# Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 04-Sep-2019 | Report No: PIDISDSA25927

## BASIC INFORMATION

### A. Basic Project Data

| Country | Project ID | Project Name | Parent Project ID (if any) |
|---|---|---|---|
| Sri Lanka | P166865 | Sri Lanka Integrated Watershed and Water Resources Management Project | |
| **Region** | **Estimated Appraisal Date** | **Estimated Board Date** | **Practice Area (Lead)** |
| SOUTH ASIA | 25-Jul-2019 | 21-Nov-2019 | Water |
| **Financing Instrument** | **Borrower(s)** | **Implementing Agency** | |
| Investment Project Financing | Democratic Socialist Republic of Sri Lanka | Ministry of Mahaweli Development and Environment | |

Proposed Development Objective(s)

The Project Development Objective (PDO) is to restore the Upper Mahaweli watershed, strengthen institutional capacity for water resources management, and enhance the functionality of water resources infrastructure.

Components

Component 1: Watershed and Water Resources Management
Component 2: Infrastructure Improvements
Component 3: Contingent Emergency Response
Component 4: Project Management

## PROJECT FINANCING DATA (US$, Millions)

### SUMMARY

| | |
|---|---|
| **Total Project Cost** | 1,677.00 |
| **Total Financing** | 1,677.00 |
| **of which IBRD/IDA** | 1,672.00 |
| **Financing Gap** | 0.00 |

### DETAILS

**World Bank Group Financing**

| | |
|---|---|
| International Bank for Reconstruction and Development (IBRD) | 1,672.00 |
| **Non-World Bank Group Financing** | |
| Counterpart Funding | 5.00 |
| Borrower/Recipient | 5.00 |

Environmental Assessment Category

A-Full Assessment

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

## B. Introduction and Context

Country Context

1. **Sri Lanka has shown steady growth over the last decade although key macroeconomic challenges persist.** Sri Lanka is a lower middle-income country with a GDP per capita of USD 4,073 (2017) and a total population of 21.4 million people. Following 30 years of civil war that ended in 2009, Sri Lanka's economy grew at an average 5.8 percent during the period of 2010-2017, reflecting a peace dividend and a determined policy thrust towards reconstruction and growth, although there were some signs of a slowdown in the last few years. The economy is transitioning from a predominantly rural-based economy towards a more urbanized economy oriented around manufacturing and services. Social indicators rank among the highest in South Asia and compare favorably with other middle-income countries. Economic growth has translated into shared prosperity with the national poverty headcount ratio declining from 15.3 percent in 2006/07 to 4.1 percent in 2016. Extreme poverty is rare and concentrated in some geographical pockets; however, a relatively large share of the population subsists on slightly more than the poverty line. Low revenues combined with largely non-discretionary expenditure in salary bill, transfers, and interest payments have constrained critical development spending and squeezed expenditure on health, education and social protection, which is low compared to peer countries. Debt levels are high, and the overall debt portfolio indicate some important risks.

2. **Continued investments in infrastructure for irrigated agriculture, hydroelectric power, and domestic and industrial water supply have helped drive a rural transformation in Sri Lanka and supported the growth of the Colombo megalopolis and other regional population and commercial centers.** Land under irrigation has grown exponentially from a mere 18,000 ha at independence in 1948 to about 750,000 ha today. Investments in irrigation infrastructure have helped Sri Lanka achieve near self-sufficiency in rice production, and an expansion of non-rice crops for the domestic and export markets has begun. Historically, the Government's continued investments in the resettlement of landless people from the wet zone to restored irrigation schemes in the dry zone mitigated to some extent the rural-urban migration and provided agriculture-based rural

employment to rural populations. Hydropower development which has reached about 1,382 MW during this period (including private hydropower) helped the country through the energy crisis of the 1980s. Investments in water supply infrastructure have greatly increased access to safe drinking water, which has reached 86 percent of the population. These investments have raised rural incomes, reduced poverty, and promoted commerce.

3. **The Global Climate Risk Index ranks Sri Lanka as the second-most climate change affected country in the world.**[1] While all areas will be affected with average temperatures increasing by 1.0°C–1.5°C, the northern and northwestern provinces are most likely to experience average temperature increases and more variable precipitation by 2050.[2] Climate change projections suggest the dry zones will become dryer and the wet zone in the southwest of the country will become wetter. More specifically, rainfall is projected to increase by 48 percent for the Southwest Monsoon by 2050, which affects the wetter southern part of the country, while the Northeast Monsoon, which occurs in the drier northern region, is predicted to decrease by 27–29 percent.[3] Increasingly variable rainfall with more intense events will tend to be more erosive, contributing to reduction of soil carbon in the catchment while reducing reservoir capacity through sedimentation. The impacts of climate change are already evident. Losses from floods in 2016 and 2017 in the Western Province, the most populated and economically developed region and the heart of the wet zone, totaled an estimated US$1.5 billion. The frequency of occurrence and scale of flooding in several river basins have been on an increasing trajectory in recent years. Water availability is becoming more variable and uncertain due to climate change. Catchment erosion has severely affected the capacity of reservoirs, with a capacity loss of 47 percent across several major reservoirs and an annual volume reduction of 200 percent higher than predicted (MASL 2017).

