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FRAMEWORK DEVELOPMENT AND INFRASTRUCTURE FINANCING TO SUPPORT PUBLIC PRIVATE PARTNERSHIPS

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ENVIRONMENTAL ASSESSMENT & MANAGEMENT FRAMEWORK (EAMF)

Executive Summary



18 July 2018



**Government of Sri
Lanka**

Ministry of Finance

**National Agency for
Public Private
Partnership**

CHAPTER 1: INTRODUCTION

Public-Private Partnerships (PPPs), although complex and time-consuming, are seen as one of the solutions that will provide value for money for projects that are well prepared and structured, where suitable. There are several constraints faced by the Government in executing a successful PPP program including: over-reliance on unsolicited proposals, multiple agencies with overlapping functions, poorly prepared projects have adversely affected recent PPP procurement, limited long-term debt and liquidity, legal framework not conducive for private sector investment, limited institutional capacity for PPPs. Limited ability to manage contingent liabilities.

The Government's recent economic policy framework (Vision 2025) features PPPs as an integral part. Vision 2025 highlights the Government's commitment to encourage PPPs to strengthen the country's growth framework. It identifies the importance of empowering the private sector and reducing reliance on public sector borrowing in the provision of public assets and services. Furthermore, the Government envisions expanding PPPs beyond the current sectors of transport and energy into health care, leisure, tourism, and education.

The project development objective and components

The Project Development Objective is to support the preparation of Public-Private Partnerships that will enable GOSL to utilize private sector finance.

Component A: Improving the Enabling Environment (US\$2.5 million)

This component aims to improve and strengthen the enabling environment for PPPs in Sri Lanka by building on the various PPP related support that has been previously provided by the World Bank and other IFIs/donors (e.g. USAID).

A.1 Establishing the Institutional environment for sustainability of PPPs. This subcomponent will strengthen the institutional framework to improve sustainability of the PPP program, by: (a) organizing and staffing NAPPP; (b) establishing institutional arrangements for the provision of long term infrastructure financing for PPPs and funding for project development with a focus on addressing the existing weaknesses in the infrastructure financing sphere; (c) establishing mechanisms to channel Viability Gap Funding (VGF) to improve financial viability of PPPs; (d) developing principles for the assessment of contingent liabilities arising from PPPs and (e) establishing and strengthening other key institutions which would contribute to the successful implementation of the PPP program, such as the establishment of PPP nodes in line agencies, and establishment of institutions critical in enhancement of the enabling environment such as procurement appeals committee and arbitration center. The establishment of these key institutions is expected to contribute towards the sustainability of the program.

A.2: PPP Capacity Building. Proposed activities will encompass capacity building for PPPs for both GoSL and private sector that is critical for successful implementation and sustainability of PPPs. This subcomponent will provide specific capacity building for NAPPP to carry out its functions, and training to acquire required skills. The programs will also focus on Government agencies, the Attorney General's department and National Planning Department. The project will provide specific training for agencies already involved in the PPP process as well as decision makers in Government, particularly Cabinet Appointed Negotiating Committees to facilitate the expeditious processing of the PPP transactions. The project will

also carry out capacity building for staff at central and provincial levels with focus on female Government staff. The capacity building program will also include the local private sector and the banking Industry for the imperative for the sustainability of the PPP Program.

A.3: Communications and Stakeholder Engagement for PPP. This component will support the development of a PPP communication strategy and private sector (and other stakeholders) engagement. Engaging stakeholders and having a robust communication strategy is seen as a critical element in ensuring successful implementation of PPPs that require buy-in from all stakeholders and general acceptability from the public. This subcomponent will support NAPPP in the development and implementation of a robust communication strategy intended to ensure that all stakeholders are adequately informed and engaged in the GoSL's PPP program and the program is sustainable. Through increased awareness, this subcomponent will seek to address the historic misconception that PPPs are privatization, foster support and buy-in from the media, help mitigate some of the risks associated with the political economy of the country and contribute to broadening the program. This sub component will also support in organizing roundtables and consultations etc. with the private sector and other stakeholders to gain their input into the design and sustainability of the PPP program.

Component B: Preparation of PPP Transactions (US\$20 million)

The Project will support the transactions selected and prioritized by NAPPP in consultations with various sector Ministries and line agencies, and: (i) for which an outline business case has already been prepared; or (ii) which are already being prepared and/or negotiated but need additional support to achieve financial close.

B1: Feasibility Studies. Under this subcomponent, the Project will: (i) carry out the due diligence necessary to assess all project related aspects and scope of the project. It will include due diligence work to assess the technical, legal, economic, and financial feasibility of the proposed transaction (technical scoping, concept design, economic and financial analysis including value for money analysis). It will also cover other assessments such as gender analysis, traffic surveys and willingness-to-pay surveys; address mechanisms for citizens engagement, grievance redress and management of labor influx; as well as environment and social assessments (although they will not be carried out independent of the feasibility study); and (ii) provide technical assistance to agencies where policy or strategic decisions are needed prior to initiating PPPs. The objective of these activities will be to strengthen the likelihood of economically viability of the transactions proposed by GoSL for public private partnership.

B.2 Project Structuring and Transaction Advisory Services. Under this subcomponent, the Project will support the structuring of the transactions, preparation of procurement documentation and negotiations of the contractual documents with the selected bidder up to the financial closure of one or more selected transactions. It will ensure that the GoSL, through NAPPP, receives transaction, legal and financial advisory support in the structuring and negotiation of transactions, to supplement NAPPPs in-house resources. This component will include market sounding, design of risk allocation, financial modelling, preparation of the PPP project documents (concession and other agreements), provision of professional and experienced skills for GoSL negotiations with the selected bidder to increase value for money, up to financial close, including the assessment of GoSL's contingent liabilities for each transaction and, where necessary, the structuring of risk mitigation instruments to improve bankability.

