1. **Country and Sector Background**

   (a) **Introduction**

   1. The Lake Victoria, with a surface area of about 68,800 km², is the second largest freshwater body in the world. It is a transboundary resource shared by Kenya, Tanzania, and Uganda. Rwanda and Burundi are a part of the upper watershed that drains into Lake Victoria through the Kagera river. Its 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). The Lake is also part of the Nile River basin system, shared by ten countries: Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Eritrea, Kenya, Rwanda, Sudan, Tanzania, and Uganda. The population of the Lake Victoria Basin (LVB) is about 35 million people, and it represents about 30 percent of the total inhabitants of the East African Community (EAC) Partner States.

   (b) **Major economic and ecological importance of Lake Victoria**

   2. Lake Victoria plays a major ecological significance because it supports a wide diversity of flora and fauna. It also plays a major economic role in the riparian countries, including supporting a large fishing industry for export and local consumption, water supply, lake transportation, and hydropower generation.

   3. Lake Victoria and its satellites are important warehouses of fisheries resources both in diversity and numbers. The Lake and associated ecosystems harbor around 200 different fish species, including the predatory Nile perch, both introduced and endemic herbivorous cichlids, and several riverine fish species, such as *Labeo victorianus* and *Barbus altianalis*. The Lake is the largest inland water fishery sanctuary in the world, producing an estimated 500,000 metric tons per annum. Three commercial fish species: Nile perch (*Lates niloticus*), Nile tilapia (*Oreochromis niloticus*) and ‘dagaa’ *Restrineobola argentea*, constitute over 95 percent of total fish catch in Lake Victoria.

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1 Burundi, Kenya, Rwanda, Tanzania, and Uganda.
4. **The fishery provides employment for about 198,000 fishers and approximately 600,000 fish traders.** The income generated from the fishery provides food security, and supports the livelihoods of approximately three million people. Fish processing and fish mill industries around the lake shore towns and cities provide employment to thousands of people. The fish resources provide foreign exchange earnings with an annual landed value of about US$300 – 400 million and combined export value of Nile perch estimated at US$250 million. The Lake fishery contributions to the GDP of the riparian countries are – Kenya, 2 percent; Tanzania, 2.8 percent; and Uganda, 3 percent.

5. **Lake Victoria is an important source of domestic and industrial water supply, and repository of wastewaters.** Approximately five million people living in the major cities around the Lake, such as Kampala, Entebbe, and Jinja (Uganda); Kisumu, Homa Bay, and Migori (Kenya); and Mwanza, Musoma, Bukoba, Shinyanga, and Kahama (Tanzania) depend on Lake Victoria for the domestic and industrial water supply. The Lake is a repository of the urban domestic and industrial wastewaters, including urban runoff, as well as the sediment loads and nutrients from the agricultural and livestock areas. The discharge of these effluents into the Lake causes pollution, by increasing the concentration of Chemical Oxygen Demand (COD), total Phosphorus (TP), total Nitrogen (TN), and Chlorophyll-a, resulting into eutrophication\(^2\).

6. **Lake Victoria is important for transportation.** The marine transport is still the cheapest means of communication for the three riparian countries. The main Lake Victoria transport routes include Mwanza – Port Bell/Jinja, Mwanza – Bukoba, Mwanza – Musoma, Port Bell/Jinja – Bukoba, and Kisumu – Bukoba. The local networks are: Kisumu – Kendu Bay – Kuwuor – Homa Bay – Mbita – Rusinga – Mfingano, and Asembo – Kowu/Homa Bay in Kenya; Mwanza – Nansio, Mwanza – Kome – Nyakalilo in Tanzania; and Port Bell – Bugoma, Port Bell - Bugombe, and Jinja – Bugala in Uganda. These marine routes are very important for the basin economy as trade routes.

7. **The LVB is important for hydropower generation.** In Uganda, the current hydropower generation depends entirely on Lake Victoria. Its hydropower system includes the 180 MW Nalubaale (formerly Owen Falls) and the Kiira with 200 MW power stations on the mouth of the Victoria Nile. The Bujagali hydropower station, which is under construction, is located about eight kilometers downstream Nalubaale and Kiira, and it is expected to generate an additional 250 MW, when commissioned in 2012. Additionally, preparations are underway for the regional Rusumo Falls Hydroelectric and Multi-Purpose dam, planned to generate 62 MW, and other power stations on the Kagera and the Victoria Nile rivers.

(c) **Main environmental challenges facing the Lake ecosystem**

8. **The Lake Victoria ecosystem faces severe environmental degradation because of continued pressure from the growing population that lives in the basin.** In each country, the lake basin population density is higher than its national average - Burundi (285 per km\(^2\)), Kenya (257 per km\(^2\)), Rwanda (323 per km\(^2\)), Tanzania (66 per km\(^2\)), and Uganda (180 per km\(^2\)). Increased human pressure has led particularly to deteriorating water quality, fluctuating lake levels, overexploitation of natural resources of the basin, and resurgence of the water hyacinth.