4. **Sri Lanka's infrastructure-driven approach to water exploitation must quickly transition towards an integrated water resource management (IWRM) approach.** The development of irrigated agriculture infrastructure was Sri Lanka's water sector priority throughout the 20th century. The over 300 dams and extensive irrigation infrastructure, along with the human settlements in the dry zone, and the engineer-dominated sector institutions are all outcomes of this approach. Today, most of the land for water storage, conveyance, and irrigation is already developed. The country's limited groundwater resources are currently at risk of overexploitation, and the aging water infrastructure has reduced the reliability of water supplies across the economy. The water institutions, which over this long period came into existence for varying reasons, now often compete over water resources and authority, and their human capacity has not kept pace with the sector's complexity.

[1] The Global Climate Risk Index 2019: https://www.germanwatch.org/en/16046.
[2] Mani et al. 2018.
[3] WHO (World Health Organization). 2015. *Review of Climate Change and Health Activities in Sri Lanka*, page 4.

## Sectoral and Institutional Context

5. **The water sector in Sri Lanka is facing major challenges.** The economy is becoming more diversified with rising water demands both in terms of quantity and quality not only for food production and portable water, but increasingly for industries, fisheries, tourism and maintaining environmental services. At the same time, existing infrastructure is aging and require significant investments in rehabilitation. Most of the best low-cost sites with unused land for storage, conveyance and irrigation have already been developed. Pollution and sand mining of rivers and water bodies are increasing, and the limited ground water resource is being increasingly tapped for irrigation, drinking and industrial uses with inadequate regulation, monitoring and long-term planning. Critical watersheds are degrading, causing reduced crop yields, downstream sedimentation and low river base flows. In addition, pollution control of major water bodies and rivers, surface and ground water quality management, watershed management, river management, and environmental flow management in the river basins are virtually non-existent. The poor management of water resources raises serious concerns.

6. **Sri Lanka's demands on the water sector are shifting.** Recognizing the evolving challenges and increasing climate risks, the Government's 'Sustainable Sri Lanka Vision and Strategic Path – Vision 2030 (August 2018) lays out a clear plan for the water sector. The Vision proposes key milestones to be reached between 2020 and 2030 including (a) the establishment of a single body for making policy decisions in the water sector and (b) institutionalizing a 'Smart water allocation' system to apportion water between drinking, agriculture, and hydropower. The Vision also advocates increasing water storage capacity by developing and rehabilitating dams and maintaining water quality at World Health Organization standards.

7. **Many of these dams and irrigation canals are aging and continue to have various structural inadequacies in operation and monitoring facilities.** Dams and irrigation facilities contribute significantly to agrarian Sri Lankan economy and sustainable livelihood development, access to quality drinking water, electricity generation, mitigation of the impact of floods and droughts, and biodiversity. The safety, reliability, and efficiency of their operation are key to achieve these goals.

8. **Vision 2030 is a good start, but the Government will need both assistance and investments to achieve the degree of sector reform needed to sustain its water resources.** There is recognition among the water sector's leadership and principal stakeholders that to be successful, the country's past infrastructure-driven approach to water exploitation must quickly transition to an IWRM approach. Such an approach must address all the key interconnected issues, such as water prioritization among sectors, watershed planning, groundwater exploitation, surface water capture and use, increasing reliability through investment and rehabilitation, adapting for climate variability, and establishing a modern intuitional and legal framework.

9. **Recent projects funded by the World Bank and other development agencies have placed emphasis on infrastructure investments, but IWRM policy issues are now the overarching priority**. The Ministry of Mahaweli Development and Environment (MMDE) and the Ministry of Irrigation, Water Resources and Disaster Management (MIWRDM)[4] including its Water Resources Board (WRB) have recognized the importance of putting in place appropriate policies and institutional arrangements to complement the investment program. Yet, these institutions have not fully transitioned from their infrastructure-centered traditions and, therefore, do not yet have the capacity and experience required for designing and executing a modern sustainable watershed and water resources management (WRM) regime, nor do they have the financing required to jump-start and sustain this new approach.

10. **This project will assist the Government to achieve important policy and institutional objectives and support**

**the investments needed to operationalize and sustain those policies.** First, the project will help put in place policies that will seek to preserve, restore, and better manage watersheds. Second, it will support the Government in standardizing the institutional framework for dam planning, safe management, and operation. Third, it will strengthen the human capital needed to design and implement key water resources management policies. The project will pair the implementation of these policy milestones with support for complementary investments such as watershed management (WSM), dam safety improvements, irrigation rehabilitation, and piloting of integrated river basin management planning through approaches designed with extensive stakeholder consultation.