Component C: Project Management (US\$2.5 million)

Under this component, the Project will support the costs of operation of NAPPP for the management of GoSL's PPP program. It will finance the day to day activities of NAPPP, goods and services required for the preparation and operation of NAPPP, as well as the cost of consultants for certain pre- identified positions for skills that cannot be easily accessed in the market.

Environmental Assessment and Management Framework

The Environmental Assessment and Management Framework (EAMF) has been prepared in lieu of a standalone Environmental Assessment as required under the World Bank's Operational Policy 4.01 – Environmental Assessment.

The proposed PPP transactions that will be supported under the project is expected to have significant environmental impacts and high risks, as well as some social impacts such as involuntary resettlement, labour influx, etc. The potential environmental risks (and resettlement and other social risks), as anticipated at this stage, would largely result from new and large infrastructure projects that have been short-listed listed for PPPs, which have been identified by the Government. Since the exact sites of project interventions are unknown at this stage, it is necessary to prepare an Environmental Assessment and Management Framework (EAMF) that would guide the Government of Sri Lanka (GoSL) in managing the environmental impacts and related social issues (such as community environment, health and safety issues) of the short-listed PPP transactions and scaling up positive impacts. A separate Resettlement Policy Framework (RPF) has been developed which provides the guidance to manage, social issues including potential resettlement issues, gender based violence and labour influx.

This EAMF has been designed to be consistent with (a) the national requirements that governs the sector and environmental management according to specifically the National Environmental Act and other related acts that that may be of relevance; and (b) the World Bank's operational policies on environmental safeguards. The RPF covers the (a) national requirements for managing involuntary resettlement and labour; and the World Bank operational policies on social safeguards and gender.

The EAMF will serve as a template for site-specific environmental and social assessments to be undertaken for project-supported physical activities as part of the feasibility studies. The main purpose of the EAMF is to develop environmental and social profiles of the country, identify potential environmental and non-resettlement social impacts early in the project cycle and to provide broad guidelines outlining measures, processes, institutional arrangements, procedures tools and instruments that need to be adopted by the project and integrated into project implementation to mitigate environmental and non-resettlement social risks and impacts.

Applicability of the EAMF to the project activities

The project is primarily for providing technical assistance to develop a comprehensive PPP system in Sri Lanka. Based on the initial assessment of the proposed project activities, it has been identified that environmental safeguards will become applicable for two project sub-components including: A.2: PPP capacity building; and B.1: Feasibility studies.

Under capacity building, the capacity of the NAPPP to ensure overall due diligence process is in place when developing and managing PPPs for environmental management will be put in place with qualified staffing and training.

A tentative list of prioritized PPP transactions is in place (Annex 1). The project will provide assistance to carry out feasibility studies for short-listed PPP transactions under sub-component B.1. These feasibility studies will include independent environmental assessments that will be also financed under this sub-component.

Structure of the EAMF

The EAMF has 7 chapters including the first chapter on Introduction that provides the background to the project, project objectives, project component descriptions and the reason for the preparing an EAMF. The chapters 2-7 covers the following:

- Environmental and social baseline condition in Sri Lanka
- Environmental legislation, regulatory and institutional framework in Sri Lanka (legislation on resettlement and labour are covered in RPF)
- Applicability of World Bank's environmental and social safeguard policies
- Safeguards due diligence process (social screening and assessment, resettlement action plan, labour influx plans are included in the RPF)
- Potential environmental and social impacts and mitigation measures
- Implementation arrangements under this project

It also includes supportive Annexes that provides further information and guidance including the following:

- Annex 1: List of Proposed PPP Transactions
- Annex 2: Suggested Format for Environmental Screening Form
- Annex 3: Policy Framework: Environmental Assessment and Impact Mitigation
- Annex 4: Generic Terms of Reference for Category A and B Environmental Assessment
- Annex 5: Basic Information Questionnaire of the CEA
- Annex 6: Format for Environmental Management and Monitoring Plan under the Environmental Assessment
- Annex 7: Generic Environmental Management Plan (EMP) for Construction of Ancillary Facilities as New Infrastructure and/or Rehabilitation of Existing Infrastructure.
- Annex 8: Guidance Note on Selecting Mitigation Measures to be Included in the Environmental Management Plan for Construction Projects
- Annex 9: Guidelines for the Rehabilitation of Burrow Pits
- Annex 10: Guidelines for Decommissioning and Demolition of Existing Buildings
- Annex 11: Guidelines for Health and Safety of Workers, Communities and Visitors
- Annex 12: Chance find procedure for Physical Cultural Resources
- Annex 13: Terms of Reference for Environmental Audit of Associated Facilities / Linked Activities
- Annex 14: Generic Terms of Reference for Projects with Major Dredging
- Annex 15: Generic Social Impact Mitigation Plan (SIMP)
- Annex 16: Generic Session Plan for Staff Training on EAMF
- Annex 17: Example of Disclosure Advertisement for Safeguards Instrument

CHAPTER 2: ENVIRONMENTAL & SOCIAL BASELINE CONDITION IN SRI LANKA

This chapter describes the overall baseline condition of Sri Lanka in terms of bio-physical environment, as well as the socio-economic environment. It also includes the sector backgrounds for the key sectors covering the 65 potential PPPs and brief assessment of current status of operationalizing environmental management in these sectors where applicable.

