water to meet relevant standards considered safe to public. |
| | | Include design measures and follow guidelines to ensure the safe disposal of sewage sludge without causing an environmental hazard, and if possible to promote its safe and beneficial use as an agricultural fertilizer. | Any sludge reuse shall be to improve soil properties and sustain soil fertility and avoid any contamination risks. |
| | | Continue the established practice of laying new drains within existing roads to avoid land acquisition and involuntary resettlement. | See Resettlement Framework |
| | | Include measures to ensure the safe disposal of canal dredge without causing an environmental hazard. | |
| | | Retain mature roadside trees, and if any trees have to be removed, plant two new trees for every one that is lost. | |
| 3. | Roads and Bridges | Develop road improvement schemes (road widening, bridge construction, etc.) only where the need is clearly demonstrated by appropriate traffic and hazard studies. | |
| | | Prioritise the widening of existing roads over construction of new roads and conduct widening within the existing ROW to avoid the need to acquire new land. | |
| | | New roads or widening of existing roads involving land acquisition and/or resettlement shall not be included in the Project, except as otherwise accepted by ADB and Government and subject to compliance requirements under ADB's SPS (2009). | See Resettlement Framework |
| | | Include the provision of new or improved drainage to remove the increased runoff caused by increasing the road surface area. | |
| | | Retain mature roadside trees as much as possible, and if any trees have to be removed, plant two new trees for every one that is lost. | Approval from Forest Department |
| | | Include tree planting alongside elevated bridges to provide a natural barrier to noise and visual impacts, and include additional man-made barriers if necessary. | |
| | | Consult the relevant national and/or local archaeological agencies regarding the archaeological potential of proposed sites of any new roads, bridges or car parks, to ensure that these are located in areas where there is a low risk of chance finds. | |

| | Components | Environmental Selection Guidelines | Remarks |
|---|---|---|---|
| 4. | Drainage Improvement | Lay new drains within existing roads to avoid land acquisition and involuntary resettlement. | |
| | | Include measures to ensure the safe disposal of canal dredge without causing an environmental hazard. | |
| | | Retain mature roadside trees as much as possible, and if any trees have to be removed, plant two new trees for every one that is lost. | |
| 5 | Solid Waste Management | Comply with all requirements of relevant national law. | See Section II of this EARF. |
| | | Locate landfill sites a minimum of 500 m (and at least 1 km where possible) from any inhabited areas, in locations where no urban expansion is expected in the next 20 years, so that people are not affected by odour or other nuisance from the site. | Distance restriction may be reviewed depending on the technology adopted for the treatment of leachate, site availability and buffer zone planning. |
| | | Locate landfills at sites where there is no risk of flooding or other hazards that might impair functioning of the site and present a risk of damage to the site or its environs. | |
| | | Locate landfill sites adjacent to STP whenever possible so that leachate can be collected and treated. | |
| | | Consult the relevant national and/or local archaeological agencies regarding the archaeological potential of proposed landfill sites, to ensure that these are located in areas where there is a low risk of chance finds. | |
| | | Provide a properly engineered and managed sanitary landfill site that is sealed to prevent leaching of contaminants into surface or groundwater, where refuse is compacted and covered each day, and where there is a separate concreted area for the safe disposal of hazardous waste. | |
| | | Provide a composting facility for the beneficial use of biodegradable wastes such as vegetable peelings, agricultural waste, etc. | |
| | | Include a public education and information element to inform communities of their responsibility to place their waste at collection points, and to segregate waste that is suitable for recycling. | |
| 6. | Public Facilities | Only projects proposed or requested by the relevant agencies shall be considered for implementation. | |
| | | Subprojects shall involve improvements within the boundary of existing facilities only. | |
| | | Ensure that any facilities involving hazardous or polluting materials (e.g. waste disposal) are designed to national and international standards, to protect human health, both within and outside the facility. | |
| | | Where new facilities are required, these shall be | |

| | Components | Environmental Selection Guidelines | Remarks |
|---|---|---|---|
| | | sited on vacant government land and ROWs where feasible. | |
| | | Ensure that water and waste disposal in constructed facilities are designed to national and international standards. | |

ADB = Asian Development Bank, CEA = Central Environmental Authority, EARF = Environmental Assessment Review Framework, km = kilometer, m = meter, ROW = right-of-way, SPS = Safeguards Policy Statement, STP = sewerage treatment plant, WTP = water treatment plant.

## B. Environmental Assessment Procedures for Subprojects

### 1. Screening and Classification/Categorization

49. The SPCU with the help of designs consultants will collect the preliminary information and, will determine if the component would require environmental assessment and/or environmental clearance as per national requirements. The DSCs will conduct a rapid environment assessment to categorize the project as A, B or C based on which required further assessments would be decided. If required, the SPCU will contact CEA for necessary endorsement, who may appoint a Project Approving Agency and issue a 'terms of reference' for the study.

50. To ensure that the project meets ADB's environmental safeguard requirements, as stipulated in the ADB SPS 2009, subprojects will be screened using ADB Rapid Environmental Assessment (REA) Checklist (**Appendix 5**), and the level of environmental assessment required (EIA/IEE) will be determined. It is anticipated that most eligible subprojects will fall into either Category B or C, as subprojects will be of small-scale without adverse environmental impacts and often involve improvement or rehabilitation of the existing system/facilities.

### 2. Preparation of Environmental Assessment Report

51. Environmental assessment documents prepared under the project shall, to the extent possible, meet both ADB and Government requirements in order to streamline the environmental procedures required by both ADB and government.

52. Subprojects projected to have potentially significant adverse environmental impacts (categorized as A) will not be considered for implementation under this Project. But if the implementation is highly critical then, an EIA will be prepared. Subprojects with some adverse environmental impacts, but are expected to be less significant than those of Category A projects, an IEE is required. Appendix 1 of ADB's SPS, 2009 provides the specific outlines and contents to be followed while preparing EIAs/IEEs. **Appendix 6** provides the outline of an ADB IEE or EIA Report. Also, the IEEs prepared during project preparation provide good samples which can be followed for preparation of environmental assessments in subsequent subprojects. **Appendix 7** provides the outline of a due diligence report to be prepared for Category C subprojects.

53. For preparing EIA and IEE relevant primary data will be generated and secondary data will be collected for project-influenced sites. An assessment of project impacts and risks on biodiversity and natural resources will also be undertaken. Issues regarding natural and critical habitats will be covered in the EIA/IEE report. In case of subprojects located within buffer zone of protected areas, a review of management plans and consultation with concerned management staff of the protected area, local communities, and key stakeholders will be

undertaken and reflected in EIA/IEE report. Pollution prevention for conservation of resources particularly technology for management of process wastes will be addressed in the EIA/IEE report. Occupational health safety and community health safety will be properly addressed in the EMP section of the EIA/IEE report. In case subprojects are likely to have adverse impacts on physical cultural resources, appropriate mitigation measures will to be planned and reflected in the EIA/IEE. EIA/IEE will also reflect meaningful consultation and disclosure process with a provision of grievance redress mechanism.

54. ADB requires that an EMP must be developed as part of the EIAs/IEEs. EMPs describe the environmental management measures that will be carried out to mitigate negative impacts or enhance the environment during implementation of a project, and the environmental monitoring to be conducted to ensure that mitigation is provided and is effective in reducing impacts, or to determine the long-term impacts of a project. EMPs shall outline specific mitigation measures, environmental monitoring requirements, and related institutional arrangements, including budget requirements for implementation. Where impacts and risks cannot be avoided or prevented, mitigation measures and actions will be identified so that the project is designed, constructed, and operated in compliance with applicable laws and regulations and meets the requirements specified in this document. The level of detail and complexity of the environmental planning documents and the priority of the identified measures and actions will be commensurate with the project's impacts and risks. Key considerations include mitigation of potential adverse impacts to the level of "no significant harm to third parties," the polluter pays principle, the precautionary approach, and adaptive management.

55. If some residual impacts are likely to remain significant after mitigation, the EMP will also include appropriate compensatory measures (offset) that aim to ensure that the project does not cause significant net degradation to the environment. Such measures may relate, for instance, to conservation of habitat and biodiversity, preservation of ambient conditions, and greenhouse gas emissions. Monetary compensation in lieu of offset is acceptable in exceptional circumstances, provided that the compensation is used to provide environmental benefits of the same nature and is commensurate with the project's residual impact.

56. All IEEs and EMPs, will be conducted prior to the award of construction contracts. The bid documents will include the requirement to incorporate necessary resources to implement the EMP. The EMP will form part of the contract document, and if required, will need to be further updated during the construction phase of a sub-project.

### C. Review of Environmental Assessment Reports

57. On completion, EIA/IEE reports will be reviewed initially by the SPCU and if satisfactory, forwarded to the PMU for approval. In the case where an Environmental Clearance is required, the EIA/IEE report is to be forwarded to the CEA for approval.

58. The executing agency will forward the EIA/IEE for ADB's review.

## V. CONSULTATION, INFORMATION DISCLOSURE, AND GRIEVANCE REDRESS MECHANISM

### A. Public Consultation and Information Disclosure

59. A Consultation and Participation Plan has been prepared for LGESP and is being implemented with the assistance of the consultants. The consultation process so far has

solicited inputs from a wide range of stakeholders, including government officials, community based organizations, elected representatives, residents of project towns marginalized/vulnerable beneficiary groups, and project affected persons.

60. Views and/or preferences of stakeholders including potential beneficiaries and affected people will be adequately considered in subproject design, and will continue at each stage of implementation. Affected persons will be consulted continuously to ensure: (i) incorporation of views and/or concerns of affected persons on environmental impacts and mitigation measures; (ii) inclusion of vulnerable persons in project benefits; (iii) identification of help required by affected persons during rehabilitation, if any; and (iv) avoidance of potential conflicts/smooth project implementation. Relevant information about the project and any major changes to subproject scope will be shared with beneficiaries, affected persons, vulnerable groups, and other stakeholders in language and form they understand.