## C. Proposed Development Objective(s)

11. **The Project Development Objective (PDO)** is to restore the Upper Mahaweli watershed, strengthen institutional capacity for water resources management, and enhance functionality of water resources infrastructure.

Key Results

- Land area under sustainable landscape management practices (Hectare (ha))
- River basin planning adopted in one basin
- Number of dams at risk rehabilitated (Number)
- Area provided with new/improved irrigation or drainage services (CRI, Hectare (ha))

## D. Project Description

The project design includes four components, as follows:

12. **Component 1: Watershed and Water Resources Management (US$35 million).** This component seeks to help develop a long-term national watershed management program and restore the Upper Mahaweli watershed. Phase I (Year 1-2, mainly subcomponent 1.1) of the watershed management activities will focus on planning, establishing core knowledge base and institutional strengthening, which will be followed by a phase II (Year 3-6, mainly subcomponent 1.2) which will be for restoration and related infrastructure investments. This component will also support lead WRM agencies, the ID, the MASL, and the WRB on overall water resources planning and management.

13. **Subcomponent 1.1: Watershed management planning and institutional strengthening.** The subcomponent will provide technical assistance and capacity building, to: (i) operationalize the newly established Watershed Management Division under MMDE; (ii) carry out an evidence-based diagnostic assessment of land use focusing on forests, active erosion, sediment generation, and agricultural practices; (iii) develop watershed management plans; (iv) build capacity on watershed management at all levels of government; and (iv) develop monitoring and evaluation systems. Better managed and restored watersheds will protect against further environmental degradation (caused by erosion, sedimentation, etc.), optimize streamflow for the various water uses, and reduce the incidence and impacts of extreme weather events. These will in turn make the residents of

[4] Since December 2018, the Ministry of Irrigation (MI) is under the Ministry of Agriculture, Rural Economic Affairs, Livestock Development, Irrigation and Fisheries and Aquatic Resources Development.

the targeted watersheds more resilient to climate-related floods and landslides. Improved watershed management planning will help to ensure soil and vegetation that sequester $CO_2$ will be better protected.

14. **Subcomponent 1.2: Watershed restoration and related infrastructure investment (US$ 17 million).** This subcomponent will be confined to the Upper Mahaweli Watershed with the intention of demonstrating a scaled approach for future replication in adjacent watersheds. The sub-component will finance the works, goods, and services required to: implement prioritized on- and off-farm WSM activities in the watershed management plans to restore the hydrologic and ecological functioning of watersheds and enhance the sustainability of existing land uses. This subcomponent has estimated net emissions of 979,146 $tCO_2$-eq through reforestation; increasing water flows and reducing sedimentation; and sustainable landscape management and erosion prevention. The subcomponent will also provide: (i) technical assistance to private and state-owned plantation companies for developing protocols for landscape management practices to address land degradation; and (ii) support to state-owned plantation companies, for the replanting of degraded abandoned land with permanent tree cover.

15. **Subcomponent 1.3: Multi-sector Water Resources Planning.** This component will support the water agencies in Sri Lanka to shift toward an integrated river basin planning and water management approach with the participation of key basin water stakeholders. As IWRM offers various tools to optimize access to water and protect the environment (facilitating the restoration of basins), it is central to enhancing communities' adaptive capacity to climate change, particularly floods and droughts. Moreover, involving key stakeholders will also facilitate water conservation efforts.

16. **1.3.1 Basin water management planning and monitoring.** This subcomponent will support the three lead WRM agencies, the ID, the MASL, and the WRB, to develop and pilot key policy innovations. This will include (a) preparation of integrated river basin investment and WRM action plans by developing and piloting an integrated river basin planning approach built on present practice and with the participation of key basin water stakeholders; (b) development, piloting, and integration into the basin management action plan a cost-effective methodology for river basin water quality surveillance and the determination of environmental flows required to manage environmental assets and services; (c) strengthening, modernizing, and improving the transparency of the water allocation and seasonal water operation planning processes; and (d) support for the development of knowledge-based integrated groundwater management basin plans. The ID pilot activities will be carried out for the Ma Oya/Mee Oya river basins in northwest Sri Lanka, learning from which, the MASL pilot activities will be carried out in the Walawe river basin in southern Sri Lanka.

17. **1.3.2 Groundwater management.** This sub-component will support the development of knowledge-based integrated groundwater management basin plans in the pilot basins. It will finance (a) aquifer investigation including exploratory, observation, and pump-test wells and mapping and productivity assessment of aquifers; (b) development of groundwater management tools, guidelines, and regulations; (c) preparation of a groundwater management plan; (d) Establishment of Provincial Groundwater Management Centers (PGWMCs) that will have the role and functions to monitor, manage, and protect the aquifers and their dependent ecosystems within the basins; and (e) capacity building of the WRB and the provincial centers including expanding their centralized and provincial information management systems to accommodate real-time groundwater monitoring and its full integration with databases in the National Water Data Center supported under this component.