Bio-physical environment

Location, geography and climate. Sri Lanka is a tropical island in the Indian subcontinent. It covers an area of about 65,610 km² and lies between 6° and 10°N latitude and 80° and 81°E longitude. A central mountainous massif with an altitude of more than 2500 m and a vast plain surrounding it describe the topography of the island. The climatic pattern of Sri Lanka is determined by the generation of monsoonal wind patterns in the surrounding oceans. Four basic seasons based on rainfall exist. These are, the south - west monsoonal period during May to September; an inter-monsoonal period during October–November; the north-east monsoonal period from December to February; and another inter-monsoonal period lasting from March to April. On the basis of the rainfall regimes, the country is divided into three broad climatic zones. These are designated as the Wet Zone, Dry Zone and the Intermediate Zone. For administrative purposes, the country is divided into nine provinces: Central, Eastern, North Central, Northern, North Western, Sabaragamuwa, Southern, Uva and Western and 25 districts.

Terrestrial water resources. There are 103 natural *river basins* with catchments ranging from 9 to 10,448 sq. km. Seventeen river basins have catchment areas of over than 1000 sq. km. The largest basin, is the 335km long Mahaweli river, which has a catchment area of 10 448 km². There are six types of *aquifers*: the shallow karstic aquifer of the Jaffna Peninsula, deep confined aquifers, coastal sand aquifers, alluvial aquifers, the shallow regolith aquifer of the Hard Rock Region and the southwestern lateritic (cabook) aquifer. Sri Lanka's largest aquifer extends over 200 km in the north western and northern coastal areas. *Groundwater resources* are widely used for domestic, commercial and industrial purposes, and small-scale irrigation. About 80 percent of rural domestic water supply needs are met by groundwater from dug wells and tube wells. Sri Lanka is covered with a network of thousands of artificial lakes and ponds, known locally as '*tanks*' (after tanque, the Portuguese word for reservoir) *Irrigation* activities in Sri Lanka date back 2 500 years. Initially, these activities started with a small-scale village tank and a simple channel system. Later, from the fourth to the end of the twelfth century, these systems were developed. Dams were built to intercept river flows across shallow valleys, or water flowing down perennial rivers was diverted by weirs and it conveyed through long excavated canals to be impounded in large reservoirs at appropriate locations to supply large areas.

Coastal and marine resources. Sri Lanka has a coastline of about 1,620 km. Sri Lanka and the southern tip of India stand on the same continental shelf and are separated by a shallow sea, the Palk Strait, which is barely 30 m deep. However, the shelf ends more abruptly in the south and east of Sri Lanka, averaging 22.5 km in width and rarely extending beyond 40 km. The seas around Sri Lanka are micro-tidal and predominantly semi-diurnal. The rise and fall of the tides is within 0.7 m at spring tides and 0.05 m at neap tides. The highest tidal range is generally around Colombo (west coast),

Sri Lanka's *coastal zone* is defined in the Coast Conservation Act No. 57 of 1981 as "that area lying within a limit of three hundred metres landwards of the Mean High Water line and a limit of two kilometers seawards of the Mean Low water line and in the case of rivers, streams, lagoons, or any other body of water connected to the sea either permanently or periodically, the landward boundary shall extend to a limit of two kilometers measured perpendicularly to the straight baseline drawn between the natural entrance points thereof and shall include the waters of such rivers, streams and lagoons or any other body of water so connected to the sea". Coastal ecosystems include coral reefs, sea grass beds, estuaries, lagoons, salt marshes, mangroves, barrier beaches, spits and sand dunes.

Land resources. During the last few decades' natural disasters have been on the increase because of improper land uses in Sri Lanka. For example, human settlement and cultivation of annual crops on steeply sloping lands have resulted in rapid soil erosion, landslides and the silting of rivers, waterways and reservoirs, thereby reducing their capacity and causing floods. Furthermore, the productivity of fertile lands has been reduced due to improper land use. According to the available statistics nearly 44% of agricultural lands have been subject to land degradation.

There is also a significant imbalance between the ownership and tenure patterns of land. There are a large number of fragmented agricultural lands small in size and generally unproductive. Similarly, there is a large extent of agricultural land in plantations areas, a significant proportion of which is underutilized.

In Sri Lanka, 82.25% of the country's land is owned by the State while only 17.75% is privately owned, reflecting a history of centralized control over land. Sri Lanka is one of the most densely populated countries in the world, and therefore much of the land has been put into productive use. There is limited information to assess the spatial and land use changes that have taken place due to incompatibility of available data.

In Sri Lanka forests cover approximately 29.7% (1.95m ha) of the land area, with dense forest amounting to 21.88% (1.44m ha). Eighty-six percent of the natural forest is located in the dry and intermediate zones of the country, and these areas contain about 85% of the closed canopy forests and 90% of the sparse (open) forests in Sri Lanka. The total area of dense natural forests in the country is 1.44 million ha of which 167,000 ha are identified as primary forest, while the remaining area is categorized as naturally regenerated forests. Approximately 79,941 ha are identified as plantation forests, including coconut and rubber plantations. What remains of forest cover is highly fragmented, making protection and management challenging.

Biodiversity. The southwestern region of Sri Lanka, encompassing approximately 20,000 km², is the only aseasonal ever wet region in the whole of South Asia. This region is referred to as the wet zone of Sri Lanka and receives up to 3,000 mm of rainfall annually. Wet-zone of Sri Lanka along with the Western Ghats of India is designated as one of the world's biodiversity hotspots, in demand of extensive conservation investment. This high biodiversity seen in Sri Lanka can be attributed to a wide variety of climatic, topographic and soil conditions that exist in the island that has resulted in a diverse array of aquatic and terrestrial habitats. Sri Lanka's biodiversity is significantly important both in a regional and global scale. Sri Lanka has the highest species density (number of species present per 10,000 sq. km) for flowering plants, amphibians, reptiles, and mammals in the Asian region. Endemism is also high among the indigenous vertebrates, which without the migrant birds, is about 42%. Highest endemism in vertebrates is seen among amphibians, freshwater fishes and reptiles. Most invertebrate groups

in the island have been incompletely surveyed, but a high diversity is documented among butterflies, dragonflies, bees, spiders and land snails.

