Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 05-Oct-2018 | Report No: PIDISDSC23414

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Africa	P165352		Lake Victoria Environmental Management Project Phase Three (P165352)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
AFRICA	Mar 25, 2019	Sep 30, 2019	Environment & Natural Resources
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Burundi Ministry of Water, Environment, Land and Urban Planning,Kenya Ministry of Environment, Natural Resources and Regional Development Authorities,Uganda Minisry of Water and Environment,Tanzania Ministry of Water and Irrigation,Rwanda Ministry of Enviroment	Lake Victoria Basin Commission	

Proposed Development Objective(s)

The Project Development Objective (PDO) is to strengthen transboundary natural resources management and climate-resilience in the Lake Victoria Basin and reduce environmental degradation in selected hotspot areas.

As LVEMP3 will also aim to get GEF support, its objective is consistent with the GEF's strategic long-term priorities for International Waters (IW), which include fostering international, multi-country cooperation on priority transboundary water concerns. The PDO makes advancements in the IW focal area by supporting and promoting collective management and governance of the Lake Victoria water system through the implementation of policy, legal, and institutional reforms and investments that contribute to sustainable use and maintenance of LVB's ecosystem services.

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	243.00
Total Financing	243.00
of which IBRD/IDA	233.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	233.00
IDA Credit	195.00
IDA Grant	38.00

Non-World Bank Group Financing

Trust Funds	10.00
Global Environment Facility (GEF)	10.00

Environmental Assessment Category	Concept Review Decision
B - Partial Assessment	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

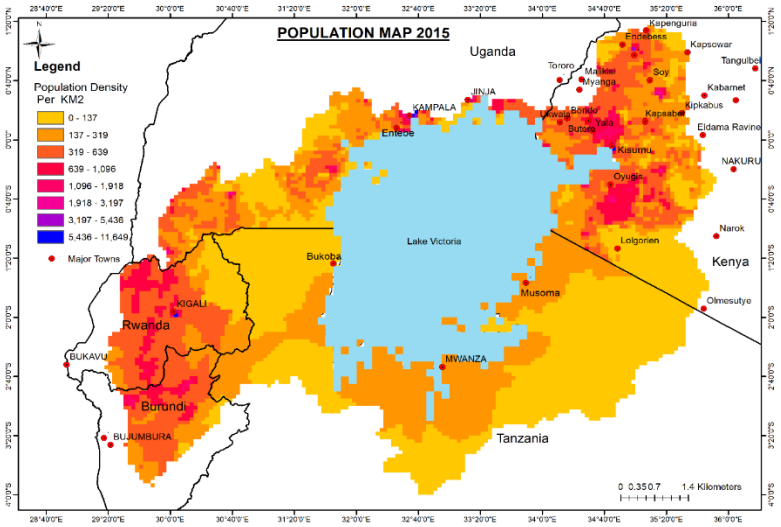
B. Introduction and Context

Country Context

1 **Lake Victoria and its watershed is a transboundary natural asset of global importance**. As the world's second largest lake, the Lake has a surface area of about 68,800 km2 with an average depth of 40 meters. It is located in Tanzania (49%), Uganda (45%), and Kenya (6%). Lake Victoria Basin (LVB), part of the Nile River Basin, occupies an area of 194,000 km2, which is jointly shared by Tanzania (44 percent), Kenya (22 percent), Uganda (16 percent), Rwanda (11 percent), and

Burundi (7 percent). Rwanda and Burundi are a part of the upper watershed draining into Lake Victoria through the Kagera river. The lake is the headwater of the White Nile.

2 **LVB is an area of concentrated poverty with high dependance on natural resources.** The Basin is home to around 45 million inhabitants, with an estimated population density of 300 persons per km^2, much higher than Africa's average of 36 (see Figure 1). Poverty (see Figure 2) is pervasive in the Basin, and it is estimated that 77.7 percent of Burundi's population living in extreme poverty, whereas the poverty rates in Rwanda, Tanzania, Kenya, and Uganda are at 60.4 percent, 46.6 percent, 43.4 percent, and 34.6 percent, respectively. Most of the poor in the Basin rely on natural resources for their livelihoods and the dense population increases pressure on land, forests, catchments and the Lake itsself. Large rural poor populations are dependent on the degraded lands in the upper Basin, particularly in Burundi, Rwanda, and the Kenya highlands. Over 80 percent of LVB's population rely on agricultural and livestock activities for their livelihoods and more than 60 percent of the population depends on rainfed agriculture, which generates between 30-40 percent of the regional GDP. More than 200,000 fishermen and their families depend on daily fish catches for their basic living. The dense population and low levels of development drive unsustainable use of natural resouces and negativley impact the Lake.



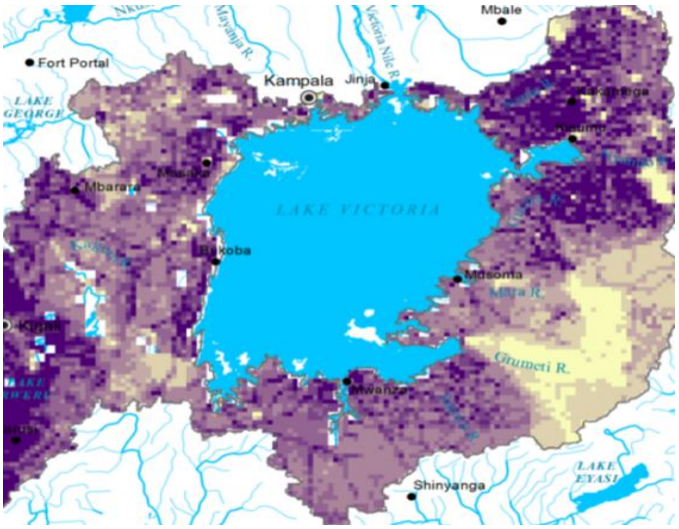


Figure 1. Population Density in LVB

Figure 2. Poverty incidence around Lake Victoria

3 **Lake Victoria and its watershed are transboundary assets, economically important to the five LVB countries.** The Lake provides water supply, significant commercial fishing, waterway transportation, hydropower generation, and great potential for tourism activities. The Lake and its tributaries are the main source of domestic, industrial and irrigation water and it supplies drinking water to major urban centers with populations over a million such as Kampala, Kisumu, and Mwanza. The Lake is navigable, providing a viable shipping and transportation route between and within the riparian countries. The fishery provides direct employment for more than 800,000 people. Fish production is estimated at freshwater fishery, with total landed catch value estimated at around US$500 million annually, supporting the livelihoods of 3 million people, generating US$400 million in export revenues, and providing up to roughly 0.8 million tons of fish to local markets. The establishment of the Nile Perch fishery in the 1980s and 1990s provided a resource boom that drew in poor and disadvantaged people from the neighboring countries. But overfishing and environmental problems are now causing a declining fish stock [33 percent between 2015 and 2016 with a further drop expected between 2016 and 2017] and therefore a related economic loss to local people and communities which heavily depend on the fisheries in the lake. The lake and its catchment are the main water source for domestic, industrial, irrigation, and hydropower use, providing 90 percent of Uganda's hydropower, most of the hydropower for Rwanda and Burundi, and the water supply to major

urban centers, including Kampala, Mwanza, and Kisumu. Protected areas cover 25 percent of the Basin's land area and include some of the most renowned wildlife attractions in Africa – Serengeti and Volcanoes National Parks.