18. **Component 2: Infrastructure Improvements (US$129 million).** The aim of this component is to enhance

the efficiency, safety and durability of hydraulic assets and support the institutional arrangements for ensuring proper management and oversight. More reliable and durable water infrastructure, combined with more efficient irrigation systems, will not only increase water supply and decrease demand for water, but also reduce the risk and impacts of floods and droughts. All these factors will enhance the beneficiaries' (especially farmers') resilience to these extreme weather events.

19. **Subcomponent 2.1: Rehabilitation of dams and irrigation infrastructure.** The subcomponent will undertake (a) canal rehabilitation and dam safety remedial works, which could not be funded by the previous Dam Safety and Water Resources Planning Project (DSWRPP, P093132). The works involve dams and irrigation structures to be rehabilitated by the Irrigation Department (ID), Eastern Provincial Council (EPC), Mahaweli Authority of Sri Lanka (MASL), and Norther provincial Council (NPC) and preparation and updating their O&M manuals. Altogether 159 subprojects have been proposed for rehabilitation; (b) Emergency Preparedness Plans (EPP) for critical dams; (c) provide support to farmer organizations (FOs) to carry out the operation and maintenance of the rehabilitated canal systems; and (d) finance the detailed feasibility study for the proposed diversion of water from Kalu Ganga Reservoir to drier North Central Province, as well as feasibility studies recommended by the basin plans prepared under subcomponent 1.3; and (e) finance small infrastructure needs identified and prioritized in the basin plans. The canal-based irrigation infrastructure will all be zero-emissions gravity-based systems.

20. **Subcomponent 2.2: Support for policy and institutional arrangements for dam safety.** This subcomponent supports the continuation of the program started under the DSWRPP for the establishment of long-term arrangements for the safety of dams. The Project will play a leading role in facilitating a process to support the Government in instituting dam safety policies, developing guidelines for dam safety monitoring and inspection, and establishing an independent dam safety agency.

21. **Component 3: Contingent Emergency Response (US$ 0.0 million)**. This contingent emergency response component will allow for rapid reallocation of project proceeds in the event of a natural or man-made disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact. To trigger this component, the Government of Sri Lanka (GoSL) would need to declare an emergency, a state of a disaster or provide a statement of fact justifying the request for the activation of the use of emergency funding. Funds can be reallocated to this subcomponent following a joint decision by the GoSL and the World Bank. This subcomponent will finance expenses on a positive list of goods, works, services, and emergency operation costs required for emergency recovery, as detailed out in the Project Implementation Manual (PIM), prepared for the project.

22. **Component 4: Project Management (US $6 million).** This component will support project management, coordination, and M&E through the Project Management Unit (PMU) established in the MMDE. The PMU will be supported to ensure the quality of overall project management, while ensuring smooth coordination of activity implementation by various implementing agencies. This component will finance: (a) the consultancy and operating costs of the PMU and of implementing agencies, including for fiduciary and safeguard aspects; (b) the M&E of project activities at baseline, midterm, and end of project, including geotagging of the assets created; (c) stakeholder outreach for awareness on the project; and (d) Support training for PMU staff and staff of the implementing agencies.

### E. Implementation

23. **The project will be managed by a PMU embedded in the MMDE.** The PMU will be responsible for ensuring that (a) all project activities are planned, financed, and implemented according to the project, operations manual, and the annual work plan and budget; (b) project implementation is in accordance with the PIM; (c) project procurement and financial management (FM) activities are carried out on time according to the World Bank's Procurement Regulations, the project fiduciary manuals of the PIM, and the Procurement Plan (PP); and (d) social and environmental safeguards applicable to the project are fully complied with. The PMU is also responsible for monitoring project activities, preparing the quarterly and annual project progress reports, and ensuring that all reports (including financial reports) are submitted to the World Bank on time. The overall project oversight will be the responsibility of the National Project Steering Committee (NPSC), established in the MMDE and chaired by its Secretary.

### F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Component 1 would be implemented in the Upper Mahaweli Watershed area. Currently, the precise locations of specific interventions under component 1 are not known and will be known only on completion of the watershed management plans and the relevant technical assessments. Dam and irrigation canal rehabilitation under component 2 will have an island wide coverage. For river basin planning the selected basins are Ma Oya, Mee Oya and Walawe river.