Cultural environment. The culture of Sri Lanka mixes modern elements with traditional aspects and is known for its regional diversity. Sri Lankan culture has long been influenced by the heritage of Theravada Buddhism passed on from India, and the religion's legacy is particularly strong in Sri Lanka's southern and central regions. South Indian cultural influences are especially pronounced in the northernmost reaches of the country. The history of colonial occupation has also left a mark on Sri Lanka's identity, with Portuguese, Dutch, and British elements having intermingled with various traditional facets of Sri Lankan culture. Culturally, Sri Lanka, particularly the Sinhalese people, possesses strong links to both India and Southeast Asia. The architecture of ancient Sri Lanka displays a rich diversity, varying in form and architectural style from the Anuradhapura Kingdom (377 BC–1017) through the Kingdom of Kandy (1469–1815).

Socio-economic environment

Sri Lanka has a population of about 21.2 million. Population density is highest in the southwest where Colombo, the country's main port and industrial centre, is located. The net population growth is about 1.3%. Sri Lanka is a lower middle-income country of 21.2 million people with per capita GDP in 2016 of \$3,835. Since the civil war ended in 2009, the economy has grown on average at 6.2 percent a year, reflecting a peace dividend and a commitment to reconstruction and growth, but there have been signs of a slowdown in the last three years. The economy is transitioning from being predominantly rural-based to urbanized economy-oriented around manufacturing and services. Sri Lanka has made significant progress in human development. Social indicators rank among the highest in South Asia and compare favorably with those in middle-income countries. The national poverty headcount ratio declined from 15.3 percent in 2006/07 to 6.7 percent in 2012/13 although disparities remain. Unlike other South Asian countries, Sri Lanka is facing an aging population.

Broad sectors considered for PPP transactions

Transport. To increase economic productivity through export oriented growth, the country needs a transport system that functions in a seamless fashion from the perspective of the exporter. This requires more focus on transport facilities and services attending to export regions and products as well as an integrated intermodal transport sector strategy; maintaining, upgrading, modernizing, and ensuring connectivity between those transport facilities and services.

Energy. Sri Lanka's energy demand is currently being catered to by several energy sources consisting of both indigenous non-fossil fuels and imported fossil fuels. Most of the country's energy needs are met through biomass, an indigenous fuel source, and imported fossil fuels, such as petroleum and coal. The remainder is made up of other indigenous sources which, include large hydro and renewables such as solar, small hydro and wind. Acknowledging this need, Sri Lanka saw an increase in the share of renewable energy (RE) in the electricity mix, when in 2014, the country met its target of generating at least 10 percent of its electricity using renewable energy.

Water. On a national basis, safe water coverage—defined here as the proportion of the population having access to water supplies from piped water systems, protected wells, or

rainwater systems—is currently almost 85%. About 44% of the population (over 9 million people) have access to piped water, 3% (more than 0.6 million) have access to hand pump tube wells, 36% of the rural population has access to safe drinking water through protected dug wells, and 1% of the population uses rainwater harvesting systems. The other side of the coin, however, is that 15% of the population is unable to access a safe water source within 200 meters of their residence.

Sanitation. In the sanitation subsector, coverage (which principally comprises on-site facilities such as septic tanks and closed pit latrines but also some piped sewerage systems) has increased from 83% in 2008 to 90% in 2013. Piped sewerage systems are limited to those locations where other forms of sanitation service provision are not practical due to population and housing density. As a result, sewerage networks presently cover only about 2.5% of the country's population in major urban areas

Urban. Sri Lanka needs to tap the competitive advantages of the Colombo Metropolitan Region (CMR) to accelerate growth. Colombo City is the commercial and financial center of the country. The CMR is the international gateway to Sri Lanka and houses most of the country's manufacturing facilities and services. In order to realize the vision of a system of cities, GoSL has initiated a national-level program – the Strategic Cities Program (SCP) – to manage the development of strategic cities and to ensure a consistent and coherent approach in developing key cities.

Housing and construction. Slum upgrading and prevention Based on the 2011 survey of Colombo carried out by the urban development authority (UDA), an estimated 68,812 households live in 1,499 underserved settlements, accounting for more than half the city's population. These settlements tend to be small and scattered, and about 74% of them have less than 50 housing units. The property market in the country is on an upward trend with the demand for land growing each year, and the growth cycle expected to hit a peak by 2020, urban planners say. The market has been on a steady line of growth since the end of the conflict in 2009, and with the dawn of peace and stability, which are key factors for investment in housing and apartments.

Education. Although Sri Lanka has long outperformed comparable developing countries at the primary and secondary school levels, it still faces major problems in the education sector which undermine the country's inclusive growth goal and ambition to become a competitive upper middle-income country (MIC).

Tourism. In Sri Lanka, tourism is the third largest export earner in the economy, after remittances and textiles and garments. In the past five years, growth in visitor numbers has been unprecedented, averaging more than 22% year on year, of which 80% to 90% was visitors coming to Sri Lanka on holiday. In 2015, 1.8 million international visitors came to Sri Lanka, stayed an average of 10.1 days, and generated an estimated \$2.98 billion¹. In 2016, international visitor arrivals reached over 2 million and revenue generated was approximately \$3.5 billion.

Industries. Emerging out of a protracted conflict, and moving in to a new era of economic progress, Sri Lanka is now ready to place a stronger focus on developing its industrial capacity in contributing to its broader development objectives. Emerging out of a protracted conflict, and moving in to a new era of economic progress, Sri Lanka is now ready to place a stronger focus on developing its industrial capacity in contributing to its broader development objectives.