4 **LVB has been experiencing rapid population growth, urbanization, and industrialization.** The Basin's population has grown from 35 million in 2006 to 45 million in 2017. Urbanization is driving populations to cities along the lakeshore, resulting in rapid expansion of cities such as Mwanza, Kisumu, Entebbe, and others. For instance, the population in Mwanza has increased by 40% in the ten-year period of 2002-12. Industrial development has also picked up speed, with an increased number of industrial entities discharging untreated wastewater and solid waste into the lake and catchments. The rapid rate of growth is stressing the lake and its catchment in order to retain natural resources on which regional growth and rural populations rely.

5 **The five Basin-Countries work together to manage Lake Victoria, despite historical tension and fragility.** Tension among the five EAC states has fluctuated over recent decades, with most countries currently mantining diplomatic relationships with other EAC countries (Rwanda and Burundi do not have diplomatic relationship). In spite of these tensions, the LVEMP program hass been jointly implemented by the five EAC member states since 1997. The program experiences relatively high willingness to cooperate and benefits from continuous support from all countries for the LVBC. Burundi is currently considered to be in a Fragile Situation according to the World Bank Harmonized List and the UNHCR assesses that 396,000 refugees have fled Burundi in recent years (May, 2018) and are hosted predominantly in the other four EAC countries.

Sectoral and Institutional Context

6 **Lake Victoria's ecosystems have undergone substantial and alarming environmental degradation over the last 40 years.** Substantial increases in water pollution, largely from discharge of untreated municipal and industrial waste and high sediment loading caused by unchecked erosion in upper catchments, is caused largely by the dense population centers and rural subsistence livelihoods. Figure 3 shows the distribution of point-source pollution in LVB. Clearly, large urban centers, such as Mwanza, Kisumu, Kampala/Entebbe, discharge the most BOD loads into the Lake. Figure 4 further presents Total Nitrogen (TN) runoff intensity by sub-river basin within LVB. As a result, the Lake experiences widespread eutrophication, which causes fish kills, oxygen depletion and spurs growth of harmful algae microorganisms, and aquatic weeds which further deplete oxygen and inhibit navigation, and the depletion of fish stocks. Water in the Lake is often a human health hazard, as untreated municipal waste increases spread of disease vectors and untreated industrial waste is also a major risk for human health. Figure 5 shows the extent of eutrophication assessed using satellite imagery. Nearly the entire perimeter of the Lake experiences hyper-eutrophication, or extremely poor water quality, whereas the entire rest of the Lake experiences poor or fair water quality; there are no zones of good water quality detected in the Lake. In addition, climate change will increase the rate of environmental degradation in the Lake as increased temperatures will accelerate eutrophication and spread of disease vectors and the increasing frequency and severity of floods and droughts will further drive erosion and increase sediment in runoff. These environmental challenges are the result of the deep poverty in the region and the Basin, where subsistence farming and fishing are both the root cause of the problem and the primary livelihoods of those most in need.