### G. Environmental and Social Safeguards Specialists on the Team

Nadeera Rajapakse, Environmental Specialist
Ferdous Jahan, Social Specialist
Bandita Sijapati, Social Specialist
Shanek Mario Fernando, Social Specialist

## SAFEGUARD POLICIES THAT MIGHT APPLY

| Safeguard Policies | Triggered? | Explanation (Optional) |
|---|---|---|
| Environmental Assessment OP/BP 4.01 | Yes | This policy is applicable because the project will support the rehabilitation of existing dam headworks and irrigation canals across the island as well as undertake water and soil conservation measures aimed at enhancing watershed functions in one of the most critical watersheds in the country. These activties would lead to earth and civil works |

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| | | with mostly short-term and mitigatable onsite and offsite impacts. In addition, the project will support technical feasibilities and the preparation of river basin investment plans that could potentially include improvements/rehabilitation to existing water infrastructure as well as planning for new infrastructure involving inter-basin transfers. As sub-projects that will be supported by the project are not fully known with deatils, an Environmental and Social Assessment and Management Framework (ESMF) has been prepared, cleared and publicly disclosed locally and in the Bank external website since March 2019. The ESMF has been applied to two year 1 investment packages under sub-component 2.1, accordingly detailed ESSRs & ESMPs have been completed and publicly disclosed. All investments will be environmentally and socially screened and assessments completed as per the guidelines set out in the ESMF. Further, a Strategic Environmental and Social Assessments (SESA) will be prepared for all river basin plans as well as other specific basin level feasibility studies (exploring water transfer options) to assess potential environmental impacts and to integrate environmental considerations into the policy and planning framework. |
| Performance Standards for Private Sector Activities OP/BP 4.03 | No | There will not be any activities that involves financing of private sector proposed at this stage of the project preparation. |
| Natural Habitats OP/BP 4.04 | Yes | Many of the country's water management infrastructure is located either within or in close proximity to significant natural habitats or designated areas of ecological importance. Excepting material burrowing, none of the dam rehabilitation and wateshed conservation activties are expected to cause any significant impacts on natural habitats. The feasibility studies and river basin investment plans under sub-component 1.3, however, could potentially identify new water infrastructure that could be located within or traverse natural habitats. As sub-project sites are not fully known with details at this stage, there remains an uncertainty of project locations, thier proximity to natural habitats and how they can be impacted. Therefore, this policy is applicable. The ESMF carries necessary guidance on |

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| | | avoidance/mitigation measures to address such potential impacts through the EA and SESA process. |
| Forests OP/BP 4.36 | Yes | None of the watershed management and dam rehabilitation activties under components 1 and 2 are expected to have any significant impacts on forest areas, as these are either existing infrastructure and/or inhabitated areas. However, extraction of raw materials such as gravel and earth needed for these infrastructure projects could have limited impacts on forest areas. Watershed management activities envisaged under the project is expected to bring positive impacts to the upper watershed areas through reforestation and conversion of pinus plantations to natural broad leaf forests. River basin investment plans the project would support could potentially include proposals for new storage and diversion infrastructure that would have significant implications on forest areas, however, this is unknown. Therefore, this policy is applicable. The ESMF includes appropriate screening processes and necessary guidelines on avoidance/mitigation measures to address potential impacts and to ensure positive impacts are well documented. |
| Pest Management OP 4.09 | No | The potential infrastructure projects under the program do not include purchase of pesticides or pesticide application. Therefore, this policy is not applicable. However, as a precautionary measure, these types of activities will be identified in the negative list with appropriate screening as part of the ESMF. |
| Physical Cultural Resources OP/BP 4.11 | Yes | The potential infrastructure projects under the program may be located in close proximity to designated physical cultural resources and cultural heritage sites as the countries historic cascading earthen tank system itself are sites of national cultural significance. The ESMF will include appropriate screening as part of the physical cultural resource screening and necessary guidelines on avoidance/mitigation measures to address potential impacts. It will also include appropriate screening as part of the EA process and chance-find procedures. |
| Indigenous Peoples OP/BP 4.10 | No | There are no conclusive evidence pointing to indigenous people living within the potential project |

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| | | area who will be adversely affected by the project activities. |
| | | Depending on the location, scale and nature of the investments, especially under Component 2 (rehabilitation of dams and irrigation infrastructure), as well as potential investments derived from watershed management and river basin planning under Components 1, 2 and 3, activities supported under may require acquisition of additional land. Requirements for land are however expected to be minimal, if any, since civil works supported under the project will mostly comprise rehabilitation works limited to the existing footprints of dams and canals. There is nevertheless the risk of adverse impacts on the livelihoods of farmers and fishing communities as a result of reduction or stoppage of water flows into reservoirs and irrigation canals while conducting detailed technical investigations and rehabilitation works; and loss of crops, structures and other assets in cases where there is encroachment into the RoW of irrigation canals, spill talk canals, access roads, etc. |
| Involuntary Resettlement OP/BP 4.12 | Yes | Since the precise nature of all the sub-projects as well as the extent of land requirements are unknown at this stage, a separate Resettlement Policy Framework (RPF) has been prepared alongside the ESMF. Among others, the RPF also includes guidelines for the preparation and implementation of Livelihood Support Assistance (LSA) Plans to aid the farming, fishing and other such communities, affected by water flow interruptions. The preparation of the LSA Plans will be participatory (and gender-inclusive) and will be discussed and agreed with the project-affected people before implementation.<br><br>Moreover, as a part of Component 1 of the project, a Strategic Environmental and Social Assessment (SESA) will be prepared at the basin level to assess the potential social impacts and to integrate social considerations into the regulatory framework as well as proposed watershed management and river basin plans. Necessary steps will be taken to ensure that all sub-schemes incorporate and implement that |