Health. The key themes affecting demand for healthcare are expected to be ageing population, lifestyle factors and increase in purchasing power. The growth in the proportion of the aged population of Sri Lanka is expected to alter the overall disease profile of the country and consequently affect the volume and type of services required. In addition to the ageing population, prosperity related changes in lifestyle including comparatively regionally high levels of exposure to alcohol, tobacco and sedentary behaviour have exacerbated the incidence of non-communicable diseases (NCD) to 65% of mortality and 80% morbidity. In addition to demographic and epidemiological shifts, increasing prosperity, education and awareness levels have contributed to elevated healthcare seeking behaviour. The improvement in purchasing power of the population in Sri Lanka coupled with actual and perceived gaps in quality and availability of public health services has contributed to increased demand for health services delivered by the private sector.

CHAPTER 3: ENVIRONMENTAL LEGISLATION, REGULATORY AND INSTITUTIONAL FRAMEWORK IN SRI LANKA

Sri Lanka is one of the leading countries in the South Asian region in enacting environmental legislations. Its concern for environment dates back to over two and a half millennia. The constitution of the Democratic Socialist Republic of Sri Lanka under chapter VI Directive Principles of State policy and Fundamental duties in section 27-14 and in section 28-f proclaim, “The state shall protect, preserve and improve the environment for the benefit of the community”, “The duty and obligation of every person in Sri Lanka to protect nature and conserve its riches” thus showing the commitment by the state and obligations of the citizens.

The overall environmental concerns are addressed by the National Environmental Act No. 47 of 1980 (and subsequent amendments by act no 56 of 1988 and act no 53 of 2000). It is the umbrella legislation for environmental protection in the country. In addition, several other sectoral legislative enactments are in place. The national organization that has the mandate to protect and take measures to safeguard the environment is the Central Environmental Authority. It currently operates in the entire country except in the North Western Provincial Council (NWPC), where the NWPC has enacted a separate statute under the 13th amendment to the Constitution of Sri Lanka and had created a separate provincial institute.

There are several other key national agencies with a mandate for environmental management and protection. The Forest Department, Department of Wildlife Conservation, Department of Archaeology, Department of Coast Conservation and Coastal Resources Management, Disaster Management Center and Geological Survey and Mines Bureau have their regional offices and staff to cater to and monitor the environmental safeguards as per the policies and regulations governing them. In addition, there are several national agencies that are impacting on the environment and adopting environmental safeguards as well. They are the Sri Lanka Land Reclamation and Development Corporation, Urban Development Authority, Water Supply and Drainage Board, Water Resources Board and Irrigation Department. The chapter lists 23 legislations, policies and treaties important for environmental management. Applicable national legislation and policies on social safeguards are covered under RFP.

CHAPTER 4: APPLICABILITY OF WORLD BANK’S ENVIRONMENTAL AND SOCIAL SAFEGUARD POLICIES

Environmental and Social Safeguard Policies and Environment, Health and Safety Guidelines

The following safeguard policies have been identified to be applicable for the proposed project:

- OP 4.01 Environmental Assessment
- OP 4.04 Natural Habitats
- OP 4.11 Physical Cultural Resources
- OP 4.12 Involuntary Resettlement (details covered in the RPF)
- OP 4.36 Forests

In addition to the above safeguard policies, the project will follow the World Bank Group's Environmental, Health, and Safety (EHS) Guidelines which are technical reference documents with general and industry specific examples of Good International Industry Practice. The EHS Guidelines are applied as required by their respective policies and standards. Industry sector EHS guidelines will be used together with the General EHS Guidelines document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors. In addition, the World Bank guidance note on Managing the Risks of Adverse Impacts on Communities from Temporary Project-Induced Labour Influx will also be followed.

Stakeholder consultations and disclosure

At this stage of the project, the stakeholders and people who may get impacted by the project have not yet been identified. Broader consultation with stakeholder was held on February 20, 2018 to discuss this EAMF.

The EAMF was disclosed in line with the World Bank's requirements by advertising in newspapers (in all three languages) and has been made available in hard copy at the Ministry of Finance and NAPPP, as well as disclosed in the website of the Ministry of. The EAMF was also publicly disclosed through the Bank's external website. Executive Summary of the document will be submitted to WB Board of Directors before concluding project appraisal.

All subsequent environmental instruments that will be prepared through the project support will be also put into consultations with project affected persons and stakeholders, cleared by the World Bank and disclosed to public as part of the environmental assessment reports. For Environmental Category A transactions, at least two consultations will be carried out and for Category B transactions at least one consultation will be held. All environmental assessment instruments supported under this project will be cleared by the Bank and will be made available publicly both in country and the Bank's external website.

CHAPTER 5: ENVIRONMENTAL AND SOCIAL SAFEGUARDS DUE DILIGENCE PROCESS

This chapter covers primarily environmental safeguard instruments to be utilized as part of the due diligence process. It also includes social aspects that are required to be jointly screened and/or assessed as a requirement of OP 4.01 – Environmental Assessment. All other social safeguard aspects including resettlement issues, labour influx and gender-based violence and the related due diligence processes are covered under the RPF.

Environmental and Social Screening

Environmental and social screening is counted to be a useful tool in identifying safeguard issues in large investment programs consisting of many sub-projects – under this project, the PPP transactions. The main objective of the screening will be to:

- a) determine the anticipated environmental/social impacts, risks and opportunities of the PPP transactions; and
- b) determine if the anticipated impacts and public concern warrant further environmental/social analysis, and if so to recommend the appropriate type and extent of assessments needed as listed below.

Category A - Transactions with substantial to high environmental and/or high social risks and sensitive, diverse unprecedented impacts. Will require Environmental Impact Assessments and preparation of Environmental Management Plans and Social Impact Mitigation Plans (SIMPs).