61. Approaches adopted in LGESP implementation will be continued. Consultations have been made during project design and implementation stages and will be made post during implementation stage also. At minimum, stakeholders shall be consulted as required regarding the scope of the environmental and social impact study before work is commenced and they shall be informed of the likely impacts of the subproject and proposed mitigation once the draft EIA/IEE, resettlement plan, and indigenous peoples plan reports are prepared. The reports recorded the views of stakeholders and indicated how these have been taken into account in project development. Consultations will be held with a special focus on vulnerable groups.

62. For the subprojects under additional financing, the key stakeholders to be consulted during subproject preparation, environmental assessment process, and project implementation include:

(i) beneficiaries;
(ii) elected representatives, community leaders, religious leaders and representatives of community based organizations;
(iii) local community based organizations and civil society organizations ;
(iv) local government and relevant government agency representatives, including local authorities responsible for land acquisition, protection and conservation of forests and environment, archaeological sites, religious sites, and other relevant government departments;
(v) residents, shopkeepers and business people who live and work alongside the roads where pipes will be lay and near sites where facilities will be built; custodians, and users of socially and culturally important buildings;
(vi) SPCU staff and consultants; and
(vii) ADB and Government.

## B. Information Disclosure

63. Information has been disclosed through public consultations and posting in public locations. The EARF and IEEs prepared for LGESP have been disclosed on project and ADB websites. For the additional financing, information disclosure will continue and the following documents will be submitted to ADB for disclosure on its website: (i) IEEs; (ii) a new or updated IEE and corrective action plan prepared during project implementation, if any; and (iii) environmental monitoring reports.

64. The executing agency shall send written endorsement to ADB for disclosing these documents on ADB's website. The executing agency will also provide relevant safeguards information in a timely manner, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders.

## C. Grievance Redress Mechanism

65. A project-specific grievance redress mechanism (GRM) has been established to receive, evaluate, and facilitate the resolution of affected person's concerns, complaints and grievances about the social and environmental performance of LGESP. The GRM of the project has been prepared and accepted by ADB and disclosed in the project website The GRM chart providing information on receipt of complaints and levels of redressal is displayed in all subproject sites, local authorities offices, SPCU offices and other important places. The SPCU records all grievances received and address them on priority. To date all grievances are addressed at the stage of first tier.

66. The GRM aims to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. The GRM (**Appendix 8**) is project-specific and not intended to bypass the government's own redress process; rather it is intended to address affected people's concerns and complaints promptly, making it readily accessible to all segments of the affected people and is scaled to the risks and impacts of the project.

67. The PMU and SPCUs will make the public aware of the GRM through public awareness campaigns. Grievances can be filed in writing using the Complaint Register and Complaint Forms (**Appendix 8**) or by phone with any member of the PMU or SPCU. The contact details of the respective SPCUs will serve as a main avenue for complaints and will be publicized through display on notice boards outside their offices and at construction sites. The safeguard documents made available to the public in an accessible version will include information on the GRM and will be widely disseminated throughout the corridor by the safeguards officers in the PMU and SPCUs.

68. **First tier of GRM**. The SPCU is the first tier of GRM which offers the fastest and most accessible mechanism for resolution of grievances. The Safeguards Manager – Social and Gender in the SPCU will be designated as the key officer for grievance redress. Resolution of complaints will be done at the earliest. Investigation of grievances will involve site visits and consultations with relevant parties (e.g., affected persons, contractors, traffic police, etc.). The Community Development Officer of the local authority or in the absence of Community Development Officer, any officer who is given the responsibility of this, would coordinate with the safeguards and gender manager of SPCU in redressing the grievances. Grievances will be documented and personal details (name, address, date of complaint, etc.) will be included unless anonymity is requested. A tracking number will be assigned for each grievance, including the following elements:

(i) Complaint Register and Complaint Forms (including the description of the grievance) with an acknowledgement of receipt given to the complainant when the complaint is registered;
(ii) Grievance monitoring sheet with actions taken (investigation, corrective measures); and
(iii) Closure sheet (Result of Grievance Redressal), one copy of which will be handed to the complainant after he/she has agreed to the resolution and signed-off.

69. The updated register of grievances and complaints will be available to the public at the SPCU office, construction sites, and other key public offices. Shall the grievance remain unresolved it will be escalated to the second tier.

70. **Second Tier of GRM**. The Social Safeguards and Gender Manager of SPCU will activate the second tier of GRM[21] by referring the unresolved issue (with written documentation), The Grievance Redress Committee (GRC) will be established before commencement of site works. A hearing will be called with the GRC, if necessary, where the affected person can present his and/or her concern or issues. The process will facilitate resolution through mediation. This local GRC will meet as necessary when there are grievances to be addressed. The local GRC will suggest corrective measures at the field level and assign clear responsibilities for implementing its decision at the earliest. The contractor will have observer status on GRC. If unsatisfied with the decision, the existence of the GRC will not impede the complainant's access to the Government's judicial or administrative remedies.

71. The safeguards and gender manager of SPCUs will be responsible for processing and placing all papers before the GRC, maintaining database of complaints, recording decisions, issuing minutes of the meetings and monitoring to see that formal orders are issued and the decisions carried out.

72. **Third tier of GRM.** In the event that a grievance cannot be resolved directly by the SPCUs (first tier) or GRC (second tier), the affected person can seek redress through third tier at the central level. . The third tier - Central Grievance Redressal Committee consists of (i) Project Director as Chairman; and (ii) Legal Officer of MPCLG as member and Social Safeguard and Gender Officer of PMU as Member Secretary.

73. In case the grievance is not solved at this level, then the complainant can refer the same to the court of law.

74. The detailed GRM is hosted in the project website.

75. The safeguard monitoring reports will include the following aspects pertaining to progress on grievances: (i) number of cases registered with the GRC, level of jurisdiction (first, second and third tiers), number of hearings held, decisions made, and the status of pending cases; and (ii) lists of cases in process and already decided upon may be prepared with details such as name, ID with unique serial number, date of notice, date of application, date of hearing, decisions, remarks, actions taken to resolve issues, and status of grievance (i.e. open, closed, pending).

76. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication and reporting and/or information dissemination) will be borne by the executing agency.

[21] The GRC will consist of the following persons (i) Commissioner of Local Government of the Province as Chairman, (ii) Divisional Secretary of the area; (iii) Chairman of the respective pradeshiya sabha; (iv) representative of nongovernment organizations and/or community based organizations working in the area as nominated by CLG; (v) Member of clergy of pradeshesiya area; (vi) Chairman of Samatha mandal; (vii) Grama Niladhari of the area; (vii) Social Safeguard and gender Manager - as Member Secretary of the GRC. The functions of the local GRC are as follows: (i) resolve problems quickly and provide support to affected persons arising from various issues including environmental and social issues.

# VI. INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

## A. Implementation Arrangements

77. The MPCLG is the executing agency. A National Steering Committee, headed by the Secretary of MPCLG, will provide policy guidance to the project. A ministerial committee, also headed by the Secretary of MPCLG, will be responsible for decisions on overall approvals and operational policies of the project.

78. A PMU in the MLGPC, headed by a Project Director, will be responsible for overall coordination, management, administration, project implementation, monitoring, and supervision. The PMU will function as the project office of the executing agency, will be in-charge of subproject appraisal and approval, and will ensure compliance with ADB loan covenants. An Environment Safeguards Officer (PMU ESO) will have the following responsibilities: (i) support project director in addressing all environment-related safeguards issues of the project; (ii) implement the EARF; (iii) monitor physical and on-physical activities under the Project; (iv) monitor implementation of safeguards plans; (v) guide the SPCUs as and when necessary; and (vi) endorse and/or submit periodic monitoring reports[22] received from SPCU to the PMU , project director, who will then submit these to ADB. It will also coordinate with national and state agencies to resolve inter-departmental issues, if any.

79. The PMU will be assisted by PMC Safeguard Specialist (PMC SS). The PMC SS will (i) review and finalize all reports in consultation with the PMU ESO; (ii) provide project management support, (iii) assure the technical quality of design and construction; (iv) review EIA/IEE/resettlement plan/indigenous peoples plan reports submitted by SPCUs; and (v) provide advice on policy reforms. In addition, the PMC SS will assist the PMU on the procurement needs and other project implementation aspects and shall play a central role in ensuring capacity building on environmental management of the PMU, contractors, and line departments through capacity development support and training.

80. SPCU in each of the seven provinces will take responsibility for supporting subproject preparation, screening and endorsement, procurement, implementation monitoring including quality control and assurance and ensuring safeguards compliance. It is essential that Provincial Councils provide clear guidance to the target *Pradeshiya Sabhas* in their development planning and subproject identification process, to ensure coherence with the provincial physical development plans and facilitate collaboration among neighboring local authorities possibly for joint infrastructure development. Each SPCU will be headed by the Commissioner of Local Government who will be assigned as the Provincial Project Director and will be the administrative head. For each SPCU, a senior engineer will be appointed as the executive head and will be in-charge of the day-to-day activities of the unit. The Safeguard Manger of SPCU will be responsible for: (i) review of the EIAs/IEEs prepared by DSCs as well as the implementation of the EMP provided in each EIA/IEE; (ii) undertake surveys and record their observations throughout the construction period to ensure that safeguards and mitigation measures are provided as intended; (iii) implement and monitor safeguards compliance activities, public relations activities, gender mainstreaming activities and community participation activities; (iv)

[22] The monitoring report will focus on the progress of implementation of the IEE/EIA and EARF, issues encountered and measures adopted, follow-up actions required, if any, as well as the status of compliance with subproject selection criteria, and relevant loan covenants.

obtain statutory clearances from government agencies/other entities; and (v) coordinate for obtaining ROW clearances with related provincial and national agencies.

81. Environment Specialists will also be appointed as part of the DSC teams to (i) prepare IEEs in the detailed design stage; (ii) assist in the monitoring of EMP during construction stage; and (iii) prepare EIAs/IEEs for new subprojects, where required to comply with national law and/or ADB procedure.