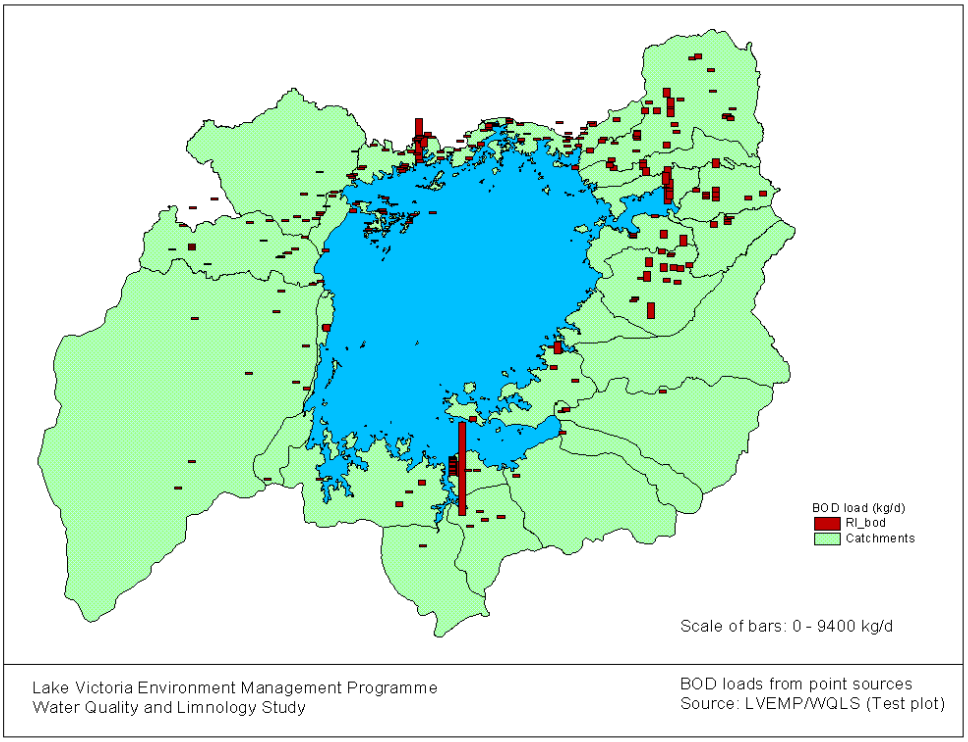


Figure 3. Distribution of point sources BOD (kg/day) in LVB

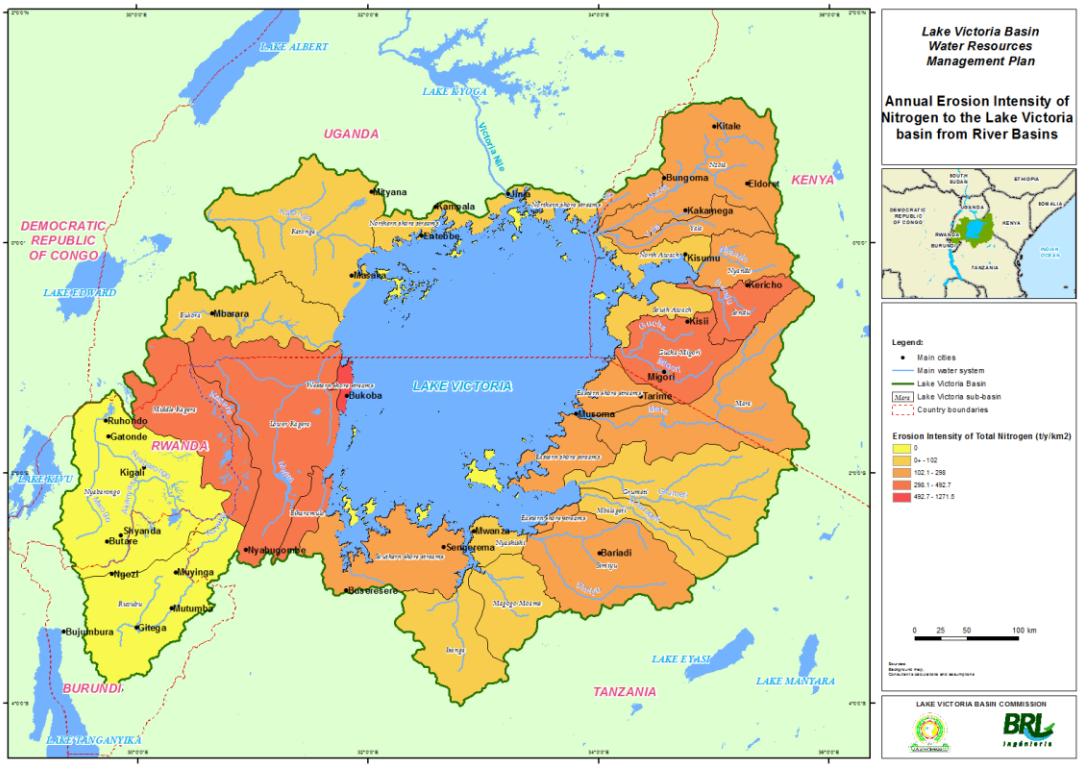


Figure 4. Total Nitrogen Runoff Intensity by Sub-river basin (kg/km2/year) in LVB

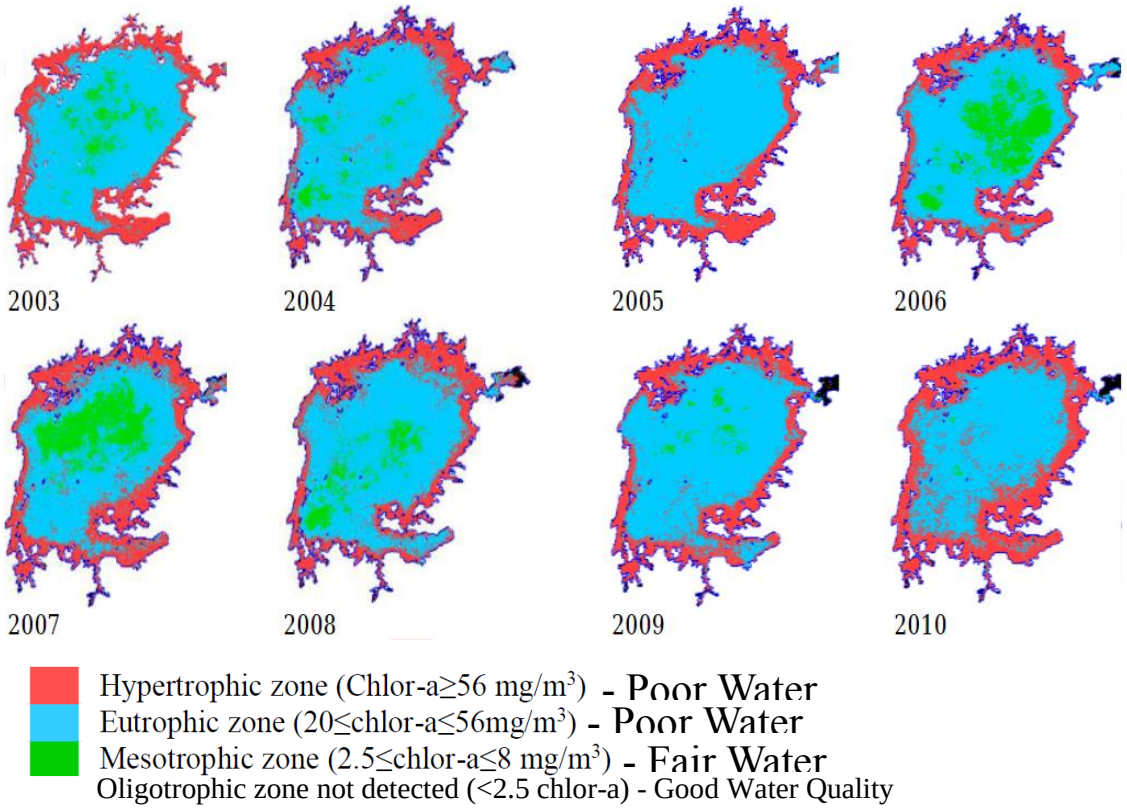


Figure 5. Satellite imagery shows eutrophication in Lake Victoria as an indication of water quality.[1]

7 **Slowing environmental degradation of the Lake requires a multi-faceted, long-term approach.** The drivers of environmental pollution in the LVB are varied and numerous, necessitating that the response is multi-faceted. Municipal and industrial wastewater treatment coupled with city-wide, inclusive sanitation are required to reduce discharge of untreated wastewater into the Lake. Industrial pollution also increases BOD loading, but more importantly, the risks of severe shocks to the environment associated with industrial pollutant spills are significant and should be controlled. Harmonized regulation and enhanced enforcement capabilities, coupled with scale-up of knowledge sharing on cleaner production techniques are needed to motivate industry and municipal governments to reduce untreated waste disposal; a harmonized industrial waste preparedness and spill response system will help to avoid more catastrophic issues in the future. Catchment management and enhanced livelihoods are needed to reverse erosion and reduce sediment loading. Other environmental management measures, such as aquatic weed control, fisheries management and forest management are necessary to reverse environmental degradation in the Lake. Considering climate vulnerabilities and incorporation of climate resilient livelihoods into environmental management measures will be essential to outcome sustainability. All of these actions require adequate regional and national planning, coordinated and harmonized regulation, monitoring and information transparency as well as technical knowledge sharing and long-term, sustained support. See Theory of Change in the Annex for a depiction of how a variety of actions are needed to address environmental degradation in Lake Victoria. In the long-term, reform and reversal of environmental problems will also require investment in irrigation and energy efficiency and other economic development activities. The need for sustained support to slow and eventually reverse environmental degradation is an experience common to countries at all levels of development, where examples such as the Chesapeake Bay, Caspian Sea and Danube River have received focused effort,

[1] Adapted from Gidudu et al., 2016

and often international support for many decades and are slowly reversing the negative trend in environmental degradation.