Category B – Transactions with moderate to substantial risks and impacts that can be mitigated. Will require Environmental Impact Assessments if risks are substantial or Initial Environmental Examination if risks are moderate and preparation of Environmental Management Plans and Social Impact Mitigation Plans (SIMPs).

Category C – Transactions with low risks and negligible impacts. Will not require further assessments.

Environmental Impact Assessment (EIA)/Initial Environmental Examinations (IEE)

EIA and IEEs are effective tools for evaluating the environmental risks and opportunities of transaction proposals and improving the quality of outcomes. Ideally the EIA/IEE should be carried out at the end of the preliminary design phase so that the impacts of each planned activity can be evaluated and alternatives can be worked out for activities that have major impacts. The outcomes of the EIA/IEE should then be used to finalise the transaction design, which should ensure that the impacts of the given transaction are minimal.

For transactions that require land acquisition, potential labour influx, and gender-based violence, the accompanying Resettlement Policy Framework (RPF) includes detailed guidance on the screening, social assessments and preparation of site-specific social safeguards instruments.

Environmental Management Plans (EMPs)/Social Impact Mitigation Plans (SIMPs)/Environmental and Social Management Plans (ESMPs)

Certain activities will have explicit impacts on the natural environment and non-land related social impacts and thus require specific plans to institute and monitor mitigation measures and take desired actions as timely as possible. An Environmental Management Plan (EMP) and Social Impact Mitigation Plan (to be combined into an Environmental and Social Management Plan (EMSP), if relevant, must be kept as simple as possible, clearly describing adverse impacts and mitigation actions that are easy to implement. The scale of the transaction will determine the complexity of the EMP/SIMP/ESMP. The basic elements of these instruments are;

- a. A description of all possible significant adverse impacts that are likely to arise due to the transaction that the EMP/SIMP/ESMP, is intending to deal with;
- b. A description of planned mitigation measures, and how and when they will be implemented;

- c. A program for monitoring with measurable indicators that will allow to determine the effectiveness of the mitigation actions;
- d. A description of who will be responsible for implementing the safeguards management plan; and
- e. A cost estimate and source of funds.

Environmental and social audits

An environmental and social audit in the context of this technical assistance is to assess the due diligence performed as part of associated facilities/linked activities as part of the EA process and identification of any improvements needed to be included under the safeguard documents and compliance of those associated facilities/linked activities.

The environmental and social audit if necessary will:

- collect, analyse and interpret monitoring results to detect changes related to implementation and operation of specific activities;
- verify the monitoring parameters are in compliance with national set standards;
- compare the predicted impacts with actual impacts and evaluate the accuracy of predictions;
- evaluate the effectiveness of implementation of the EMP/SIMP/ESMP;
- identify shortcomings in the safeguards management plan, if any and incorporate it into the EMP/SIMP/ESMP if deemed necessary; and
- identify and report if there is non-compliance with the EMP/SIMP/ESMP.

Consultation Plan

The NAPPP has already conducted a consultation for the EAMF with stakeholders identified at the preparation stage of the project, which was held on February 20, 2018.

The relevant PPP partners including NAPPP in consultation with the relevant line ministry or line agency must undertake several consultations during transaction preparation on the overall planned interventions to be financed by the project. Instrument wise consultations need to be taken around each transaction site. These should be duly documented in the respective outputs of the consultancies.

Safeguards Training

The Environmental Specialist of NAPPP will be trained by the Environmental Specialist of the World Bank on the EAMF implementation and procedural requirements of the World Bank. As part of the Component A4, the Environmental Specialist of NAPPP will develop and implement a training plan for the relevant implementing agencies.

CHAPTER 6: POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

Environmental and Social Impacts

PPP transactions are likely to result in both positive and negative social and environmental impacts. Highlighted below are the potential adverse impacts that could occur when the PPPs are implemented.

Positive impacts

- Improved legal, institutional and technical PPP growth environment
- Increased Private Sector Investment
- Employment and Improved Service Delivery
- Government Fiscal Efficiency and Transparency
- Modernisation
- Reducing risk for the public sector
- Providing alternative funding/freeing government funds
- Provide funding to maintain infrastructure overtime
- Improved economic growth
- Expected transactions Results/Output(s)

Environmental benefits associated with the PPP transactions include:

- Enhanced environmental capacity for the PPP implementing institutions
- Availability of resources for environmental management
- Improved aesthetics nationally, due to more environmentally friendly infrastructure
- Public safety improvements from better management of resources
- More efficient use of national environmental resources

Negative impacts

- Incessant Traffic including accidents
- Diseases Spread-Public Health
- Noise and Vibration Impacts
- Health and Safety of Construction Workers
- Decreased Air Quality
- Solid and Effluent Waste Hazards and Pollution
- Chemical Wastes
- Increased crime and in-migration
- Physical and economic displacement on identified transaction sites
- Loss of Land
- Access Creation
- Borrow Pits and Quarry Sites
- Blasting and Rock Excavation
- Underground Fractures and Hydrogeology
- Soil Erosion/Run Off
- Loss of vegetation
- Loss of Flora and Fauna
- Reduction of biodiversity due to blocking of movement of organisms
- Ecological Niches Interference
- Decreased Water Quality
- Visual Intrusion
- Risks of Birds
- Changes in downstream morphology of the riverbed and banks
- Changes in the downstream water quality

- Impacts on Ecosystems
- Impacts of labor influx, including GBV, worker’s code of conduct, community conflict, etc
- Gender and exclusion

Environmental & Social Management Process

Impacts identified as part of the Environmental Assessment and mitigation measures will be included as part of an Environmental Management Plan (EMP), Social Impact Mitigation Plan or the combined Environmental and Social Management Plan (ESMP). The EMP/SIMP/ESMP will include measures that will be undertaken at different stages of the transaction (planning, design, procurement, construction and post-construction) in order to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels.