## B. Institutional Capacity Development Program

82. The PMC SS will be responsible for training of PMU and SPCUs staff on environmental awareness and management in accordance with both ADB and government requirements. Specific modules customized for the available skill set shall be devised after assessing the capabilities of the target participants and the requirements of the project. The entire training will cover basic principles of environmental assessment and management; mitigation plans and programs, implementation techniques, monitoring methods and tools. Typical modules that will be present for the training session would be as follows: (i) sensitization; (ii) introduction to environment and environmental considerations in urban development projects; (iii) review of IEEs and integration into the subproject detailed design; (iv) improved coordination within nodal departments; and (v) monitoring and reporting system. The proposed training program along with the frequency of sessions is presented in **Table 5**.

**Table 2: Training Program for Environmental Management**

| Program | Description | Participants | Form of Training | Duration/ Location | Conducting Agency |
|---|---|---|---|---|---|
| **A. Pre-Construction Stage** | | | | | |
| Awareness Workshop | Awareness of requirements of environmental safeguard s in design, execution and managing the assets created under the project including procedures to be followed and approvals to be obtained. | Senior officers of MPCLG, NSC members and elected representatives of *Pradeshiya Sabhas* | Workshop | ½ day | PMU with support of PMC and ADB (SLRM) |
| Sensitization Workshop | Introduction to Environment: Basic Concept of environment Environmental Regulations and Statutory requirements as per Government and ADB | *Pradeshiya Sabhas*, SPCU Staff | Workshop | ½ Working Day | SPCU, DSC, PMU |
| Session I | | | | | |
| Module I | Introduction to Environment: Basic Concept of environment Environmental Regulations and Statutory requirements | *Pradeshiya Sabhas*, SPCU Staff | Lecture | ½ Working Day | SPCU, DSC, PMU |

| Program | Description | Participants | Form of Training | Duration/ Location | Conducting Agency |
|---|---|---|---|---|---|
| | as per Government and ADB | | | | |
| Module II | Environmental Considerations in Urban Development Projects:<br>Environmental components affected by urban development in construction and operation stages<br>Activities causing pollution during construction and operation stages<br>Environmental Management Good Practices in Urban Infrastructure Projects | *Pradeshiya Sabhas*, SPCU Staff | Workshop | | SPCU, DSC, PMU |
| Module III | Review of IEE and its Integration into Designs:<br>IEE Methodology<br>Environmental Provisions in the EMPs<br>Implementation Arrangements<br>Methodology of Assessment of Pollution Monitoring<br>Methodology for site selection of burrow areas, waste disposal areas etc. | *Pradeshiya Sabhas*, SPCU Staff | Lecture and Field Visit | ½ Working Day | SPCU, DSC, PMU |
| Module IV | Improved Coordination with other Institutions:<br>Overview of the Project<br>Environmental and Social Impacts<br>Statutory Permissions<br>Procedural Requirements<br>Cooperation and Coordination with other Institutions.<br>Requirement of target setting, team work and team building | *Pradeshiya Sabhas*, SPCU Staff | Lecture and/or Interactive Sessions | | SPCU, DSC, PMU |
| Module V | Special Issues in the Project<br>Bio-Diversity Assessment and Conservation<br>Geomorphological Assessment and Soil and Erosion Protection | *Pradeshiya Sabhas*, SPCU Staff | Lecture | ½ Working Day | SPCU, DSC, PMU |

| Program | Description | Participants | Form of Training | Duration/ Location | Conducting Agency |
|---|---|---|---|---|---|
| | Statutory Permissions – Procedural Requirements Consultation and Counseling | | | | |
| | Working out responsibility chart and plan of action | | | ½ Working Day | |
| **B. Construction Stage** | | | | | |
| Session II | | | | | |
| Module VI | Role during Construction Roles and Responsibilities of officials/ contractors/ consultants towards protection of environment Implementation Arrangements Monitoring mechanisms Introducing necessities of auditing, checks and balances | *Pradeshiya Sabhas*, SPCU Staff | Lecture and/or Interactive Sessions | ½ Working Day | SPCU, DSC, PMU |
| Module VII | Monitoring and Reporting System | *Pradeshiya Sabhas*, SPCU Staff | Lecture and/or Interactive Sessions | ½ Working Day | SPCU, DSC, PMU |

ADB = Asian Development Bank, DSC = Design and Supervision Consultants, MPCLG = Ministry of Provincial Councils and Local Government, PMU = project management unit, SLRM = Sri Lanka Resident Mission, SPCU = subproject coordination unit.

## C. Staffing Requirement and Budget

83. The costs for environmental safeguard activities which are responsibilities of the PMC and DSC are included in respective consultant packages. The cost of mitigation measures during construction stage will be incorporated into the contractor's costs. Thus, remaining costs related to environmental safeguards cover the following activities:

(i) Conduct of IEE or EIA studies, preparing and submitting reports and public consultation and disclosure;
(ii) EPL applications, if required;
(iii) Conduct of environmental monitoring for baseline data generation and long-term surveys along with GIS based mapping and infrastructure system;
(iv) Replacement and maintenance of trees, if required; and
(v) Conduct of environmental capacity-building lectures and workshops for creating awareness.

84. The indicative costs of these various inputs are shown in **Table 7**.

**Table 6: Indicative Cost of EARF Implementation**

| Item | Quantity | Unit Cost (US$) | Sub-total Cost (US$) | Source of Funds |
|---|---|---|---|---|
| **Project Cost - Environment** | | | | |
| IEE – filing fee and other government fees | 25 | $1,000 | $25,000 | Project cost – Environment - PMU (to be paid under incremental administration cost) |
| EIA - filing fee and other government fees | 10 | $2,000 | $20,000 | |
| Environmental Protection License - filing fee and other government fees | Lump sum per province (7 provinces) | $1,000 | $7,000 | |
| **Subtotal** | | | **$52,000** | |
| **Administrative Cost** | | | | |
| (i) Public Consultations | Lump sum per province (7 provinces) | $1,000 | $7,000 | Project Cost - PMU Costs (to be paid under incremental administration cost) |
| (ii) Environmental Monitoring | | | | |
| (a) Design Stage to establish baseline environmental data | Lump sum per province (7 provinces) | $3,000 | $21,000 | Project Cost - PMU Costs (to be done under the guidance of PMC / SPCU by SPCU staff and accounted under incremental administration cost. |
| (b) Construction Phase | | - | - | Civil Works Contractor Costs |
| (c) O&M | | - | - | *Pradeshiya Sabhas'* cost |
| (iii) Landscaping and tree-planting | Lump sum per province (7 provinces) | $2, 000 | $14,000 | Civil Works Contractor Costs |
| (iv) Capacity Building Expenses | Lump sum per province (7 provinces) | $1,000 | $7,000 | On job training is done by PMC / DSC - Any other workshops and/or sessions on these will be under Project Cost - PMU Costs and accounted under Capacity Building expenditure. |

## VII. MONITORING AND REPORTING

85. The PMU will continue to monitor and measure the progress of EMP implementation. The monitoring activities will be corresponding with the subproject's risks and impacts and will be identified in the EIAs/IEEs for the subprojects. The PMU and SPCUs will continue to undertake site inspections, document review to verify compliance with the EMP and progress toward the final outcome and recording information of the work, deviation of work components from original scope.

86. DSC will submit monthly monitoring and implementation reports to SPCU, who will take follow-up actions, if necessary. SPCU will submit the quarterly monitoring and implementation reports to PMU who will then submit to the project director. The PMU will submit semi-annual

monitoring reports to ADB. The suggested monitoring report format is in **Appendix 9**. Project budgets will reflect the costs of monitoring and reporting requirements. For subprojects likely to have significant adverse environmental impacts during operation, reporting will continue at the minimum on an annual basis. Monitoring reports will be posted in a location accessible to the public.

87. For projects likely to have significant adverse environmental impacts, the executing agency will retain qualified and experienced external experts to verify its monitoring information. The executing agency will document monitoring results, identify the necessary corrective actions, and reflect them in a corrective action plan. The executing agency, in each quarter, will study the compliance with the action plan developed in the previous quarter. Compliance with loan covenants will be screened by the executing agency.

88. ADB will review project performance against the executing agency's commitments as agreed in the legal documents. The extent of ADB's monitoring and supervision activities will be commensurate with the project's risks and impacts. Monitoring and supervising of social and environmental safeguards will be integrated into the project performance management system. ADB will monitor projects on an ongoing basis until a project completion report is issued. ADB will carry out the following monitoring actions to supervise project implementation:

(i) conduct periodic site visits for projects with adverse environmental or social impacts;
(ii) conduct supervision missions with detailed review by ADB's safeguard specialists/officers or consultants for projects with significant adverse social or environmental impacts;
(iii) review the periodic monitoring reports submitted by executing agency to ensure that adverse impacts and risks are mitigated as planned and as agreed with ADB;
(iv) work with executing agency to rectify to the extent possible any failures to comply with their safeguard commitments, as covenanted in the legal agreements, and exercise remedies to re-establish compliance as appropriate; and
(v) prepare a project completion report that assesses whether the objective and desired outcomes of the safeguard plans have been achieved, taking into account the baseline conditions and the results of monitoring.