8 **Water quality management in LVB requires coordinated regional and national action.** Because of the shared nature of the resource, environmental problems in LVB are shared by all countries and are inherently regional problems. Disease vectors and oxygen depleting nutrients which enter the Lake in untreated wastewater discharged by one nation affect water quality for all countries that share the Lake. Soil and nutrient erosion occurs extensively in all five countries. A soil-erosion hot-spot analysis depicted in Figure 6 accounts for soil cover, slope properties, soil type and rainfall to assess likely areas of sediment runoff. Sediment and nutrient transport occurring extensively in all five countries, coupled with untreated wastewater, cause eutrophication throughout the Lake and provide a fertile environment for the nuisance invasive weeds, such as water hyacinth. The depletion of fish stocks is the joint outcome of poor water quality and overfishing/illegal fishing, driven by all riparian countries. Because the water body is shared and water from all countries' tributaries mixes naturally, these problems cannot be solved through the efforts of a single country. Addressing these challenges requires both local and national efforts in all countries, jointly undertaken and coordinated at the regional level.

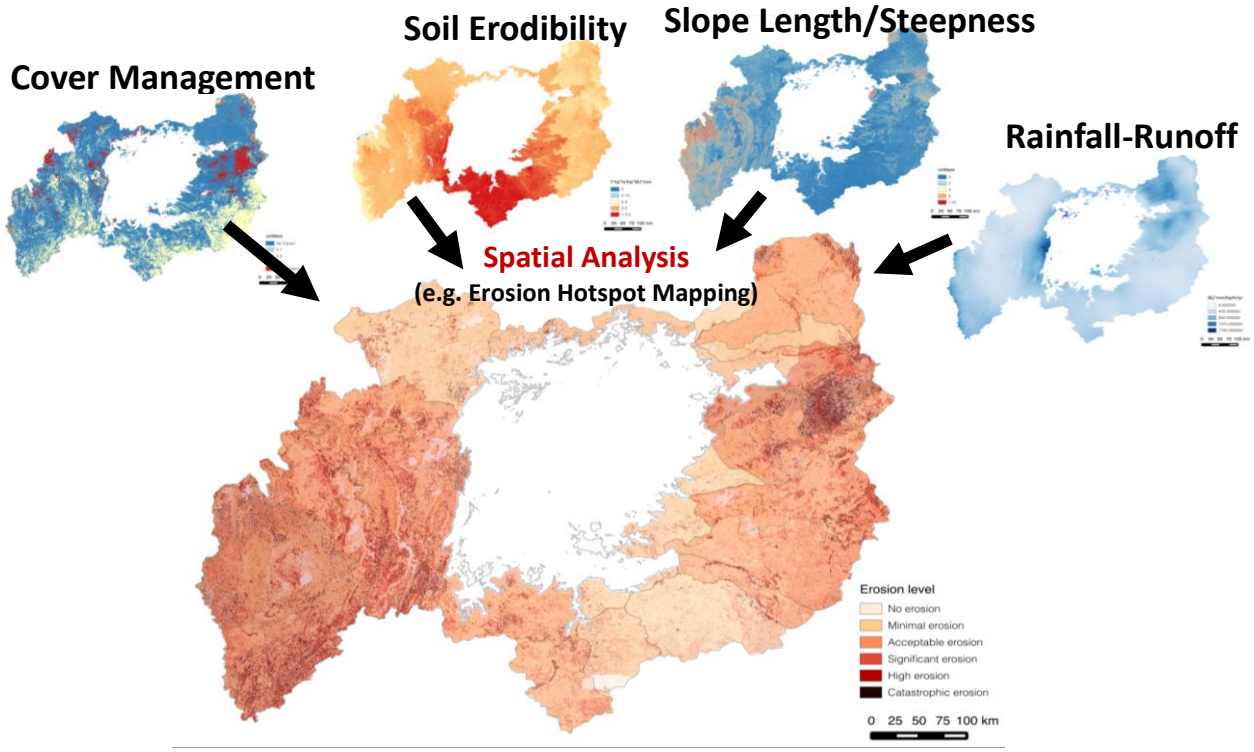


Figure 6. Spatial analysis used to assess and depict soil-erosion hotspots and likely areas for land and watershed management.

9 **The LVB countries recognize the need for coordinated action.** Through the EAC, the five Basin-countries have proactively taken joint efforts to address environmental degradation in the Lake with the technical and financial support of the World Bank and other donors. Through numerous protocols, the five countries have agreed to cooperate to manage the Lake's resources and address the environmental concerns of the Lake and Basin. The Lake Victoria Basin Commission (LVBC) was established in July 2005 as a permanent apex institution of the East African Community (EAC), to provide a regional coordination framework for addressing the shared concerns of the Member States. While the countries do not always agree or coordinate water-resources allocations and development-related decision making in Lake Victoria and the

broader Nile Basin, the national commitment to addressing environmental degradation challenges and securing livelihoods for people in the Basin remains high and is balanced in all countries. At the local level, commitment to action varies and is informed by local experience/impacts, interests and benefits, reinforcing the need to design project-related actions in coordination with national as well as local leaders.

10 **LVEMP Program is making a significant step towards reducing the environmental degradation trend in LVB.** With the technical and financial support of the World Bank, EAC and its member states launched the phased regional initiative LVEMP. The first phase of LVEMP (LVEMP1, 1996–2005) greatly improved the understanding of the environmental challenges faced by the Lake, and piloted investments in watershed rehabilitation and reducing water hyacinth infestation. Building on these results, the second phase of LVEMP (LVEMP2, 2009-2017) prioritized the environmental threats in the Lake, tested a variety of interventions in pollution and watershed management (including municipal and industrial wastewater treatment in hotspots and sustainable land and water management in priority river basins), and strengthened regional cooperation for an improved management of the Basin. Today, the Lake and its resources continue to fuel the economies of Kenya, Tanzania and Uganda, partly due to the success of these efforts. Without LVEMP, the understanding of the main degradation problems, potential solutions, and cross-border coordination would have been very limited, which would have encouraged continuous proliferation of water hyacinth and other forms of potentially irreversible pollution and degradation. Although substantial problems persist, they would have been even more severe without these efforts.