Mitigation considerations and options

All moderate to major adverse impacts are considered for mitigation. Specific measures have been suggested in this regard where practicable. With regard to negligible and minor impacts where the transaction activity is not expected to cause any significant impact in such cases, best practice measures and mitigation have also been recommended where appropriate to improve the environmental and social performance of the transactions. The mitigation options considered may include project modification, provision of alternatives, transaction timing, pollution control, compensations and relocation assistance. In cases where the effectiveness of the mitigation is uncertain, monitoring programs are introduced.

Recommended mitigation measures

The mitigation measures or guidelines have been designed in order to avoid, minimize and reduce negative environmental and social impacts at the transaction level. The following table provides some of the key environmental issues that are likely to take place and proposed mitigation measures.

Impacts	Description of mitigation measures
Physical Environment	
Waste disposal	<p><u>Solid nontoxic waste</u> Adequate waste reception facilities should be provided at project sites/camp sites Final disposal should be at dump sites approved by the municipal or urban council.</p> <p><u>Waste oil /fuel</u> Spent or waste oil from vehicles and equipment should be collected and temporarily stored in drums or containers at site Waste oil should be disposed by oil marketing companies or agents approved or recognized and have the capacity to undertake oil disposal</p>

Impacts	Description of mitigation measures
Air pollution	<p>The Projects should require that construction contractors operate only well-maintained engines, vehicles, trucks and equipment. A routine maintenance program for all equipment, vehicles, trucks and power generating engines should be in place.</p> <p>The project should ensure the use of good quality fuel and lubricants only</p> <p>If dust generation at the project/construction site becomes a problem, limited wetting of sites and or unloading and reloading points should be done to reduce dust raising</p> <p>Construction traffic speed control measures should be enforced on unpaved roads (speed limits through communities should be ≤ 50km/hr on unpaved roads and near or at project site should be ≤ 30 km/hr).</p> <p>Engines of vehicles/trucks and earth-moving equipment should be switched off when not in use.</p>
Noise and vibration	<p>The Projects should require contractors to use equipment and vehicles that are in good working order, well maintained, and that have some noise suppression equipment (e.g. mufflers, noise baffles) intact and in working order. This will be achieved by making it a component of contractual agreements with the construction contractors.</p> <p>Contractors will be required to implement best driving practices when approaching and leaving the site (speed limit of ≤ 30 km/hr) to minimize noise generation created through activities such as unnecessary acceleration and breaking squeal.</p> <p>Engines of vehicles/trucks and earth-moving equipment should be switched off when not in use.</p>
Impacts on Landscape and Visual Receptors	<p>Project sites should be boarded off from public view during construction</p> <p>Good house-keeping at construction sites should be ensured</p>
Impact on traffic and Public safety	<p>Only road worthy vehicles and trucks should be used to avoid frequent breakdowns on the roads</p> <p>Only experienced drivers should be employed</p>
Water use	<p>Obtain water abstraction permit from the Water Supply and Drainage Board.</p>
Water pollution	<p>No garbage/refuse, oily wastes, fuels/waste oils should be discharged into drains or onto site grounds</p> <p>Fuel storage tanks/sites should be properly secured to contain any spillage</p> <p>Maintenance and cleaning of vehicles, trucks and equipment should take place offsite especially where project sites are close to water bodies.</p> <p>Toilet facilities should be provided for construction workers to avoid indiscriminate defecation in nearby bush or local water bodies</p>
Soil and Land degradation	<p>Minimize land clearing areas as much as possible to avoid unnecessary exposure of bare ground to the elements of the weather</p> <p>Re-vegetate cleared areas as early as possible using native plant species</p> <p>As much as possible, avoid construction work during the monsoon period.</p>

Impacts	Description of mitigation measures
Impact on fauna and habitat	<p>Avoid unnecessary exposure and access to sensitive habitat areas.</p> <p>For identified or suspected sensitive habitats (swamps/ wetlands), regular inspection or monitoring should be carried out in the area prior to start and during work.</p> <p>If sensitive habitats are encountered, Project activities should cease and the Project should consult NAPPP to determine the appropriate course of action.</p> <p>If the project site is discovered as a sensitive habitat area, the Project should engage the NAPPP to develop a suitable plan.</p>
Impacts on inland water bodies/marine Fauna/habitat	<p>The Projects should require that contractors implement a hazardous materials management plan that includes specification for proper storage and handling of fuels, oil, wastes, and other potentially hazardous materials as well as a plan for containment and clean-up of accidental spills into the aquatic environment.</p> <p>During pre-installation and installation of project facilities, spotting of sensitive aquatic mammals should form part of the project activities. Should these species be observed in the vicinity of the work area, the project should execute measures to avoid destruction or disturbance.</p> <p>Project staff must report sightings of any injured or dead aquatic life (fishes)/marine mammals immediately, regardless of whether the injury or death is caused by a Project activity. The report should include the date and location of the animal/strike, and the species identification or a description of the animal. The report should be made to the NAPPP and the relevant line ministry or line agency</p> <p>The Project workforce and local communities should be educated to ensure that the importance of environmental protection and nature conservation are effectively communicated and that wider appreciation of environmental issues and construction best practice are fostered</p>
Impact on inland water/marine water quality /coastal processes	<p>All Projects should implement a hazardous materials management plan that includes specification for proper storage and handling of fuels, oil, wastes, and other potentially hazardous materials as well as a plan for containment and clean-up of accidental spills into the inland water/marine environment.</p> <p>Marine vessels will be required to adhere to International Maritime Organization (IMO) regulations on bilge and ballast water discharge.</p> <p>Areas close to water environment that are disturbed during construction activities (such as trench digging) should be rehabilitated as soon as possible after the pipes have been installed.</p> <p>All rehabilitated areas should be surveyed on weekly basis for the first month after rehabilitation, and a monthly basis for the subsequent five months, to monitor levels of erosion in the vicinity of the development. If observations indicate that significant erosion and sediment transport is taking place (i.e. that rehabilitation has been unsuccessful) additional mitigation should be employed to reduce erosion.</p>
Social Environment	
Physical displacement	<p>All affected persons to be given relocation assistance (cash or kind) at replacement cost by the project to enable them to move their properties to new locations, i.e. in accordance with the GoSL's legal framework and Bank's policies as laid out in the Resettlement Policy Framework (RPF). Resettlement Action Plans will be required. If a site is acquired, the State may relocate persons and their families as well as community facilities to be affected. The affected families should not be made to incur any cost during the relocation period. The resettlement action plan should be prepared for this area with the RPF as a guide.</p>