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| | | recommendations of the SESA once they are available. |
| Safety of Dams OP/BP 4.37 | Yes | This policy is triggered because the project will directly support the rehabilitation of existing dam infrastructure which are classified as medium to large (the program will not finance physical interventions that involve the construction of water bodies with embankments more than 15 meters high) and/or rehabilitate water infrastructure that are depended upon the storage and operation of upstream medium/ large dams which is typical for Sri Lanka's cascading tank and irrigation infrastructure. Therefore, due diligence measures with regard to the Safety of Dams have been included in the ESMF. |
| Projects on International Waterways OP/BP 7.50 | No | The policy is not applicable because the project does not include potential infrastructure projects located in or have impacts on international waterways |
| Projects in Disputed Areas OP/BP 7.60 | No | The policy is not applicable because there are no disputed areas in Sri Lanka. |

## KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

### A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

Environment

Under component 1, the project would support the restoration of one of the most critical (and degraded) watersheds in the central mountain area of Sri Lanka. Demands of a rapidly expanding population exerting high pressure on the country's natural resources has resulted in serious land degradation manifested in high rates of soil erosion, sedimentation, soil fertility decline, crop yield reduction, landslides etc. While specific project interventions will be selected through a detail watershed planning process during project implementation, they are likely to include numerous soil and water conservation measures such as reforestation, conversion of Pinus plantations to native broad leaf forests, on-farm and off-farm soil erosion control, drainage and sedimentation improvement etc all of which are expected to generate environmental benefits in the long-run. Any adverse environmental impacts relating to potential investments aimed at curtailing watershed degradation and enhancing the land's hydrological/ecological functions are likely to be associated with land preparation, earth works and construction of small scale infrastructure which will be localized, short-term and manageable.

Component 1 would also support development of integrated river basin investment and WRM action plans for selected river basins which are expected to generate exceedingly positive environmental outcomes in the long-term. As of now it is not known what proposals would comprise the river basin plans. Potential proposals involving inter-

basin water transfers identified within the investment plans would have far reaching safeguard concerns. Any potential risks from such investment proposals will be assessed through strategic environmental and social assessments during the feasibility stage which in turn will duly inform the environmental viability of such proposals. It will support the development, piloting, and integration into the basin management action plan a cost-effective methodology for river basin water quality surveillance and the determination of environmental flows required to manage environmental assets and services. These are critically vital areas that have not received much attention earlier and as such is expected to strategically enhance the sustainability of outcomes from river basin management. River basin planning pilot will be complemented by support to develop knowledge-based integrated groundwater management basin plans - another critical area that will benefit from strategic intervention.

Component 2 would support physical investments to rehabilitate high-risk dam infrastructure similar to what has been carried out under the recently completed Dam Safety and Water Resources Management Project (DWSRPP) as well as rehabilitation of irrigation canals. The type of environmental impacts and risks associated with the type of dam infrastructure rehabilitation are well documented through DSWRPP which include mainly impacts relating to material sourcing (such as sand, gravel, earth and rocks needed for dam rehabilitation work) which can be mitigated with sound construction planning and management. Impacts relating to rehabilitation of irrigation canals would typically include impairment of water quality, restrictions on community use of water, material sourcing, dust, noise and disposal of excavated material etc. All these impacts are anticipated to be short-term and localized and mitigatable with good construction planning.

Social

The project is expected to have positive benefits, especially through on-farm and off-farm soil and water conservation activities, improvements in functionality of water resources, reduced risk of dam failure, and access to improved irrigation facilities. All in all, approximately 110,000 families living within the proposed Upper Mahaweli Watershed will benefit through both on-farm and off-farm soil and water conservation activities; 538,000 families from the interventions made to rehabilitate dams and irrigation infrastructure, especially in the form of reduced risk of dam failure as well as access to improved irrigation facilities; and measures to promote the participation of youth and women in key project interventions will help ensure that they benefit from project results.