11 **Reversing and slowing long-term trends in environmental degradation requires a sustained commitment.** Lake Victoria experiences a variety of complex and interwoven water-quality challenges that are driven largely by the deep poverty and lack of alternative livelihoods in the region. With a water retention time of about 23 years, environmental degradation—once it occurs in the Lake—is hard to revert, and has a lasting impact on the people and economy of Lake Victoria Basin (LVB) countries. Without support from the LVEMP program and other donors, the water quality and ecosystems in the Lake would have declined much more rapidly; watersheds would be more seriously denuded and spread of waterborne disease would be more rampant. Efforts in the LVEMP program and those of other donors have successfully reduced the rapid pace of degradation and the Lake's resources continue to fuel the economies of the Basin-states. Donor support and country commitment have put in place important institutional structures needed to safeguard the Lake's resources, including the capacity for coordinated action and understanding of the need to reduce the rapid pace of water quality degradation. At present, LVEMP support is only able to slow down trends in deterioration, however it is important to remain committed to both the poverty-targeted support in watershed management and the environmental outcomes and reduced impact on the Lake to sustain gains made and continue to slow decline. which will require long-term commitment on the part of the countries and sustained donor support.

12 **Addressing environmental problems in the Lake and its Basin will require a wide range of regulatory, technical assistance and physical investments; LVEMP3 will prioritize information and monitoring systems, regional planning for sanitation and wastewater management and sustainable land and water management.** The full extent of environmental pollution issues and the impact of management interventions on addressing those issues are not well characterized. LVEMP3 will prioritize environmental pollution monitoring systems, both field-based and using satellite imagery, to establish a clearer baseline and monitor results of the current phase of the program and future interventions. The program will also establish a framework and process for prioritization of future environmental management actions. LVEMP3 will advance a combination of information and institutional strengthening efforts as well as on-ground investments to control soil erosion and reduce nutrients entering water bodies. LVEMP will advance other natural resource management issues, particularly city-wide inclusive sanitation, through support for regional planning and capacity building and connecting with on-going World Bank operations in transport, urban environmental services, and water and sanitation in the Basin countries (see Annexes 1 and 2). Recommended prioritization of specific actions as well as the rationale for

their inclusion or exclusion based on lessons learned from the LVEMP program implementation are shown in Annex 3. A Theory of Change for the full range of environmental management actions needed in Lake Victoria as well as the prioritized actions and how they contribute to outputs and outcomes is included in Annex 4.

13 **Project and long-term outcomes benefit the five countries economies, rural livelihoods and ecosystems.** While the project is focused on slowing environmental degradation, long-term environmental management will benefit economies and rural livelihoods. The Lake and the basin provide a resource that rural people rely on for protein, agricultural and drinking water – a resource that becomes particularly important during drought and conflict. The region also depends on Lake and tributary function for transportation, commercial fisheries and drinking water for cities, elements which underpin their natural-resources-based economies. Long-term, the protection of the Lake provides a buffer against shock and stress and can help fuel economic growth.

C. Relationship to CPF

14 **The proposed LVEMP3 is aligned with the WBG's twin goals of ending extreme poverty and promoting shared prosperity.** The project aims to contribute to achieving the Strategic Priority No. 4 of the World Bank's Regional Integration Strategy "Promoting Global Public Goods" and, particularly, its objective "Manage coastal erosion, marine fisheries and trans-boundary water resources management." The project is to improve the sustainable management of the transboundary national natural resources, as well as contribute to livelihoods of the poor.

15 LVEMP3 also aims to directly contribute to the World Bank's country strategic objectives:

- Kenya's CPS suggests the engagement domains, of which one is the objective of increasing Competitiveness and Sustainability – Growth to Eradicate Poverty. LVEMP3 objectives and expected outcomes will be particularly aligned with the strategy focusing on strengthened planning and management of economic growth, climate change as well as increased agricultural productivity. Additionally, improved delivery of social services for vulnerable groups, particularly women, are an expected outcome of LVEMP3, contributing to the engagement domain Protection and Potential – Human Resource Development for Shared Prosperity.
- LVEMP3 will align with Tanzania's CPF's Focus Areas "Enhancement of Productivity and Accelerate Diversified and Equitable Growth" and "Modernizing and Improving Efficiency of Public Institutions", particularly Objective Indicator 1.3 "Natural resource management for equitable growth".
- The Ugandan CPF FY16-21 includes the objective to enhance resilience of the poor and vulnerable to current and long-term degradation of natural resources, droughts, including management of catchment areas to mitigate the effects of climate change. Furthermore, LVEMP3 will particularly contribute to achieving improved interconnectivity for regional integration and the increased efficiency and sustainability of natural resource management.
- The Bank's CAS for Burundi recognizes that regional integration is key for Burundi's development agenda, stressing the need to "improve food systems and environmental management" and aims to achieve Equitable and Sustainable Growth (under the CAS Strategic Objective 1) in which land and environment degradation issues need to be addressed.
- The CPS for Rwanda emphasizes that protecting the environment and natural resources is critical to ensuring a sustainable "green economy," and that the need to invest in and promote greater regional integration is a priority.

Alignment with national and regional priorities

16 **The EAC and its Partner States recognize that the ENR challenges facing the LVB require increasingly close cooperation to reach a sustainable future growth scenario.** The objective of LVEMP3 closely follows the Protocol of

Sustainable Development of the Lake Victoria Basin, and "A Shared Vision and Strategy Framework for Management and Development of the Lake Victoria Basin" adopted by the EAC Partner States in 2003.

17 **Sustainable management in Lake Victoria is also highlighted in the national development strategies of each LVB country, which identify environmental degradation as a threat to national development.** They have incorporated the important role of ENR management in health improvements, poverty reduction and sustainable economic growth, for example, Vision 2030 and Economic Recovery Strategy for Wealth and Employment Creation (ERS) of Kenya; Vision 2025, the National Strategy for Growth and Reduction of Poverty (NSGRP), and National Five-Year Development Plan for the period 2016/17-2020/21 in Tanzania; Vision 2040 and the National Development Plan (NDP II) of Uganda. Rwanda specifies goals in the second Economic Development and Poverty Reduction Strategy (EDPRS2) covering four thematic areas, including the cross-cutting issues of environment and regional integration. Burundi sets out its ambitions for future growth and development in Vision Burundi 2025 and the Poverty Reduction Strategy 2012 which also cover environmental and regional aspects of development.

C. Proposed Development Objective(s)

17 18 The Project Development Objective (PDO) is to strengthen governance and climate-resilience in transboundary environmental and natural resource management in the Lake Victoria Basin and reduce environmental degradation in selected hotspot areas.