## Appendix 1: Sri Lanka Standards Institute Applicable Standards

### බීමට සුදුසු ජලය සඳහා තිබිය යුතු විශේෂිත ලක්ෂණ

*(ප්‍රථම මුද්‍රණය 614 - 1983)*

පළමුවන සංශෝධන - රසායනික සහ භෞතික අවශ්‍යතාවයන්

| ලාක්ෂණික ගුණ | සීමා උපරිම අවශ්‍යතා | තිබිය හැකි උපරිම අවශ්‍යතා |
|---|---|---|
| pH | අඩංගු 7.0 - 8.5 | අඩංගු 6.5 - 9 |
| පාට | අඩංගු 5 | අඩංගු 30 |
| ගඳ | පිලිකුල් නැති | පිලිකුල් නැති |
| රස | පිලිකුල් නැති | පිලිකුල් නැති |
| ඝෝරතාවය (මට ඝනිත ඒකට) | 2 - JTU | 8 - JTU |
| විද්‍යුත් සන්නායකතාවය | 750 uS/cm | 3500 uS/cm |
| ක්ලෝරයිඩ් (Cl) | 200 mg/L | 1200 mg/L |
| නිදහස්ව පවතින ක්ලෝරීන් (Cl) | - | 0.2 mg/L |
| ඛාෂ්මිකතාවය (as CaCO) | 200 mg/L | 400 mg/L |
| ඇමෝනියා නිදහස් | - | 0.06 mg/L |
| ඇමෝනියා ඇල්බියුමින් | - | 0.15 mg/L |
| නයිට්‍රේට් (as N) | - | 10 mg/L |
| නයිට්‍රයිට් (as N) | - | 0.01 mg/L |
| ෆ්ලෝරයිඩ් (as F) | 0.6 mg/L | 1.5 mg/L |
| පොස්ෆරස් - එකතුව (PO) | - | 2 mg/L |
| මුළු ඝන ද්‍රව්‍ය | 500 mg/L | 2000 mg/L |
| කැල්සියම් එකතුව (as CaCO) | 250 mg/l | 600 mg/L |
| යකඩ එකතුව (as Fe) | 0.3 mg/L | 1 mg/L |
| සල්ෆේට් | 200 mg/L | 400 mg/L |
| සෝඩියම් | 100 mg/L | 240 mg/L |
| මැග්නීසියම් | 30 - 150 ★ | 150 mg/L |
| ටැන් | 0.05 mg/L | 1.5 mg/L |
| මැංගනීස් | 0.05 mg/L | 0.5 mg/L |
| කුප්පාගාගම් | 5 mg/L | 15 mg/L |
| ඇලුමිනියම් | - | 0.2 mg/L |
| ආසනික් | - | 0.05 mg/L |
| කැඩ්මියම් | - | 0.005 mg/L |
| සයනයිඩ් | - | 0.05 mg/L |
| ඊයම් | - | 0.05 mg/L |
| රසදිය | - | 0.001 mg/L |
| සෙලේනියම් | - | 0.01 mg/L |
| ක්‍රෝමියම් | - | 0.05 mg/L |
| ඇනායනික් පිරිසිදු කරන ද්‍රව්‍ය (MBAS-LAS ලෙස) | 0.2 mg/L | 1 mg/L |
| ෆීනොලික් සංයෝග (ෆීනෝලික් OH ලෙස) | 0.001 mg/L | 0.002 mg/L |
| තෙල් සහ ග්‍රීස් | - | 1 mg/L |
| කෘමිනාශක මාත්‍රා | (WHO සහ FAO අවශ්‍යතා විමර්ශණය කරන්න) | |
| රසායන ඔක්සිජන් ඉල්ලුම (COD) | - | 10 mg/L |

★ සල්ෆේට් ප්‍රමාණය අඩු බලපායි. (සල්ෆේට් 250 mg/L සඳහා උපරිම mg ප්‍රමාණය 30 mg/L වන අතර අඩු සල්ෆේට් අගයන් සඳහා වැඩි mg ප්‍රමාණයක් තිබිය හැකිය)

## English Translation:

Standards for Potable Water
Physical and Chemical Requirements
According to SLS 614 : 1983

| 1. Physical Requirements | | | |
|---|---|---|---|
| **Serial No.** | **Characteristics** | **Maximum Desirable Level** | **Maximum Permissible Level** |
| 1 | Colour | 5 Units | 30 Units |
| 2 | Odour | Unobjectionable | Unobjectionable |
| 3 | Taste | Unobjectionable | Unobjectionable |
| 4 | Turbidity | 2 Jackson Turbidity Units | 8 Jackson Turbidity Units |

| 2. Chemical Requirements (Basic) | | | |
|---|---|---|---|
| **Serial No.** | **Substance or Characteristics** | **Maximum Desirable Level** | **Maximum Permissible Level** |
| 1 | pH range | 7.0 to 8.5 | 6.5 to 9.0 |
| 2 | Electrical conductivity | 750 µs/cm | 3500 µs/cm |
| 3 | Chloride (as Cl) | 200 mg/l | 1200 mg/l |
| 4 | Free residual chlorine (as $Cl_2$) | | 0.2 mg/l |
| 5 | Alkalinity (total as $CaCO_3$) | 200 mg/l | 400 mg/l |
| 6 | Free Ammonia | | 0.06 mg/l |
| 7 | Albuminoid Ammonia | | 0.15 mg/l |
| 8 | Nitrate (as N) | | 10 mg/l |
| 9 | Nitrite (as N) | | 0.01mg/l |
| 10 | Fluoride (as F) | 0.6 mg/l | 1.5 mg/l |
| 11 | Total phosphates (as $PO_4$) | | 2.0 mg/l |
| 12 | Total residue | 500 mg/l | 2000 mg/l |
| 13 | Total hardness (as $CaCO_3$) | 250 mg/l | 600 mg/l |
| 14 | Total Iron (as Fe) | 0.3 mg/l | 1.0 mg/l |
| 15 | Sulphate (as $SO_4$) | 200 mg/l | 400 mg/l |

## Permissible Noise Levels in Accordance with Noise Control Regulations

Maximum Permissible Noise Levels (as i«T) at Boundaries of the land in which the noise source is located shall not exceed the limits set out below.

| **Area** | **$L_{Acq}$ TdB (A)** | |
|---|---|---|
| | **Day Time** | **Night Time** |
| Low Noise (Pradeshiya Sabha area) | 50 | 45 |
| Medium Noise (Municipal Council/Urban | **63*** | 50 |
| Council area) | | |
| High Noise (EPZZ of BOI & Industrial | 70 | 60 |
| Estates approved under part IVC of the NEA | | |
| Silent Zone (100 m from the boundary | 50 | 45 |
| of a courthouse, hospital, public library, | | |
| school, zoo, sacred areas and areas | | |
| set apart for recreation or | | |
| environmental purposes) | | |

Provided that the noise level should not exceed 60 dB (A) inside existing houses, during day time.

Maximum permissible Noise levels at Boundaries of the land in which the source of noise is located in Lazo T for construction activities.

### Construction Activities

$L_{,ca}$ T, dB (A)

| Day Time | Night time |
|---|---|
| 75 | 50 |

The following noise levels will be allowed where the background noise level exceed or is marginal to the given levels in the above table.

| | | |
|---|---|---|
| a) | For low noise areas in which the background noise level exceeds or is marginal to the given level | Pleasured Background Noise level + 3dB (A) |
| b) | For medium noise areas in which the background noise level exceeds or is marginal to the given level | Measured Background Noise level + 3dB (A) |
| c) | For silent zone in which the background noise level exceeds or is marginal to the given level | Measured Background Noise Level + 3dB (A) |

### ADB SPS Requirements

During the design, construction, and operation of the project the PMU and PIUs will apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines. These standards contain performance levels and measures that are normally acceptable and applicable to projects. When Government of Sri Lanka regulations differ from these levels and measures, the PMU and SPCU will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of

specific project circumstances, the PMU and PIUs will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS.