However, interventions under Components 1 and 2 (e.g., rehabilitation and management of the proposed watersheds, the introduction of agro-forestry, dam safety remedial works, etc), are likely to trigger some adverse social impacts. While land acquisition and physical displacement of people is not envisaged, it is likely that while carrying out detailed technical investigations and remedial works under Component 2, water flows into reservoirs and irrigation canals might have to be reduced or stopped for prolonged periods, leading to disruptions in irrigation releases and drinking water supplies to rural and urban water supplies. Likewise, there is likely to be some encroachment into the RoW of irrigation canals, spill talk canals, access roads, etc. Project interventions thus could lead to loss of structures, crops, trees, etc., as well as have an impact on the livelihoods of fishermen and farmer communities living and cultivating within the project area.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
The watershed management activities supported by the project will be part of a larger Upper Mahaweli Watershed Management Plan, implementation of which will be facilitated by necessary sectoral policy, planning and institutional reforms. This plan will be a long-term commitment undertaken by the government to address a critical issue in the country’s main watershed that feeds its main rivers, as such potential long-terms impacts from unanticipated

developments are not envisaged as a major risk. Watershed management programs will have multiple social benefits in terms improved livelihood opportunities and enhanced asset base (livestock and agriculture) that will essentially improve their quality of life.

The rehabilitation of dams and irrigation infrastructure component of the project essentially aims at addressing the urgently needed remedial work to improve dam safety in some of the tanks/reservoirs considered to be of high to medium risk and irrigation efficiency of selected distribution networks. Apart from the urgent repairs supported by the project, it is possible that the GOSL could undertake other interventions in the future as part of a continuous effort to improve/maintain dam safety and irrigation efficiency. However, since it is not possible to define what those activities would constitute of (if undertaken at some point in future), it is not possible to assess any resultant cumulative environmental and social impacts. For large development programs, EIAs/IEEs will be mandatory in accordance with the National Environmental Act and associated regulations, hence the impacts will be addressed through the EIA/IEE studies in the future. The EAs will take activities funded under this project into account, therefore, cumulative impacts, if any, will be addressed at that stage.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

Component 1 and 2 are addressing critical needs of the country's water sector. The degradation of the Upper Mahaweli watershed has contributed to reduced water flows and storage capacities in several strategic reservoirs serving multiple development purposes. Soil erosion, reduced soil fertility, sedimentation of the country's main reservoirs trigger multiple downstream impacts and hence need urgent addressing. The dam and irrigation infrastructure rehabilitation component is primarily focused on reducing water induced hazards to the public by improving dam safety of some of the high risk tanks/reservoirs in the country and improving efficiency of irrigation water through minimizing water losses. Therefore, the proposed interventions are essential and critical and hence alternative options do not apply because the reservoirs/dams are already constructed and the project is financing interventions for rehabilitation in order to increase the operational efficiency of these infrastructure. Different alternatives for rehabilitation will be considered during the engineering design stage and the most sustainable option will be selected. Technical alternatives will be explored to the fullest extent so as to avoid stoppage of irrigation water flows and the adverse impacts thereof. Component 3 aims to improve the capacity to plan water resources in the country, which is essential especially in the face of ever increasing demand for water and anticipated climate change impacts.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

The demand-responsive approach adopted under this project means that the participating communities and sub-projects are yet to be fully identified. As such, the Ministry of Mahaweli Development and Environment (MMDE) has prepared an Environment & Social Management Framework (ESMF) and Resettlement Policy Framework (RPF). The ESMF identifies environmental/social concerns that require attention during the design and implementation stages of sub-projects and recommends a process for the early identification and mitigation of potential impacts in all categories of sub-projects. The ESMF has been applied to two irrigation schemes which will be taken under year 1 investments (Mahalindawewa dam rehabilitation and Walawe right bank irrigation canal rehabilitation). According to findings of the environmental and social screening, no serious or irreversible issues are expected from these sub-projects and is deemed to require ESMPs only. Application of the ESMF for several other dam remedial package and irrigation canal rehabilitation package have already commenced and is expected to be completed before the project is effective.

Similarly, the RPF prepared under the Project identifies, social issues typically associated with impacts relating to 'involuntary resettlement' in the rehabilitation of watersheds and existing dams and suggest ways and means of addressing such issues in a site-specific manner. The RPF includes relevant legislation and regulations existing in Sri Lanka that govern the preparation and implementation of Resettlement Action Plans (RAPs). In addition, the RPF also includes provisions for the preparation and implementation of Livelihood Support Assistance (LSA) Plans to aid the farming, fishing and other such communities affected by water flow interruptions. The preparation of the LSA Plans will benefit from the experience of the erstwhile DSWRPP. The planning and preparation of the LSAs It will be participatory (and gender-inclusive) and will be discussed and agreed with the project-affected people before implementation. The project will ensure appropriate documentations of these engagements with the stakeholders and feedback from the consultations will be used to inform the design and implementation of the project as well as the LSA Plans, where relevant. As described in the ESMF and the RPF, a robust mechanism for grievance redress will be established, and the procedures for the uptake of complaints and the resolution of the same, will be detailed in the Operational Manual (OM). Institutional arrangements for the implementation of the RAPs/ESMPs for each watershed and dam rehabilitation have also been described in the ESMF and RPF.