18 As LVEMP3 will also aim to get GEF support, its objective is consistent with the GEF's strategic long-term priorities for International Waters (IW), which include fostering international, multi-country cooperation on priority transboundary water concerns. The PDO makes advancements in the IW focal area by supporting and promoting collective management and governance of the Lake Victoria water system through the implementation of policy, legal, and institutional reforms and investments that contribute to sustainable use and maintenance of LVB's ecosystem services.

Key Results (From PCN)

Project beneficiaries and expected outcomes

20 The project beneficiaries will be the community members, including women and children, who will benefit from sustainable land and water management practices, reduced environmental degradation, improved climate resilience, and enhanced livelihood opportunities in selected hotspot areas. The LVB Commission and Partner State Governments, including sectoral ministries, will benefit from clear policies and guidelines, strengthened mechanisms for regional coordination and cooperation, regional planning, institutional capacity building, and outreach and communication programs. Local governments will benefit from strengthened institutions and capacity to manage, operate, and maintain interventions in a financially sustainable way to achieve both environmental improvement and poverty reduction. The private sector and civil society will benefit from greater inclusion and participation in environmental and natural resource management.

Key outcome indicators

21 During preparation, the team will work with the clients, World Bank M&E specialists and draw on good practice examples and recent portfolio review documents to develop an M&E system that captures the results of this project. The project will establish a baseline for monitoring purposes at the project outset. Outcome indicators under consideration

are:

Governance in transboundary ENRM
- Regional platform for sharing information on the state of the Lake established and functional (yes/no)
- Score on policy and regulatory framework in LVB

Climate resilience in transboundary E and NRM
- Share of targeted beneficiaries adopting climate-resilient land-linked practices (percentage);

Soil erosion:
- Area under sustainable landscape management practices (ha)*

*Denotes Corporate Results Indicator

D. Concept Description

22 The project proposes to have the following components:

Component 1: Strengthening cooperative management of transboundary natural resources

This component focuses on the improvement of cooperative management of the Basin's shared transboundary natural resources. It will assist EAC and its five LVB countries in environmental and ecosystem monitoring for more transparent information about pollutant loading, effects on the Lake and its ecosystems and to establish an information base on which countries can base future investment in maintaining and restoring Lake function. Building on enhanced information services, the LVBC will coordinate and develop regional planning and technology dissemination efforts for key regional ENRM issues, such as sanitation, aquatic weed control and erosion control. Underpinning the important information services and regional planning, Component 1 will strengthen the capacity of LVBC to sustainably fulfill functions prioritized by its Member States. Disbursement-linked indicators (DLIs) will be adopted in the component to ensure tangible actions and results from clients. The following sub-components are proposed:

1.1: Improve regional information services on water quality and ecosystem health. This sub-component will support LVBC's ability to characterize water quality and ecosystem services and to provide information services to its main stakeholders including providing important regional early warning functions in the Basin. Key activities will include: (i) establishment of an online regional water quality monitoring platform; (ii) delivering the State of the Lake report; (iii) conduct fish resource surveys and ecosystem monitoring.

To achieve this, the LVBC will establish an online information platform that draws on information shared by member states and remotely sensed data to provide synthesized information services on pollutant loads, key water quality parameters such as turbidity, BOD, nutrients. Near real-time early warning systems that require regional data sharing and/or that are best leveraged at the regional level, such as aquatic weed growth, storm warning, toxic spill emergency response and other relevant systems will be included in the regional platform. This sub-component will also support LVBC to develop and deliver the State of the Lake report and to introduce and pilot advanced technology for water quality monitoring systems. Finally, this Sub-Component will support LBVC and LVFO to assess ecosystem service productivity, including conducting fish resource surveys and related ecosystem monitoring at the regional level. National level water quality monitoring systems strengthened under Sub-Component 2.3 will be closely linked to the regional water quality platform advanced under Sub-Component 1.1.

1.2: Regional investment planning for improved water quality and eco-system services. This sub-component will

support development of a Lake Victoria Water Quality Management Investment Plan.

The Investment Plan will prioritize and promote technically informed, sound investment in sanitation, erosion control and aquatic weed control measures that target critical Lake areas and reduce the most damaging pollution sources. Other pollution sources, such as industrial pollution, solid waste and nutrient flows will be characterized during plan development but will not be elaborated in detail under the current project's support.
The strong focus on sanitation investment planning will allow LVBC and member states to engage technical partners and local authorities to focus on the largest pollutant loads and to coordinate and harmonize regional, national and sub-national wastewater and sanitation plans to ensure a unified and technically sound approach to reducing un-treated waste discharge in the Basin. To ensure that sanitation interventions are comprehensive and include service provision for the poorest, this work will introduce and mainstream modern approaches to sanitation planning (e.g., City-Wide Inclusive Sanitation). Project support dedicated to wastewater treatment design studies (Sub-component 3.3) will be linked to the Regional Investment Plan through a Disbursement Linked Indicator. The Indicator will be designed to align national investment pipelines with regional plans and prioritized investment needs.

Regional identification and prioritization of aquatic weed control and erosion control measures will be an important aspect of regionally coordinated measures to reduce overall pollutant loads on the Lake. Building off the water quality monitoring platform developed under Sub-Component 1.1, geospatial data and country-led field surveys will be used to identify and prioritize erosion hot spots for land and watershed management investments under this project and for future investment. Analysis of the aquatic weed control information services provided under Sub-Component 1.1 will allow LVBC and the countries to track and plan efforts to more effectively control and eliminate nuisance weeds. Efforts will include reginal good practice sharing, introduction of new techniques drawing on global good practice and regional dialogue on prioritization of investments targeting erosion and aquatic weed control in the Basin.

1.3: Strengthen LVBC's capacity to deliver on its mandate to coordinate management of water quality in Lake Victoria Basin. This sub-component will focus on strengthening capacity of LVBC and its member states with respect to water quality monitoring, enforcement technology for reduction of pollution and transitioning to climate resilient livelihoods. Major activities will include: (i) an institutional audit; (ii) specific financial and institutional sustainability measures recommended by the audit; and (iii) regional action to harmonize and enhance enforcement of environmental regulations in the basin states.

The institutional audit will assess strengths and opportunities for enhancing the organizational effectiveness and priorities of the EAC member states. Implementation support for key recommendations of the audit will be supported under this Sub-Component, particularly those that enhance financial and institutional sustainability of LVBC and deepen linkages with EAC governance systems. This Sub-Component will also support efforts to enhance regional harmonization of environmental regulation and information sharing on enforcement modalities.