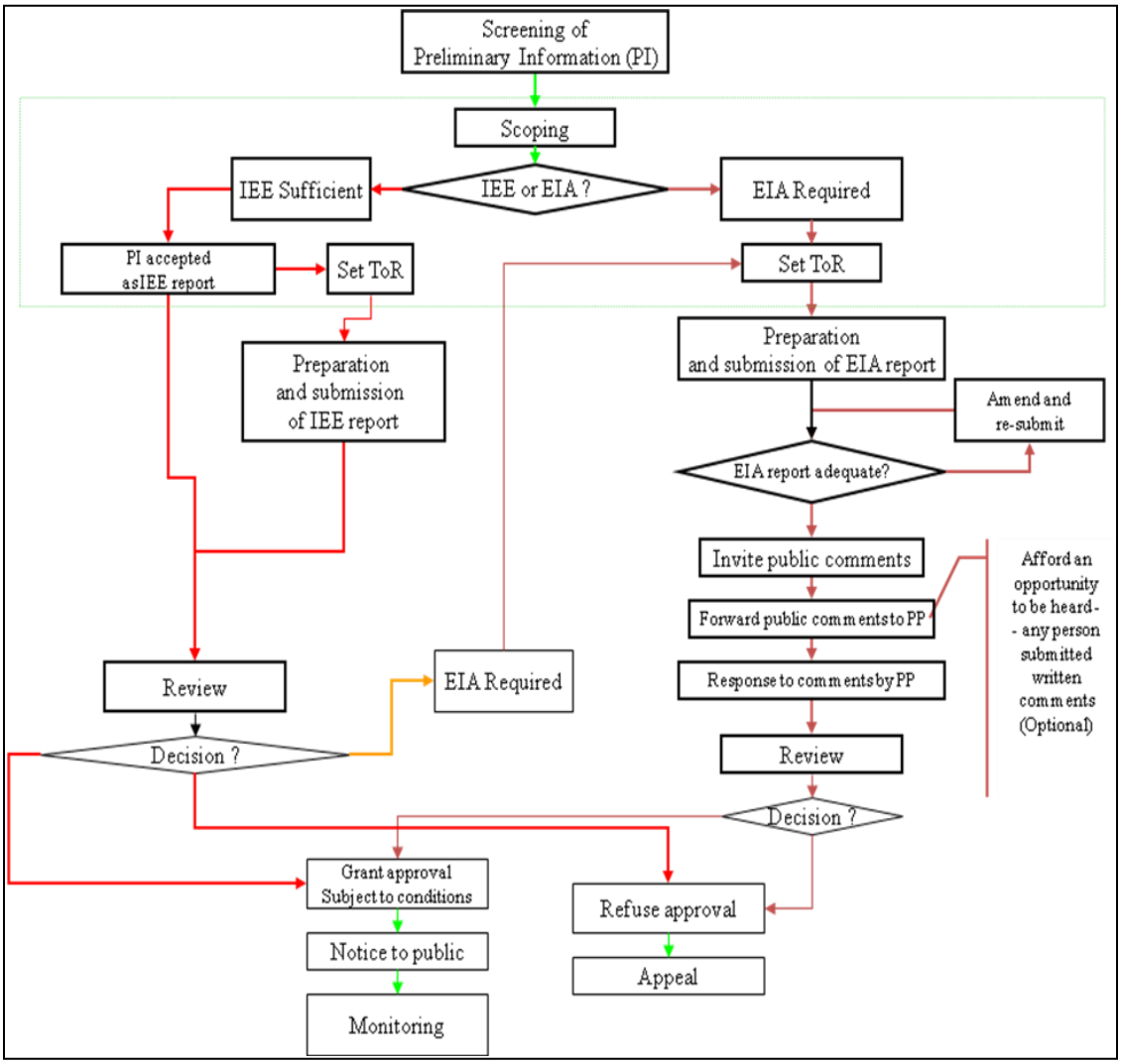
**WHO Ambient Air Quality Guidelines**

| Table 1.1.1: WHO Ambient Air Quality Guidelines[7,8] | | |
|---|---|---|
| | Averaging Period | Guideline value in µg/m³ |
| **Sulfur dioxide ($SO_2$)** | 24-hour<br><br><br>10 minute | 125 (Interim target-1)<br>50 (Interim target-2)<br>20 (guideline)<br>500 (guideline) |
| **Nitrogen dioxide ($NO_2$)** | 1-year<br>1-hour | 40 (guideline)<br>200 (guideline) |
| **Particulate Matter $PM_{10}$** | 1-year<br><br><br><br>24-hour | 70 (Interim target-1)<br>50 (Interim target-2)<br>30 (Interim target-3)<br>20 (guideline)<br><br>150 (Interim target-1)<br>100 (Interim target-2)<br>75 (Interim target-3)<br>50 (guideline) |
| **Particulate Matter $PM_{2.5}$** | 1-year<br><br><br><br>24-hour | 35 (Interim target-1)<br>25 (Interim target-2)<br>15 (Interim target-3)<br>10 (guideline)<br><br>75 (Interim target-1)<br>50 (Interim target-2)<br>37.5 (Interim target-3)<br>25 (guideline) |
| **Ozone** | 8-hour daily maximum | 160 (Interim target-1)<br>100 (guideline) |

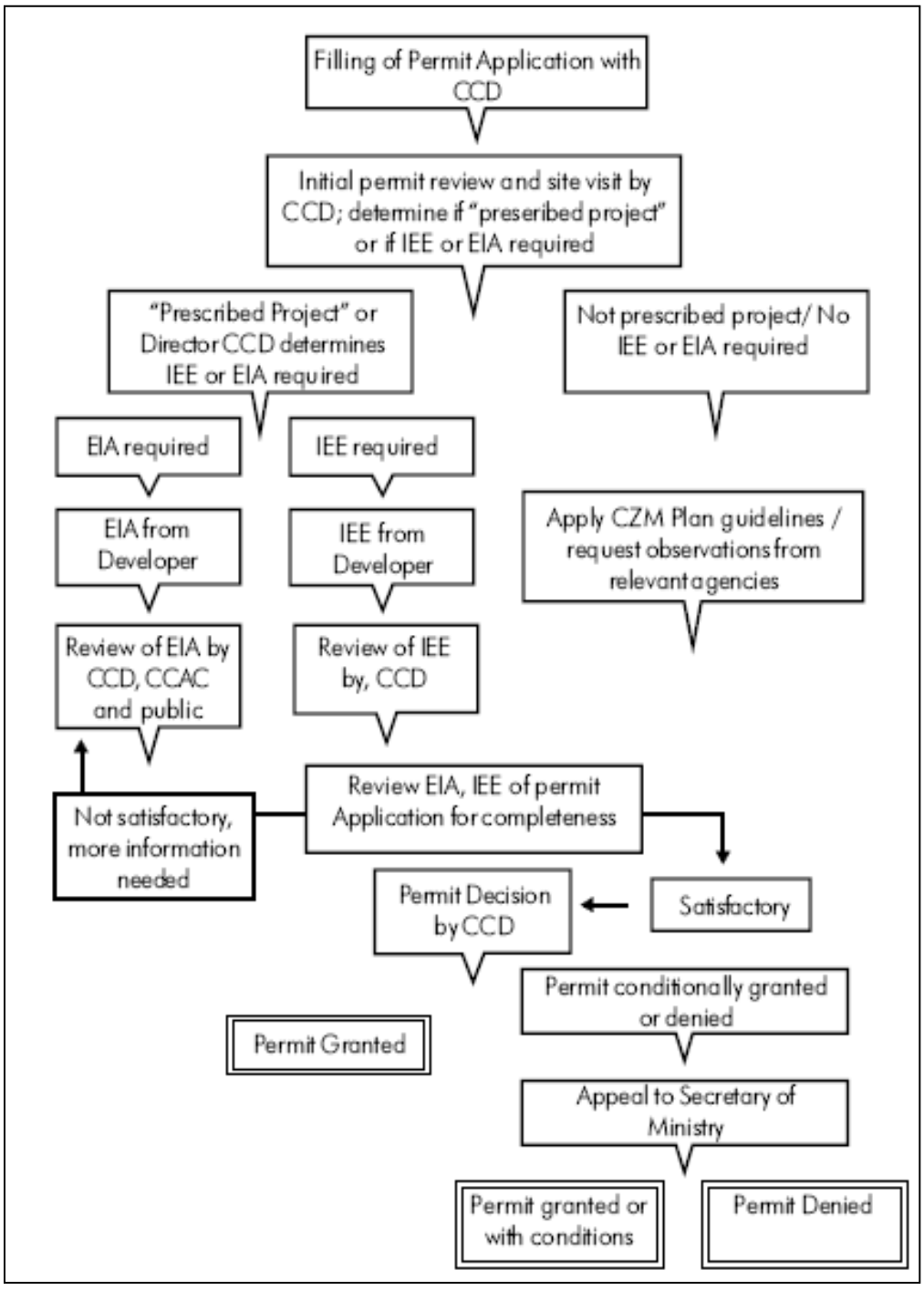
**World Bank Group's EHS Noise Level Guidelines**

| Table 1.7.1- Noise Level Guidelines[54] | | |
|---|---|---|
| | One Hour $L_{Aeq}$ (dBA) | |
| Receptor | Daytime 07:00 - 22:00 | Nighttime 22:00 - 07:00 |
| Residential; institutional; educational[55] | 55 | 45 |
| Industrial; commercial | 70 | 70 |

## Appendix 2: Procedure for Obtaining Government Environmental Clearance



## Appendix 3: Procedure for Obtaining Permit from Coastal Conservation Department



## Appendix 4: Wetlands of International Importance in Sri Lanka

| | Name | Area (hectares) | Location | Province/District | Description |
|---|---|---|---|---|---|
| 1 | Annaiwilundawa Tanks Sanctuary | 1,397 | 07°42'N 079°49'E | Northwetern Province | An ancient system of human-made cascading tanks or reservoirs, ranging between 12 and 50 hectares each, dating back to the 12th century, which help to sustain traditional paddy fields in the area as well as islets of natural vegetation. In addition to being unique to the bio-geographical region, the site harbors quite a few species of threatened fish, amphibians, birds, mammals, and especially reptiles and supports up to 40% of the vertebrate species found in Sri Lanka. The system serves as an important refuge for migratory birds and also supports about 50% of the country's freshwater fish species, including at least three endemic species. Only 3 to 4 meters deep, it is a highly productive wetland with an array of zooplankton and phytoplankton, which also makes it extremely important for migratory fish. The tanks store water, in this dry region, for irrigation purposes, and also play a major role in flood control, aquifer recharge, retention of pollutants and sediments, and nutrient export. Local communities have practiced sustainable traditional farming and fishing since ancient times, but extension of prawn (shrimp) farms in surrounding areas has resulted in mangrove destruction and pollution and eutrophication caused by waste water releases; other potential threats derive from the spread of two species of alien invasive fish and four of plants and from the use of |

| | Name | Area (hectares) | Location | Province/District | Description |
|---|---|---|---|---|---|
| | | | | | chemical fertilizers and pesticides in nearby coconut plantations. |
| 2 | Bundala | 6,210 | 06º10'N 081º12'E | Southern Province | Four shallow, brackish lagoons and saltpans interconnected by channels with associated marshes, dunes and scrub. It is the most important wintering site in southern Sri Lanka for migratory shorebirds, regularly holding over 15,000 individuals of various species, and provides habitat for rare and threatened waterbird species. Human activities include commercial salt extraction, subsistence fishing, wildlife tourism, livestock grazing, and firewood collection. |
| 3 | Kumana Wetland Cluster | 19,011 | 06°37'N 081°44'E | Southeast Province – Ampara District | The Ramsar site falls within two existing protected areas Kumana National Park, and the Panama-Kudumbigala Sanctuary. Located South-east of Sri Lanka, this site consists of a diversity of coastal wetland habitats, including lagoons, estuaries, irrigation reservoirs, mangroves, salt marshes, interspersed with sand dune, scrubland and forest vegetation. The site provides excellent feeding and resting habitats for a large number of threatened wetland species, including three turtle species such as the green turtle (*Chelonia mydas*), loggerhead turtle (*Caretta caretta*), and the olive ridley turtle (*Lepidochelys olivaceae*). Other threatened species include the globally vulnerable mugger crocodile (*Crocodylus palustris*), bird species like the vulnerable lesser adjutant (*Leptoptilus javanicus*), and mammals such as the endangered |