\(^2\) This is defined as excessive enrichment of water with chemical nutrients, typically nitrogen and phosphorus, that can trigger excessive growth of aquatic plants and phytoplankton (algae).
9. **Lake Victoria water quality has declined significantly since the 1970s**, mainly due to increased sedimentation, as well as pollution and eutrophication.

10. **Increased sedimentation.** Land degradation is the main cause of the increased sediment loads into the river basins and Lake Victoria. High population growth, coupled with poverty and unsustainable agricultural practices have increased pressure on land. The small scale farmers have resorted to cultivating in areas with steep slopes, riverbanks, forests, and wetlands. Their activities have contributed to increased soil erosion, decreased nutrient retention in soils and wetlands, and thus increased mineral and biogenic sedimentation in Lake Victoria. Overgrazing has also contributed significantly to soil erosion. The estimated economic value of the soil lost due to soil erosion in the LVB is approximately US$10 million per year.

11. **Increased pollution and eutrophication.** Many rivers and streams draining into Lake Victoria and the near-shore areas are heavily polluted, particularly by: (i) raw and partially treated municipal and industrial effluents; (ii) contaminated urban surface runoff; (iii) unsanitary conditions of the shoreline settlements; and (iv) pollutants carried in eroded sediments, particularly nitrogen (N) and phosphorus (P), synthetic pyrethroids, and organophosphates. These pollutants bring into the lake coliforms of faecal origin; oxygen demanding organic substances; heavy metals, such as chromium, lead and mercury; and pesticide residues. The pollution effect is clearly seen in the littoral areas. The increased algal biomass and phosphorus loading is noticeable. There are a number of highly eutrophied "hotspot" areas, such as Winam Gulf (Kenya), Murchison Bay (Uganda), Napoleon Gulf, and Mwanza Gulf (Tanzania).

(ii) **Fluctuating lake levels**

12. **The water levels of Lake Victoria have fluctuated, causing serious economic and environmental impacts on the riparian and downstream countries.** Since 2000, the Lake level had dropped by about 1.6 meter, bringing it to a level of 1,133.26 masl in October 2006, which was very close to the lowest ever recorded level of March 1923. This fall was partially attributed to a three-year drought period (2001 – 2004), and partially to over-abstraction of water, beyond the Agreed Curve by Uganda for hydropower production. The main economic and environmental impacts of the declining lake levels included reduced water intakes, increased number of sunk investment (in respect to jetties, piers, water intake points and fish landing infrastructure), interference and destruction of fish breeding and nursery habitats, and reduced hydro-power generation. Shipping companies suffered huge financial losses due to increased maintenance costs, reduced cargo to ensure safe anchoring, and relocation of jetties and piers. However, the lake levels increased to approximately 1,134.31 masl in March 2007 due to the above normal rainfalls received in the Lake basin.

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3 To convert meters above sea level (masl) to Jinja Gauge, subtract 1,122.86.

4 The Agreed Curve describes a water discharge rating curve that emulates the natural relationship between Lake Victoria levels and the flow of the Nile River through the Nalubaale and Kiira hydropower dams. It depicts the management of the Nalubaale and Kiira dams in which the volume of releases would remain consistent with what would have occurred under the natural conditions, thereby ensuring no change in downstream discharges. Since, the Agreed Curve functions as an operating rule for water discharge, such water releases are a function of the lake levels at any given time period.
(iii) Overexploitation of natural resources

13. **Declining fish stocks and loss of habitats and biodiversity.** The problem of unsustainable fishing in Lake Victoria has had adverse impacts on fish species diversity and the stocks of Nile perch, the most commercially important fish species. Until the 1970s, Lake Victoria supported a multi-species fishery dominated by tilapiine and haplochromine cichlids. The fishery has undergone drastic changes in its recent history. It is thought that some 200 endemic haplochromine species, which previously comprised about 90 percent of the fish biomass, had become extinct from the lake due, in part, to predation by the Nile perch (*Lates niloticus*) introduced in the lake in the late 1950s and early 1960s. The use of wrong fishing gears and methods are also thought to have contributed to the dramatic loss of fish biodiversity in Lake Victoria.

14. **Wetlands destruction.** Fringing wetlands and the littoral zones are closely connected to the ecological health of Lake Victoria. Development around the littoral zone of the lake has resulted in the destruction or degradation of fringing wetlands that are refugia and sites for fish breeding. Wetlands are also involved in the exchange of nutrients with the lake and act as filters, trapping incoming sediments and pollutants. Extensive wetlands around Lake Victoria are being destroyed or degraded through conversion to agricultural land, excavation for sand and clay, and use as disposal sites. It is estimated that about 75 percent of Lake Victoria’s wetlands area has been affected significantly by human activity, and about 13 percent is severely damaged.