Impacts	Description of mitigation measures
Employment and loss of livelihood	If a site is acquired, all persons living off the site should be provided with livelihood assistance based on their current income levels or the project should assist such persons obtain new jobs immediately without any loss of income such that each affected person is able to improve or at least restore his/her income to pre-project level. Income restoration schemes to be prepared should be designed in consultation with affected persons, and in consideration of their resource base and existing skills. The measures adopted should be done in accordance with the RPF.
Loss of access to land	Due process should be followed to establish the true owner of any land, be it family or stool land. Once established, the project should acquire the site by paying appropriate compensation. The land compensation should be based upon replacement value, impact issues, description of mitigation measures of land in the area and in accordance with the RPF. In case of loss of common resources, structures and facilities, the same should be restored or reinstalled or access to lost facilities provided at a new place in consultation with the community or appropriate authority
Loss of structures/properties	For a project site to be used, irrespective of the land compensation, appropriate compensation should be paid to the owner for any structures/properties which are permanent structures at the site. Depreciation should not be factored during valuation of these properties. The compensation process should satisfy the RPF developed for the project. Appropriate compensation should be paid for any damaged or destroyed propriety that belongs to affected persons. No depreciation during valuation of these properties. Guidance for these measures are provided in the RPF.
Impacts on recreation and public areas	Appropriate notices and warning signs will be erected around working areas and public areas to warn prospective trespassers of any danger or risk.
Impacts on Human Health/ Safety and sanitation	Trucks carrying construction materials such as sand, quarry dust, laterite etc. will have the buckets covered with tarpaulin or appropriate polythene material from or to project site.
Construction-related Impacts	Only road worthy vehicles/trucks should be used. Only experienced drivers/operators should be employed. Except for areas secured by fencing, all active construction areas will be marked with high-visibility tape to reduce the risk accidents involving pedestrians and vehicles. All open trenches and excavated areas will be backfilled as soon as possible after construction has been completed. Access to open trenches and excavated areas will be secured to prevent pedestrians or vehicles from falling in. Adequate sanitary facilities will be available for workers and open range defecation will not be countenanced. Construction workers will be provided with and educated to wear suitable Personal Protective Equipment (PPE) including hard hats, overalls, high-visibility vests, safety boots, earplugs, gloves etc. Construction workers should be educated to adhere to basic rules with regard to protection of public health and sexual health practices, including most importantly hygiene and disease prevention.
Impacts on cultural heritage / archaeological interest / existing ecologically sensitive areas	The pre-construction surveys should identify cultural heritage resources and existing ecologically sensitive areas that the project should avoid and by-pass these resources. The Project should implement a chance find procedure and reporting system to be used by contractors in the event that a cultural heritage feature or ecologically sensitive item/issue is encountered.

Impacts	Description of mitigation measures
Impacts on Human Health and Public Safety	<p>The project will require all contractors to implement an Environmental, Health and Safety (EHS) plan which will outline procedures for avoiding health and safety incidents and for emergency medical treatment. This will be achieved by making it a component of contractual agreement.</p> <p>Contractors will be required to wear suitable Personal Protective Equipment (PPE) including hard hats, high-visibility vests, safety boots and gloves and life vests as appropriate in accordance with the EHS plan.</p> <p>All construction and other workers will be sufficiently trained in the safe methods pertaining to their area of work to avoid injuries.</p>
Labour related issues	<p>Contractors should use local labour as much as possible and where available. As much as possible, all unskilled labour should be contracted or obtained from the local community. Contractor's ESMP/SIMP should be prepared which should include among others management plans for labour influx and worker camp management plan and code of conduct for workers, including measures to address GBV, as provided for in the RPF</p> <p>Preparation of redundancy plans and packages should be discussed with affected workers that will include re- training and re- tooling of affected workers and aim to avoid labour strife.</p>
Gender and exclusion related issues	<p>Besides project related activities, women and other vulnerable groups' access to infrastructure and services that PPP projects are expected to deliver, capacity building of the PPP unit on gender, the feasibility studies should include gender analysis for every PPP project.</p>

CHAPTER 7: IMPLEMENTATION ARRANGEMENTS

Overall implementation arrangement in the NAPPP

The NAPPP will be the key agency responsible for supervising the implementation of these environmental safeguards by the respective line ministry or line agency of the GOSL and the private partner in respect of this World Bank project. As the NAPPP was recently established with new personnel, the institution does not have previous experience in executing World Bank- financed projects and thus, will be closely guided by the World Bank team to adhere to various requirements and policies of the Bank with regards to Safeguards, procurement and financial management during the implementation of the project.

Implementation arrangements for environmental safeguard management

The NAPPP will recruit a qualified Environmental Specialist to supervise the project related environmental safeguards. Specifically, the Environmental Specialist will be responsible for ensuring project activities that have environmental safeguards implications under different project components to be supported under the World Bank project, follows the necessary environmental safeguard due diligence defined earlier.