| | Name | Area (hectares) | Location | Province/District | Description |
|---|---|---|---|---|---|
| | | | | | fishing cat (*Prionailurus viverrinus*). The productive coastal wetlands support a thriving near-shore fishery that includes commercially important crustaceans such as *Penaeus spp*., and *Macrobrachium spp.*, and also offer refuge for their juvenile stages. Locals engage in lagoon fishing and rice cultivation, and also depend on seasonal non-timber forest products such as woodapple fruits. The site is famous for its historical values. Around 200 B.C., the area belonged to an ancient irrigation civilization. Caves were occupied by Buddhist monks as far back as the 1st century B.C. with a few caves being famous for their ancient rock inscriptions and paintings. Threats to the site include disturbance by increasing visitor numbers, increased siltation around lagoons due to cattle grazing while surrounding areas face the problem of illegal logging, poaching and excessive use of chemicals for agriculture. The Department of Wildlife Conservation, under the Fauna and Flora Protection Ordinance of Sri Lanka is directly responsible for managing this diverse and culturally rich wetland. |
| 4 | Maduganga | 915 | 06°18'N 080°03'E | Southern Province | A mangrove lagoon joined to the sea by a narrow canal and containing 15 islands of varying size, some of which are inhabited. It is formed of two shallow waterbodies, Maduganga and smaller Randombe Lake, connected by two narrow channels. On the islands and shores relatively undisturbed mangrove vegetation contains a rich biodiversity |

| | Name | Area (hectares) | Location | Province/District | Description |
|---|---|---|---|---|---|
| | | | | | qualifying the wetland for 7 Criteria of International Importance. Many globally/nationally endangered, endemic and rare species - e.g. *Shorea affinis*, an endemic and endangered plant, mugger crocodile (*Crocodylus palustris*) vulnerable (IUCN Red Book) and CITES-listed purple-faced leaf monkey (*Trachypithecus vetulus*), endangered, estuarine crocodile (*Crocodylus porosus*), flapshell turtle (*Lissemys punctata*), indian python (*Python molurus*) find shelter here. The lagoon provides the breeding, spawning and fattening ground for many fish species and supports 1.2 % of the little green heron bio-geographical population. The cultural heritage is very prominent, with numerous ancient temples in the area and on the islands. Maduganga helps in flood control by storing water during monsoon rains and retains nutrient run-off from nearby cinnamon plantations. The major occupation of the local people is fishing and agriculture (cinnamon and coconut). Poaching of wild animals and waterfowl is unfortunately increasing, and extensive use of fertilisers and consequent abundant growth of invasive species, e.g. *Najas marinas* or *Annona glabra*, are factors of concern. |
| 5 | Vankalai Sanctuary | 4,839 | 08º56'N 079º55'E | Northwest Province – Mannar District | This Ramsar site consists of several ecosystems which range from arid-zone thorn scrubland, arid-zone pastures and maritime grasslands, sand dunes, mangroves, salt marshes, |

| | Name | Area (hectares) | Location | Province/District | Description |
|---|---|---|---|---|---|
| | | | | | lagoons, tidal flats, sea-grass beds and shallow marine areas. Due to the integrated nature of shallow wetland and terrestrial coastal habitats, this sanctuary is highly productive, supporting high ecosystem and species diversity. The site provides excellent feeding and living habitats for a large number of waterbird species, including annual migrants, which also use this area on arrival and during their exit from Sri Lanka. It harbors more than 20,000 water birds during the migratory season, including the northern pintail (*Anas acuta*), greater flamingo (*Phoenicopterus roseus*) and the eurasian wigeon (*Anas penelope*), of which Vankalai Sanctuary supports 1% of the population of the latter two species. The site's coastal and marine ecosystems are important for over 60 species of fish, marine turtles, and rare species such as dugongs (*Dugong dugon*). These ecosystems provide important spawning and feeding grounds for juvenile fish species such as trevally (*Caranx spp.*), snappers (Lutjanus spp.), and also host a number of threatened species, such as the green turtle (*Chelonia mydas*), dugongs (*Dugong dugon*), and saltwater crocodiles (*Crocodylus porosus*). Vankalai Sanctuary sustains diverse food chains, while also sustaining the livelihoods of fisheries-dependent communities in the area. Civil unrest has kept human activity out of this region for nearly two |

| | Name | Area (hectares) | Location | Province/District | Description |
|---|---|---|---|---|---|
| | | | | | decades, hence there are only few permanent settlements in the area. Locals engage in small-scale livestock grazing, subsistence and commercial fishing. Part of the Vankalai Sanctuary is an archaeological site since it is partly located in the major port of ancient Sri Lanka, dated from 6th century BC to 13th century AD. The Department of Conservation is directly responsible for managing this diverse and culturally rich wetland. |
| 6. | Wilpattu Ramsar Wetland Cluster | 165800 | 08º32'27"N 080º10'01"E. | North Western Province | Wilpattu Ramsar Wetland Cluster. 02/02/2013; North Western, North Central provinces; 165,800 ha; National Park. The site encompasses all of Wilpattu National Park (Willu-pattu meaning 'Land of Lakes'), declared in 1938. Some 205 water bodies, both natural and manmade, were identified within the boundary of the park. A unique feature is the numerous 'villus' which are natural, sand-rimmed water basins ranging between 10 to 160 hectares that are filled with rainwater. The varying salt content of the villus offer an ideal habitat for a wide range of resident and migrant wildlife species, including the endangered Asia Elephant Elephas maximus, the vulnerable Lesser Adjutant (Leptoptilos javanicus) and the vulnerable freshwater crocodile Crocodylus palustris. Seagrass beds, mangroves, salt marshes, swamps and floodplain forests are also found and contribute to the area's rich biodiversity. Twenty-one endemic species of |

| | Name | Area (hectares) | Location | Province/District | Description |
|---|---|---|---|---|---|
| | | | | | vertebrates have been recorded at the site, including the endangered Sri Lankan Leopard (Panthera pardus ssp. Kotiya) and the Ceylon Swallow (Hirundo hyperythra). The site once supported a thriving agricultural civilization, demonstrated by its 68 archaeologically important sites. Currently, communities in the southeastern and western areas rely on commercial and subsistence fisheries, while those in other areas depend upon agriculture. Invasive aquatic species, logging, slash and burn agriculture threaten the site. Ramsar Site no. 2095. Most recent RIS information: 2013 |

Source: http://www.ramsar.org

## Appendix 5: Rapid Environmental Assessment (REA) Checklists

**Rapid Environmental Assessment (REA) Checklist (Buildings)**

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 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 |
|---|---|---|---|
| A. Project Siting<br>Is the project area adjacent to or within any of the following areas: | | | |
| Underground utilities | | | |
| Cultural heritage site | | | |
| Protected Area | | | |
| Wetland | | | |
| Mangrove | | | |
| Estuarine | | | |
| Buffer zone of protected area | | | |
| Special area for protecting biodiversity | | | |
| Bay | | | |
| B. Potential Environmental Impacts<br>Will the Project cause… | | | |
| Encroachment on historical/cultural areas? | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| Encroachment on precious ecology (e.g. sensitive or protected areas)? | | | |
| Impacts on the sustainability of associated sanitation and solid waste disposal systems? | | | |
| Dislocation or involuntary resettlement of people? | | | |
| Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups? | | | |
| Accident risks associated with increased vehicular traffic, leading to loss of life? | | | |
| Increased noise and air pollution resulting from increased traffic volume? | | | |
| Occupational and community health and safety risks? | | | |
| Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation? | | | |
| Generation of dust in sensitive areas during construction? | | | |
| Requirements for disposal of fill, excavation, and/or spoil materials? | | | |
| Noise and vibration due to blasting and other civil works? | | | |
| Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction? | | | |
| Long-term impacts on local hydrology as a result of building hard surfaces in or near the building? | | | |
| 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 safety caused by fire, electric shock, or failure of the buildings safety features during operation? | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| Risks to community health and safety caused by management and disposal of waste? | | | |
| 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? | | | |

**Rapid Environmental Assessment (REA) Checklist (Urban Development)**

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 |
|---|---|---|---|
| A. Project Siting<br>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. Potential Environmental Impacts<br>Will the Project cause… | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| 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)? | | | |
| 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? | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| 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? | | | |

## Rapid Environmental Assessment (REA) Checklist (Water Supply)

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 |
|---|---|---|---|
| A. Project Siting<br>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. Potential Environmental Impacts<br>Will the Project cause… | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| pollution of raw water supply from upstream wastewater discharge from communities, industries, agriculture, and soil erosion runoff? | | | |
| impairment of historical/cultural monuments/areas and loss/damage to these sites? | | | |
| hazard of land subsidence caused by excessive ground water pumping? | | | |
| social conflicts arising from displacement of communities ? | | | |
| conflicts in abstraction of raw water for water supply with other beneficial water uses for surface and ground waters? | | | |
| unsatisfactory raw water supply (e.g. excessive pathogens or mineral constituents)? | | | |
| delivery of unsafe water to distribution system? | | | |
| inadequate protection of intake works or wells, leading to pollution of water supply? | | | |
| over pumping of ground water, leading to salinization and ground subsidence? | | | |
| excessive algal growth in storage reservoir? | | | |
| increase in production of sewage beyond capabilities of community facilities? | | | |
| inadequate disposal of sludge from water treatment plants? | | | |
| inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances and protect facilities? | | | |
| impairments associated with transmission lines and access roads? | | | |
| health hazards arising from inadequate design of facilities for receiving, storing, and handling of chlorine and other hazardous chemicals. | | | |
| health and safety hazards to workers from handling and management of chlorine used for disinfection, other contaminants, and biological and physical hazards during project construction and operation? | | | |
| dislocation or involuntary resettlement of people? | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups? | | | |
| noise and dust from construction activities? | | | |
| increased road traffic due to interference of construction activities? | | | |
| continuing soil erosion/silt runoff from construction operations? | | | |
| delivery of unsafe water due to poor O&M treatment processes (especially mud accumulations in filters) and inadequate chlorination due to lack of adequate monitoring of chlorine residuals in distribution systems? | | | |
| delivery of water to distribution system, which is corrosive due to inadequate attention to feeding of corrective chemicals? | | | |
| accidental leakage of chlorine gas? | | | |
| excessive abstraction of water affecting downstream water users? | | | |
| competing uses of water? | | | |
| increased sewage flow due to increased water supply | | | |
| increased volume of sullage (wastewater from cooking and washing) and sludge from wastewater treatment plant | | | |
| 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? | | | |

| Screening Questions | Yes | No | Remarks |
|---|---|---|---|
| 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? | | | |

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## Appendix 6: Outline of an ADB EIA or IEE Report

The generic table of contents of an ADB IEE or EIA report is provided below[1]. The difference between the IEE and ADB is the scope of the assessment. The order of dominance of the different sections may vary slightly depending on the assessment context.