Indicative Component 1 DLIs:

- Process benchmark (TBD) for independent institutional assessment of LVBC and/or Organizational strengthening and financing plan of LVBC prepared.
- Adoption of Water Quality Investment Plan by EAC and inclusion of key investments in national financing plans
- Finalization and agreement for operationalization of the Action Plan for the Nile Basin Initiative and LVBC operation and coordination strategy

Component 2: Sustainable land and water resource management in selected soil erosion hotspots
This component seeks to reduce sediment loading in the upper catchments of the Basin in order to improve the water

quality in the Lake and upstream rivers. Actions will include the implementation of climate-resilient, sustainable land management and watershed management actions in targeted erosion hotspots assessed using geospatial data and on-ground working knowledge of the Basin. Depending on the specific area of intervention, actions will include support for terraced and climate resilient farming and other soil retention infrastructure, agroforestry, riparian zone set-back enforcement, rainwater harvesting systems and provision of alternative livelihoods for those relying on agricultural practices which accelerate erosion. Measures required to reduce the spread of water hyacinth and other invasive species will be integrated into relevant watershed management actions and training of water-user associations. Depending on the social structure in each country, these activities will incentivize and promote village and local community participation and will seek to attract private sector investments. Activities under this component will be implemented by national line ministries responsible for watershed management and/or land management. Sub-components include:

2.1: Sustainable, climate-resilient land and water resource management. Implemented nationally, this sub-component will map and address soil erosion hot spots in priority river Basins. Using institutional arrangements appropriate for each country and engaging local communities, this activity will also promote innovative and climate smart technologies and measures and will encourage cross-learning between countries.

2.2: Control of water hyacinth and other invasive species. This sub-component will support integration of aquatic weed control measures into national-implemented watershed management measures in sub-component 2.1. Aiming to retain gains made under LVEMP1 and LVEMP2, this work will continue to suppress aquatic weeds and will strive to promote private and community participation in aquatic weed control measures.

2.3: Eco-system and natural resource management monitoring. This sub-component will support LVB countries to collect and monitor the data of water eco-systems and natural resources (including fish resources) and prepare their biennial reports for national governments and EAC.

Indicative DLIs:

- SLM guidelines completed and adopted

Component 3: Monitoring, enforcement and prevention of pollution

This component aims to strengthen the monitoring and enforcement of pollution management and reduce pollution discharge from selected industrial pollution hotspots through inventory assessment, enhancement of national environmental information systems, improvement of national environmental regulation and enforcement mechanism, training and best practical sharing of resource efficiency and cleaner production (RECP) measures, and promotion of private sector participation. The component will also strengthen the capacity of riparian countries in emergency pollution prevention and response. Its sub-components are:

3.1: Water quality monitoring and discharge assessment. This sub-component will support national level efforts to collect and share data on water quality in the Lake and in major tributaries. It will introduce and enhance advanced technology as well as basic capacities related to core water quality parameters. It will also enable standardization of a municipal and industrial pollution discharge assessment to more fully characterize changes in waste streams impacting the Lake's resources. The monitoring and assessment work will feed into national environmental information systems developed with public information access and disclosure, environmental inspection, and incentives in view. This work will be linked to regional information services developed under Component 1.

3.2: Strengthening environmental pollution control and regulatory systems. This sub-component will work with national and regional agencies to support monitoring and enforcement to increase transparency and enhance

compliance, including strengthening regulatory and enforcement structures, advancing training, and best-practice sharing for waste management in selected polluting industries. This sub-component will also support development of pollution prevention and emergency response systems in selected hotspots along the Lake.

3.3: Feasibility study and design of physical investments in water pollution control activities which are prioritized under Sub-Component 1.2.

Indicative DLIs:

- Completion of the updated inventory of industrial pollution sources
- Member States submit water quality data to LVBC or make publicly available

Component 4: Project coordination and management

This component will provide the resources necessary for effective project coordination; communication and stakeholder involvement; monitoring and evaluation at the regional, national, and local levels, and; sharing of information and knowledge.

4.1: Project coordination and management
4.2: Project monitoring & evaluation
4.3: Knowledge management (including south-south learning) and outreaches

SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

Lake Victoria, with a surface area of 68,800 km2 is the second largest freshwater body in the world, and it is a transboundary resource shared by Kenya (6 percent), Tanzania (49 percent), and Uganda (45 percent). Rwanda and Burundi are a part of the upper watershed that drains into Lake Victoria through the Kagera river. The Lake's catchment area of 194,000 km2 is shared by five countries: Burundi (7 percent), Kenya (22 percent), Rwanda (11 percent), Tanzania (44 percent), and Uganda (16 percent).

Lake Victoria Basin is home to some 45 million people, around 30% of the total population in the East African Community (EAC-Burundi, Kenya, Rwanda, Tanzania and Uganda). The population density in LVB is reported to be about 300 persons per square kilometer, much higher than Africa's average of 36. The dense population occupies around a ninth of the Basin's land surface. LVB has immense ecological values and is greatly valued for its social and economic potential. The potential based on the human resource, rich agricultural soils, abundant water resources, minerals, fisheries, wetlands, diverse forest resources, wildlife and tourism potential and a rich biodiversity. The lake supports a fishing industry for export and local consumption. However, overfishing and environmental problems are now causing a declining fish stock leading to economic loss to local people and communities which heavily depend on the fisheries in the lake. Protected areas cover 25 percent of the Basin's land area and include some of the most renowned wildlife attractions in Africa – Serengeti and Volcanoes National Parks. Besides, its water serves vital multipurpose functions for domestic uses, hydropower generation, agricultural and industrial uses, and medium of transport and climate modulation. Despite its potential, the Basin is threatened by ecological and environmental degradation, widespread poverty, high population growth, discharges of untreated efluent and high sediment loading into the lake and its catchments. LVEMP 2 tested a wide variety of interventions in pollution and watershed management, including rehabilitation/construction of wastewater or sludge treatment plant, sanitation and solid waste management. In the contrary, LVEMP3 will concentrate only on the areas of sustainable land and water management, particularly on soil erosion control measures in selected hotspots. These investments are envisaged to generate relatively low environmental and social impacts.