15. **Forest degradation.** This is caused by encroachment of agriculture and increasing demands of the growing population for fuelwood, charcoal, timber, and construction purposes. Deforestation has been severe over the last few decades, including loss of high altitude forests, riverine forests, and lowland forest/woodlands in national parks and reserves. The loss in permanent vegetation cover has accelerated runoff and increased exposure of soils to sheet and gully erosion. The remaining forests, woodlands and trees in savanna systems and on-farm across the basin are facing severe pressures. Valuable indigenous trees (e.g. *Podocarpus* spp. and *Markhamia lutea* for timber; and Fito, emitongole, eminyinya, enkukuru, obukagati, used for making local products), wildlife and non-wood forest products, including diverse medicinal plants, are threatened.

(iv) Resurgence of Water Hyacinth

16. **Water hyacinth (Eichhornia crassipes) has become a major invasive weed in Lake Victoria and its tributaries since the late 1980s, and a serious threat to aquatic ecosystems, affecting fish stocks and water quality.** The Kagera river system is a major source of the invasive weed. In 1998, water hyacinth weed was estimated to cover approximately 17,000 ha of waters of Lake Victoria. LVEMP I developed a lake-wide water hyacinth management plan, researched, and tested various control methods. By February 2000, this weed infestation had been reduced by about 80 percent, to approximately 3,400 ha, mainly through biological control using two weevils – *Neochetina eichhorniae* and *Neochetina bruchi*. In recent years, the coverage of water hyacinths has increased to about 5,100 ha, which is 30 percent of the 1998 coverage, due to the continued nutrient and sediment loading from poorly managed catchments upstream.
2. Program objectives and phases

17. The proposed LVEMP II is a lake basin management initiative by the five EAC Partner States, coordinated by the Lake Victoria Basin Commission (LVBC), aimed at improving the management of regional “commons” and cooperation on regional “public goods”. The Project focuses mainly on: (i) establishing a cooperative framework for the sustainable management of the shared transboundary natural resources of Lake Victoria basin; and (ii) supporting mitigation and prevention measures required to reverse the environmental degradation and improve livelihoods of communities living in Lake Victoria basin.

18. The proposed LVEMP II will be an eight-year program, split into three Adaptable Program Lending (APL) phases. APL1 (FY09 – FY12), which is estimated to cost US$90 million, will involve Kenya, Tanzania, and Uganda. These countries already have experience in the cooperative management of Lake Victoria basin from LVEMP I. The APL2 (FY10 – FY16), which is estimated at US$30 million, will bring in Burundi and Rwanda, on the basis of meeting eligibility criteria, satisfying policy and Project triggers, and demonstrating the Project implementation readiness. APL3 (FY13 – FY16), with indicative cost of another US$90 million will further scale up interventions that Kenya, Tanzania, and Uganda would implement under APL 1. This brings the total estimated cost of the LVEMP II APL to US$210 million. Currently, all EAC Partner States are eligible for the IDA financing.

3. Project development/Global environmental objectives

19. The Project development/global environmental objectives (PDO/GEO) of APL1 are to: (i) improve collaborative management of the transboundary natural resources of the LVB for the shared benefits of the EAC Partner States; and (ii) reduce environmental degradation to improve the livelihoods of communities, which depend on the shared natural resources of the LVB.

20. The key PDO/GEO performance indicators for APL1 are: (i) Adoption of harmonized policies, legislations and regulatory frameworks for water and fisheries management; (ii) Adoption of basin-wide water and fisheries resources management frameworks; (iii) Percentage reduction in water hyacinth infestation in Lake Victoria; (iv) Percentage increase in the stock of fish in Lake Victoria and satellite lakes; (v) Percentage increase in land productivity for households participating in watershed management activities; and (vi) Percentage reduction in untreated effluent disposed by targeted municipals and industries into Lake Victoria.

4. Rationale for Bank Involvement

21. The LVEMP II objectives are consistent with priorities of the Bank’s regional and national assistance strategies, including Africa Action Plan (AAP) i.e. improving governance, strengthening drivers of growth, enhancing participation, and building partnerships. They are also in line with Bank’s Regional Integration Assistance Strategy’s priority of strengthening the management of regional commons, and cooperation on regional public goods. LVEMP II had also been identified as a priority in the Bank’s Country Assistance Strategies for Kenya (2004) and its Progress Report (2004 – 2007); and Joint Assistance Strategies for Tanzania (December 2006), and Uganda (2006).

22. The LEMP II objectives are also consistent with the GEF’s strategic long-term priorities for International Waters (IW) and Sustainable Land Management (SLM). These
include to foster international, multi-country cooperation on priority transboundary water concerns; and to upscale SLM investments that generate mutual benefits for the global environment and local livelihoods.