**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 conducted. 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), 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, trans-boundary, 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;

[1] Directly from Footnote 1, Annex 1 to Appendix 1

(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 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 7: Outline of Due Diligence Report

Executive Summary
I. Introduction
    A. Background
    B. Objective of the Subproject
    C. Categorization and Justification for DDR
II. Subproject Description
    A. Present Status
    B. Need for the Subproject
    C. Components of the Subproject
III. Potential Impacts and Mitigation Measures
IV. Contractor Requirement for Environmental Management
V. Grievance Redress Mechanism
VI. Conclusion and Recommendations

Appendices:
REA Checklist
Location Map
Site Layout – showing proposed infrastructure, boundaries, and if any existing facilities/trees/etc.
Site Photographs

## Appendix 8: Sample Grievance Registration Form

*(To be available in Local Language)*

The _____Project welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

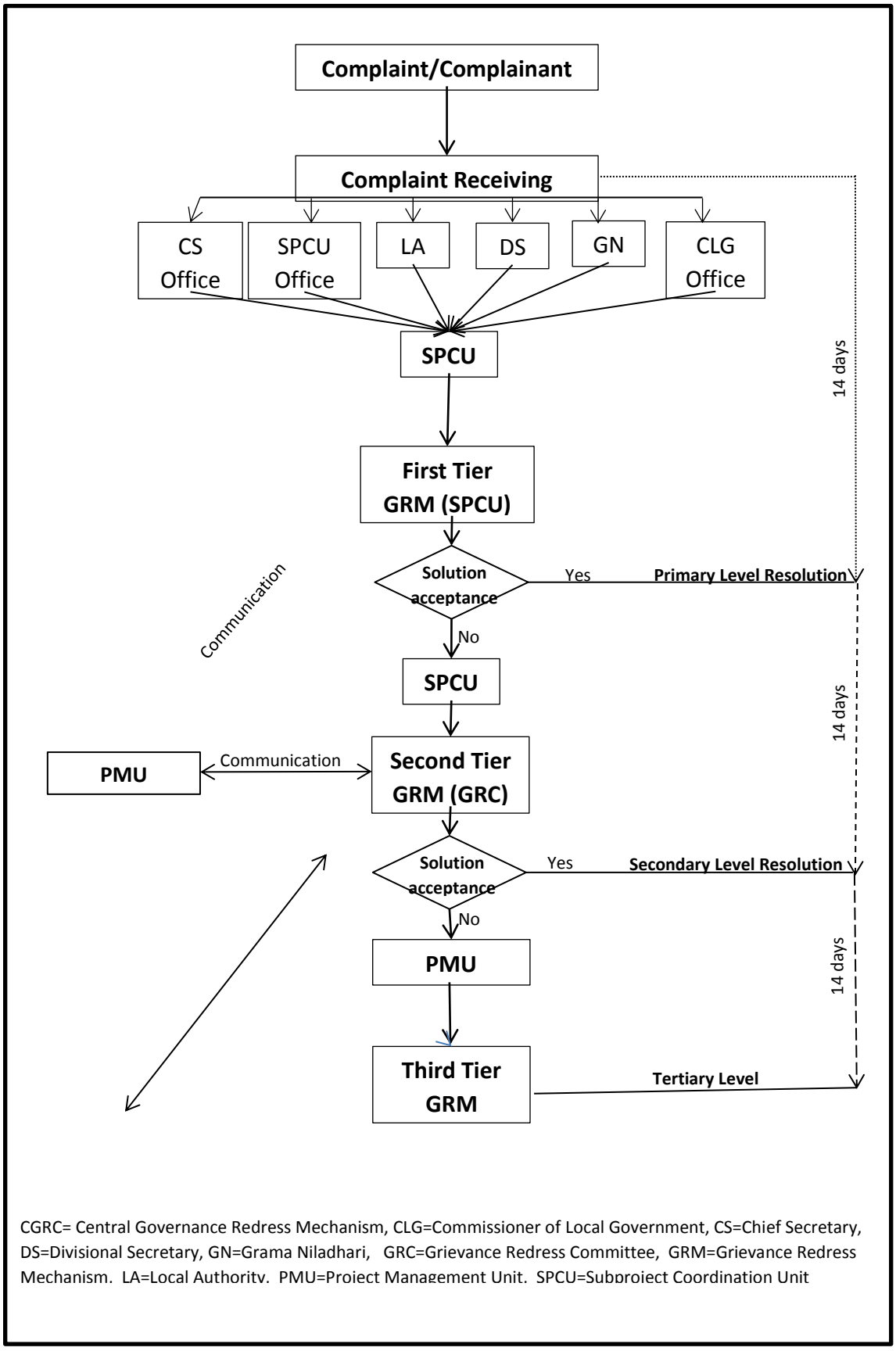
Shall you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing *(CONFIDENTIAL)* above your name. Thank you.

| | | | |
|---|---|---|---|
| Date | Place of registration | | |
| Contact Information/Personal Details | | | |
| Name: | | Gender: __Male ___ Female | Age: |
| Home Address | | | |
| Village / Town | | | |
| District | | | |
| Phone no. | | | |
| E-mail | | | |
| Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below:<br>If included as attachment/note/letter, please tick here: ___ | | | |
| How do you want us to reach you for feedback or update on your comment/grievance? | | | |

FOR OFFICIAL USE ONLY

| | | | |
|---|---|---|---|
| Registered by: (Name of Official registering grievance) | | | |
| Verified thru: | ___ Note/Letter | ___ E-mail | ___ Verbal/Telephonic |
| Reviewed by: (Names/Positions of Official(s) reviewing grievance) | | | |
| Action Taken: | | | |
| Whether Action Taken Disclosed: | | ____ Yes | ___ No |
| Means of Disclosure: | | | |

## Grievance Redressal Mechanism




CGRC= Central Governance Redress Mechanism, CLG=Commissioner of Local Government, CS=Chief Secretary, DS=Divisional Secretary, GN=Grama Niladhari, GRC=Grievance Redress Committee, GRM=Grievance Redress Mechanism, LA=Local Authority, PMU=Project Management Unit, SPCU=Subproject Coordination Unit

## Appendix 9: Environmental Monitoring Format

### SAMPLE Semi-Annual Environmental Monitoring Report Template

*This template must be included as an appendix in the EIA/IEE that will be prepared for the project. It can be adapted to the specific project as necessary.*

**Introduction**

- Overall project description and objectives
- Description of sub-projects
- Environmental category of the sub-projects
- Details of site personnel and/or consultants responsible for environmental monitoring
- Overall project and sub-project progress and status

| No. | Sub-Project Name | Status of Sub-Project | | | | List of Works | Progress of Works |
|---|---|---|---|---|---|---|---|
| | | Design | Pre-Construction | Construction | Operational Phase | | |
| | | ☐ | ☐ | ☐ | ☐ | | |
| | | ☐ | ☐ | ☐ | ☐ | | |
| | | ☐ | ☐ | ☐ | ☐ | | |

**Compliance status with National/ State/ Local statutory environmental requirements**

| No. | Sub-Project Name | Statutory Environmental Requirements | Status of Compliance | Action Required |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

**Compliance status with environmental loan covenants**

| No. (List schedule and paragraph number of Loan Agreement) | Covenant | Status of Compliance | Action Required |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**Compliance status with the environmental management and monitoring plan**

- Provide the monitoring results as per the parameters outlined in the EMP. Append supporting documents where applicable, including Environmental Site Inspection Reports.
- There should be reporting on the following items which can be incorporated in the checklist of routine Environmental Site Inspection Report followed with a summary in the semi-annual report send to ADB. Visual assessment and review of relevant site documentation during routine site inspection needs to note and record the following:
    - What are the dust suppression techniques followed for site and if any dust was noted to escape the site boundaries;
    - If muddy water was escaping site boundaries or muddy tracks were seen on adjacent roads;

- adequacy of type of erosion and sediment control measures installed on site, condition of erosion and sediment control measures including if these were intact following heavy rain;
- Are their designated areas for concrete works, and refuelling;
- Are their spill kits on site and if there are site procedure for handling emergencies;
- Is there any chemical stored on site and what is the storage condition?
- Is there any dewatering activities if yes, where is the water being discharged;
- How are the stockpiles being managed;
- How is solid and liquid waste being handled on site;
- Review of the complaint management system;
- Checking if there are any activities being under taken out of working hours and how that is being managed.