The project will be executed by the MMDE under which the PMU will be established. The key implementing partners Mahaweli Authority of Sri Lanka, the Irrigation Department and the Forest Department have ample experience in conducting environmental and social assessments through the recently concluded DSWRRP and other on-going engagements with the world bank on the irrigation and forestry sectors. As such key personnel in the implementing agencies are well aware of environmental and social safeguards requirements as a significant number of officials have already been trained under the recently concluded and on-going engagements with the bank.

The main responsibility for ensuring compliance with environmental safeguards requirements will be borne by the PMU which will be supported by safeguards staff who are suitably qualified and experienced. Technical capacity to undertake environmental and social screening, and preparing site-specific ESMPs, will be developed within the PMU and it’s provincial and district implementing arms. In the event EA/EIAs/SIAs are warranted, including preparation of LSA plans and RAPs, the PMU will recruit consultants with the required expertise. Review and clearance of sub-project level environmental and social screening and EAs will be undertaken by the PMU and in the case of Cat A and Cat B sensitive type of sub-projects, concurrence of the World Bank will be required.

The GOSL has past experience in managing environmental and social safeguard risks in large scale development work funded by international donor agencies. The Central Environmental Authority, the country’s premier environmental regulatory agency, has almost three decades of experience in environmental management and monitoring of development projects. However, the CEA is unlikely to be closely involved with the project given that most of the sub-projects will not fall into the prescribed category of projects. The NWSDB has implemented several WB and ADB funded projects in the sector and hence is familiar with safeguard requirements. Having said that, the project will need to build its own technical capacity to support safeguard management in its sub-projects.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The project stakeholders are governmental officers and residents in the watershed, community organizations, women’s groups, farmers/ fishery associations, watershed management committees, and tea plantation companies. These stakeholders will be engaged by the project through existing channels and schemes. Regular consultation will take place. The Operations Manual (OM) of Component 1 lays out a framework and process of how the consultation should take place. The OM will implement the recommendations in ESMF and RPF in designing the Stakeholders Engagement Plan (SEP). Efforts will be taken to ensure that women, elderly people and other vulnerable groups are

included as stakeholders of the project and meaningful consultations are periodically held with them to identify any unanticipated adverse social impacts. If needed, women-only meetings will be arranged to ensure their participations. Learning from the experience of the earlier project (the Dam Safety and Water Resources Planning Project), the PMU will empower the local communities to mobilize them for livelihood activities and participatory monitoring of project activities, beyond setting up a grievance redness mechanism for the project level. Quarterly meetings with community members will be conducted to reflect feedbacks from local communities. In addition to the above, environmental and social screening will include additional consultations on specific safeguard issues and all safeguard instruments will be publicly disclosed via the project's website and the Bank's external website.

## B. Disclosure Requirements

**Environmental Assessment/Audit/Management Plan/Other**

| Date of receipt by the Bank | Date of submission for disclosure | For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors |
|---|---|---|
| 22-Feb-2019 | 28-Mar-2019 | 30-Aug-2019 |

**"In country" Disclosure**

Sri Lanka
15-Mar-2019

Comments

**Resettlement Action Plan/Framework/Policy Process**

| Date of receipt by the Bank | Date of submission for disclosure |
|---|---|
| 14-Mar-2019 | 28-Mar-2019 |

**"In country" Disclosure**

Sri Lanka
14-Mar-2019

Comments

## C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

**OP/BP/GP 4.01 - Environment Assessment**

Does the project require a stand-alone EA (including EMP) report?

Yes

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?

Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?

Yes

**OP/BP 4.04 - Natural Habitats**

Would the project result in any significant conversion or degradation of critical natural habitats?

No

If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?

NA

**OP/BP 4.11 - Physical Cultural Resources**

Does the EA include adequate measures related to cultural property?

Yes

Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?

Yes

**OP/BP 4.12 - Involuntary Resettlement**

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes

**OP/BP 4.36 - Forests**

Has the sector-wide analysis of policy and institutional issues and constraints been carried out?

NA

Does the project design include satisfactory measures to overcome these constraints?

NA

Does the project finance commercial harvesting, and if so, does it include provisions for certification system?

NA

**OP/BP 4.37 - Safety of Dams**

Have dam safety plans been prepared?

Yes

Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?

Yes

Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?

No

**The World Bank Policy on Disclosure of Information**

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes

**All Safeguard Policies**

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

Yes

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| Practice Manager/Manager: | Ahmed Shawky | 04-Sep-2019 |
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