B. Borrower's Institutional Capacity for Safeguard Policies

The project will be implemented within Lake Victoria Basin (LVBC) through a collaboration between Lake Victoria Basin and relevant national and local authorities. Lake Victoria Basin Commission (LVBC), an institution of the EAC, will be responsible for overall project oversight at regional level to guarantee a uniform strategy and establish a strong basis for coordination among Partner States. In the LVBC structure, the office of the Environment and Natural Resources Management Officer (ENRO), is an established position under the Deputy Executive Secretary Projects and Programmes and is responsible for managing and coordinating environment and social safeguard issues in LVBC. Environmental and Social Safeguard management capacity of LVBC has been enhanced through coordination of LVEMP II implementation. Despite the relatively weak capacity in safeguards under LVEMP2 at lower levels, the institutional arrangement for E&S management is considered to be appropriate and will be enhanced through continued E&S capacity building. At the national level, the existing arrangement for managing environmental and social issue under the respective national environment management agencies will be maintained. Each National Project Coordination team has adequate experience in safeguard management and operates in close collaboration and oversight from the national environmental regulatory authorities. The project team will be responsible for implementation of the activities and agencies will play an oversight role on the implementation of the project and to ensure quality and compliance with country regulations.
The environmental and social safeguard frameworks, namely: Environmental and Social Management Frameworks (ESMFs) and Resettlement Policy Frameworks will be prepared for each partner state to provide strategic and operational guidance for the integration of environmental and social considerations into the planning, implementation and operational of the proposed LVEMP III activities. In addition, Burundi will prepare an IPPF. ESMFs in all instances will be applied for the initial screening of the proposed project activities for any negative environmental and social impacts which would require attention prior to project implementation. Appropriate Environmental and Social Safeguard instruments will be prepared, reviewed and disclosed in accordance with World Bank Safeguards Policies and Borrowers' environmental and social management procedures.

C. Environmental and Social Safeguards Specialists on the Team

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D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	Lake Victoria is an ecologically sensitive area and a habitat to number of flora and fauna, which are likely to be negatively impacted from cumulative activities within the basin. LVEMP3 is envisaged to support a combination of information, institutional strengthening and on ground investments in

		sustainable land and watershed management in highly degraded sub-catchments and erosion hotspots. Interventions are envisaged to include terraces, sediment and other soil erosion retention infrastructure, which are not likely to generate significant environmental and social impacts. Implementation of LVEMP3 will generate low to moderate construction related impacts, such as erosion, noise, dust, vibrations, OHS hazards, etc. These impacts will be screened and mitigated at investment or subprojects level through appropriate instruments (ESIAs, ESMPs, E&S Screening Forms) as prescribed in the country specific ESMFs. It is anticipated that in line with the nature of the proposed activities under LVEMP 3 and in conformity with national environmental management regulations for each country, the ESMFs will be appropriate tools to provide guidance to project activities, which will mostly be defined and prepared during implementation. The project will not finance physical investments in sanitation, but will focus on preparation of regional sanitation master plan. The development of a Regional Sanitation Master Plan as proposed under sub-component 1.3 will require a Strategic Environmental and Social Assessment (SESA) to be prepared by at the regional level under the coordination of LVBC during project implementation. Weak capacity in supervising and monitoring implementation of the ESMPs was noted to be a key weakness for the implementing entities, particularly, at lower LGA levels. Under LVEMP3, the project will continue efforts to enhance E&S capacity at all levels of the project.
Performance Standards for Private Sector Activities OP/BP 4.03	No	
Natural Habitats OP/BP 4.04	Yes	LVBC is a threatened, globally important ecosystem and habitat for many endemic aquatic species. The ESMF will provide guidance on specific investments that would trigger this policy.
Forests OP/BP 4.36	Yes	OP 4.36 was not triggered in the previous phases and the chance of triggering the policy under LVEMP3 is low. LVEMP3 will not invest in forest areas, but will involve small scale of tree planting as part of sustainable and watershed management in degraded hotspots, buffer zones along the lake, rivers and

		associated wetlands, and on some of the progressive terraces. Trees will also be planted to protect buffer zones as designated by the governments along wetlands.
Pest Management OP 4.09	Yes	Community managed initiatives under CDD and SLM may involve activities that could require application of agrochemicals and pesticides. Stand-alone IPMPs were prepared for LVEMP2 in each country to address pest management issues which were anticipated from CDDSs. However, due to the choice of CDDs and the small-scale nature of the implemented projects at community level, these instruments were not fully useful. Given the likely low levels of pesticides application in CDDs under LVEMP3. It is therefore proposed to prepare the IPMPs as part of the ESMFs and not a stand-alone IPMPs to address issues pertaining to this policy. However, IPMPs as part of ESMFs shall take into account country frameworks, regulations, institutions, implementing arrangement, capacities and IPMP budget.
Physical Cultural Resources OP/BP 4.11	Yes	No PCR was found during the implementation of previous phases of LVEMP, and chance to implement this OP in LVEMP is low. However, the policy will be triggered for construction erosion control related interventions which may encounter known or unknown PCRs. To meet policy requirements, the project will always undertake PCR inventory and Chance Finds Procedure developed as part of ESMFs and ESIAs/ESMPs and chance finds procedures will be included in the ESMPs.
Indigenous Peoples OP/BP 4.10	Yes	This policy is triggered only for Burundi due to the presence of IPs groups in the project area, and an Indigenous Peoples Planning Framework(IPPF) will be prepared to inform preparation of sites specific IPPs during project implementation. The IPPF will be disclosed publicly prior to appraisal. Screening for IP groups in the project area has been done and . IPs groups exist in the provinces of Muyinga and Kirundo in Burundi.
Involuntary Resettlement OP/BP 4.12	Yes	Activities under component 2, which will support climate resilient, sustainable land management and watershed management actions in selected soil erosion hotspots, as well as enhancing livelihood opportunities in these same hotspots are likely to require land either temporarily or permanently. Because exact locations of these interventions are

		unknown at this stage, the client will prepare Resettlement Policy Frameworks (RPFs) each per participating country to guide preparation of land acquisition or resettlement action plans, what ever is applicable, during project implementation. The RPFs will be consulted upon and publicly disclosed prior to project appraisal.
Safety of Dams OP/BP 4.37	Yes	LVEMP will be not be involved in construction or rehabilitation of any dams. Since LVEMP3 is not a water project, any proposals for constructing and building dams will be excluded. There may be some sediment retention infrastructure including gully plugs and ponds, whose dimension will not reach 10 meters or 3 million cubic meters. If appropriate for the small sediment retention ponds, generic dam safety measures will be incorporated into the designs and the environmental and social impacts are covered by the ESIA/ESMP under OP4.01.
Projects on International Waterways OP/BP 7.50	Yes	The Project activities may lead to both consumptive and non-consumptive use of international waters which may slightly vary the quantity, although the Project interventions are in fact likely to improve the quality of water through control of pollution and erosion in selected hotspots and catchments. The LVBC shall undertake to notify the riparian Countries of Lake Victoria and the Nile Basin Countries.
Projects in Disputed Areas OP/BP 7.60	No	This policy was not triggered in the previous phases and is not to be triggered under LVEMP3 because project activities will not be undertaken in any disputed area/s.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Mar 25, 2019

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Prior to appraisal the following safeguards instruments will be prepared for each country and disclosed by March 25, 2019: (i) Environmental and Social Management Framework (ESMF) and (ii) Resettlement Policy Framework (RPF). Two IPPFs will also be prepared for Burundi and Kenya.

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