## Summary Monitoring Table

| Impacts (List from IEE) | Mitigation Measures (List from IEE) | Parameters Monitored (As a minimum those identified in the IEE should be monitored) | Method of Monitoring | Location of Monitoring | Date of Monitoring Conducted | Name of Person Who Conducted the Monitoring |
|---|---|---|---|---|---|---|
| **Design Phase** | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| **Pre-Construction Phase** | | | | | | |
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| | | | | | | |
| | | | | | | |
| **Construction Phase** | | | | | | |
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| | | | | | | |
| | | | | | | |
| **Operational Phase** | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

## Overall Compliance with CEMP/ EMP

| No. | Sub-Project Name | EMP/ CEMP Part of Contract Documents (Y/N) | CEMP/ EMP Being Implemented (Y/N) | Status of Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfactory) | Action Proposed and Additional Measures Required |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

**Approach and methodology for environmental monitoring of the project**

- Brief description on the approach and methodology used for environmental monitoring of each sub-project

**Monitoring of environmental Impacts on Project Surroundings (ambient air, water quality and noise levels)**

- Brief discussion on the basis for monitoring
- Indicate type and location of environmental parameters to be monitored
- Indicate the method of monitoring and equipment to be used
- Provide monitoring results and an analysis of results in relation to baseline data and statutory requirements

*As a minimum the results should be presented as per the tables below.*

**Air Quality Results**

| Site No. | Date of Testing | Site Location | Parameters (Government Standards) | | |
|---|---|---|---|---|---|
| | | | PM10 µg/m3 | SO2 µg/m3 | NO2 µg/m3 |
| | | | | | |
| | | | | | |
| | | | | | |

| Site No. | Date of Testing | Site Location | Parameters (Monitoring Results) | | |
|---|---|---|---|---|---|
| | | | PM10 µg/m3 | SO2 µg/m3 | NO2 µg/m3 |
| | | | | | |
| | | | | | |
| | | | | | |

**Water Quality Results**

| Site No. | Date of Sampling | Site Location | Parameters (Government Standards) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | pH | Conductivity µS/cm | BOD mg/L | TSS mg/L | TN mg/L | TP mg/L |
| | | | | | | | | |
| | | | | | | | | |

| Site No. | Date of Sampling | Site Location | Parameters (Government Standards) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | pH | Conductivity µS/cm | BOD mg/L | TSS mg/L | TN mg/L | TP mg/L |
| | | | | | | | | |

| Site No. | Date of Sampling | Site Location | Parameters (Monitoring Results) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | pH | Conductivity µS/cm | BOD mg/L | TSS mg/L | TN mg/L | TP mg/L |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**Noise Quality Results**

| Site No. | Date of Testing | Site Location | $LA_{eq}$ (dBA) (Government Standard) | |
|---|---|---|---|---|
| | | | Day Time | Night Time |
| | | | | |
| | | | | |

| Site No. | Date of Testing | Site Location | $LA_{eq}$ (dBA) (Monitoring Results) | |
|---|---|---|---|---|
| | | | Day Time | Night Time |
| | | | | |
| | | | | |

## SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

- Summary of follow up time-bound actions to be taken within a set timeframe.

## APPENDIXES

- Photos
- Summary of consultations
- Copies of environmental clearances and permits
- Sample of environmental site inspection report
- Other

## SAMPLE ENVIRONMENTAL SITE INSPECTION REPORT

Project Name
Contract Number

NAME: _____ DATE: _____
TITLE: _____ DMA: _____
LOCATION: _____ GROUP: _____

WEATHER CONDITION:
_____

INITIAL SITE CONDITION: _____

CONCLUDING SITE CONDITION:

Satisfactory _____ Unsatisfactory _____ Incident _____Resolved _____ Unresolved _____

INCIDENT:
Nature of incident:
_____

_____

Incident Issues

Resolution

| | | |
|---|---|---|
| Project Activity Stage | Survey | |
| | Design | |
| | Implementation | |
| | Pre-Commissioning | |
| | Guarantee Period | |

**Inspection**

| | |
|---|---|
| Emissions | Waste Minimization |
| Air Quality | Reuse and Recycling |
| Noise pollution | Dust and Litter Control |
| Hazardous Substances | Trees and Vegetation |

Site Restored to Original Condition Yes

Signature
_____

**Sign off**

_____ _____

**Name** **Name**
**Position** **Position**

## Appendix 10: Tentative List of Subprojects to be Implemented Under Additional Financing

**Component 1: Water Supply Schemes in CKD affected areas:**

| Province | S/No | Sub-Project Details | Covered DS Divisions | Population Served | CKD affected patients | Tentative Estimate (LKR Mn) |
|---|---|---|---|---|---|---|
| **North Central** | 1. | Extension to Uththupitiyafrom Kekirawa Water Supply Scheme | Thirappane | 1,200 | 12 | 70.08 |
| | 2. | Extension to Elagamuwa from Greater Dambulla Water Supply Scheme (Extension Main line length - 15 km) | Kekirawa | 3,000 | 24 | 97.00 |
| | 3. | Extention to Thirappane Surrounding area from Kekirawa Water Supply Scheme (Extension length - 16 km) | Thirappane | 4,000 | 34 | 80.00 |
| | 4. | Extension to Mahailukpallama from Kekirawa Water Supply Scheme (Extension length -12 km) | Kekirawa | 2,750 | 21 | 92.00 |
| | 5. | Extension to Bendiwewa from Polonnaruwa Water Supply Scheme(Extension length -18 km) | Thamankaduwa | 3,000 | 36 | 69.70 |
| | 6. | Capacity improvements to Minneriya WTP. | Hingurakgoda | 75,000 | 938 | 75.00 |
| | 7. | Capacity improvements to Nuwarawewa WTP | Mihinthale, Nuwaragampalatha East,Nuwaragampalatha Central | 125,000 | 1,248 | 160.00 |
| | 8. | Extension to Elagamuwa from Greater Dambulla Water Supply Scheme (Extension to internal distribution system by 100km) | Kekirawa | 3,000 | 24 | 175.00 |

| Province | S/No | Sub-Project Details | Covered DS Divisions | Population Served | CKD affected patients | Tentative Estimate (LKR Mn) |
|---|---|---|---|---|---|---|
| | 9. | Improvement Works to Ipalogama Treatment Plant (Kekirawa Water Supply Scheme) | Kekirawa | 100,000 | 2,500 | 145.36 |
| | 10. | Extension to Sewagama Canel - 3 from Polonnaruwa Water Supply Scheme (Extension length - 7.5 km) | Thamankaduwa | 2,500 | 45 | 66.68 |
| | 11. | Pipe Line Extension – Upto Thambala and development of existing WSS. | Thamankaduwa / Lankapura | 10,487 | 240 | 753.14 |
| | 12. | Extension and distribution improvements in Minneriya and Hingurakgoda. | Hingurakgoda | 75,000 | 938 | 114.00 |
| | 13. | Capacity Improvement Works to Tissawewa WSS & Treatment Plant | Nuwaragampalatha Central | 42,000 | 412 | 137.50 |
| | 14. | Uruwewa water supply scheme | Padaviya | 1,000 | 1,337 | 30.00 |
| | 15. | Abayapura water supply scheme | Padaviya | 2,500 | | 35.00 |
| | 16. | Thibiriwewa water supply scheme | Kebithigollawa | 2,750 | 1,053 | 35.00 |

| Province | No | Sub-Project Details | Covered DS Divisions | Population Served | CKD affected patients | Tentative Estimate (LKR Mn) |
|---|---|---|---|---|---|---|
| **North Western Province** | 1. | Completion work of Existing Ibbagamuwa water supply scheme | Ibbagamuwa | 17,250 | Not known | 380.00 |
| | 2. | Hiripitiya – Ganewaththa WSP (New Scheme) | Ganewatta | 16,161 | 83 | 378.00 |
| | 3. | Extension of Existing Nikaweratiya WSS To Nikaweratiya / Ambanpola - ( Approximate pipe length 62.5 Km) | Nikaweratiya / Ambanpola | 11,700 | 42 | 342.30 |
| | 4. | Extension of Existing Galgamuwa WSS ( Approximate pipe length 28 Km) | Galgamuwa | 3,400 | 28 | 262.00 |

| Province | No | Sub-Project Details | Covered DS Divisions | Population Served | CKD affected patients | Tentative Estimate (LKR Mn) |
|---|---|---|---|---|---|---|
| | 5. | Construction of water supply scheme at Karuwalagaswewa | Murukkuwattawana, Kudamadawachchiya, Karuwalagaswewa Tabbowa | 15900 | 162 | 275.00 |
| **Central** | 1. | Water Supply Extention to supply to Sigiriya, Kandalama & Kithulhitiyava rural areas. (extension pipe length 160 km) | Dambulla | 30,662 | 61 | 1,050.00 |
| | 2. | Water Supply extension to supply to Galewela, Inamaluwa&Dambulla rural areas (extension pipe length 153 km) | Dambulla | 9,072 | | |
| | 3. | Renovation and Augmentation of existing treatment plant Dambulla | Dambulla | Not relevant | | 45.00 |
| | 4. | Construction of Borehole, pump house, Chlorinators - New schemes (3 nos) | Matale | 400 | | 60.00 |

| Province | No | Sub Project Details | Covered DS Divisions | Population Served | CKD affected patients | Tentative Estimate (LKR Mn) |
|---|---|---|---|---|---|---|
| **Uva** | 1. | Diwulapalassa New scheme | Mahiyanganaya | 2,120 | 140 | 30.00 |
| | 2. | New Water Supply Scheme to supply water for rural villages of Thanamalvila & Hambagamuwa | Thanamalvila | 3,000 | Not identified | 1300 |
| | 3. | Rahathangama ,Kumaragama & Kukurampola pipe line Extension from Buttala WSS | Buttala | 8,480 | 66 | 175.50 |
| | 4. | Kumaragama Extension from Buttala WSS ( Total extension by No 3 & 4 is 69Km) | | | | |
| | 5. | Extension to Belaganwewa from Giradurukotte WSS (Extension length 47 Km) | Mahiyanganaya | 4,400 | 127 | 158.00 |
| | 6. | Rideemaliyadda New Schemes | Rideemaliyadda | 4,720 | 25 | 130.0 |

**Component 2 - Local Government Infrastructure Service Delivery Improvement**

Social, Environment and Economic Infrastructure like Water Supply, Sewerage, Solid Waste Management, Roads and Bridges, Weekly Fairs, Health and Maternity Centers etc. will be provided after selection based on the priority of the area.in 29 Local Authorities selected under Additional Financing.