23. **The Bank/GEF brings in global knowledge on best practices.** The Bank/GEF can access global experience from both Bank and non-Bank financed projects around the world on management of transboundary water bodies, and other shared natural resources, such as fisheries.

24. **The LVEMP II provides opportunities for building on the institutional and knowledge foundations laid by LVEMP I.** The Bank/GEF support will strengthen mechanisms for knowledge development and dissemination, as well as institutional capacity for natural resources and environmental management.

5. **Description**

A. **Lending instrument**

25. **The Adaptable Program Lending (APL) instrument will be used to support regional multi-year and multi-country LVEMP II initiative, to ensure timely implementation of the interventions.** The APL instrument would enable IDA credit support to be provided in a flexible manner, when: (i) Borrowers have satisfied the eligibility criteria, and met policy and Project triggers; and (ii) individual EAC Partner States priority investment proposals are ready to receive IDA credit support.

B. **Project components**

26. **The Project will comprise the following four main components:** (i) Strengthening institutional capacity for managing shared water and fishery resources; (ii) Point sources pollution control and prevention; (iii) Watershed management; and (iv) Project coordination and management. A brief description of each component and its estimated cost under APL1 program is given below.

Component 1: Strengthening institutional capacity for managing shared water and fisheries resources (a total of US$19.5 million).

27. **This component will focus on strengthening the existing institutions to improve the cooperative management of shared transboundary natural resources of the LVB, and hence contribute to the achievement of the first PDO/GEO.** It will finance the capacity building programs, including short and long-term training, technical assistance, and provision of equipment to the regional, national, and local institutions responsible for coordination, research, management of resources, and enforcement of environmental standards. Its objectives are to: (i) Improve the effectiveness of key regional and national institutions, through harmonization of national policies, legislation, and standards; (ii) Develop options for long-term mechanisms for financing natural resources management interventions; and (iii) Develop regional frameworks for the management of key transboundary natural resources – water and fisheries.

Sub-component 1.1: Harmonization of policies, legislations, and regulatory standards (GEF US$4.0 million, SIDA US$0.5 million).

28. **The main objective of this sub-component is to improve the policy and regulatory framework for the management of water and fisheries resources of the LVB.** It will finance national and regional dialogue and technical assistance for review and harmonization of policy,
legislations, and standards. This sub-component will also finance the development and implementation of regional natural resources and environmental management frameworks, based on the harmonized policies, legislations, and standards. The management frameworks include: (i) a Water Resource Management Plan (WRMP) for the LVB; (ii) an updated Lake Victoria Fisheries Management Plan (FMP); and (iii) a basin-wide Watershed Management Strategy (WMS). Finally, it will finance the development of sustainable financing mechanisms, including: (i) operationalizing the Fish Levy Trust Funds (FLTFs) to finance national fisheries management interventions; and (ii) TA to study options for establishing the Lake Victoria Environmental Trust Fund (LVETF) to provide long-term financing for management of other natural resources.

Sub-component 1.2: Ecosystem monitoring and applied research (IDA US$12.7 million, GEF US$2.3 million).

29. This sub-component will finance the strengthening of existing national and developing new regional scientific and socio-economic: (a) data gathering protocols; (b) ecosystem monitoring tools; and (c) data sharing mechanisms. The ecosystem monitoring tools to be developed or strengthened include: (i) Water Information System (WIS) for monitoring surface water, groundwater, and water quality; (ii) Decision Support System (DSS) for the basin water resources; (iii) Atmospheric deposition monitoring network; (iv) GIS-based database for the land use, hydrology, and biodiversity, and related Lake Victoria Dynamic Information Framework (LVDIF); (v) Regional framework for fish stocks assessment; and (iv) Water hyacinth surveillance and control strategy. It will also finance continuation of priority water, fisheries, and land research to fill knowledge gaps on environmental, social, and economic-related aspects; and use of outcomes to inform LVB policy and management decisions. Priority will be given to regional research programs, which are focusing on transboundary issues. Multi-disciplinary research programs, which link physical and biological sciences to social and economic aspects, would be emphasized. Emphasis will also be put on translating scientific research outputs generated under LVEMP I into practical and cost-effective management interventions.

Component 2: Point sources pollution control and prevention (a total of US$33.8 million).

30. The main objective of this component is to reduce within the lake and its littoral zone environmental stresses, through the implementation of mitigation and prevention measures, thus contributing to the achievement of the second PDO/GEO. It will finance investments aimed at reducing point sources of pollution in priority hotspots, identified during LVEMP I. There will be three sub-components: (i) Rehabilitation of wastewater treatment facilities; (ii) Promotion of cleaner production technologies; and (iii) Pollution risk management and safety of navigation.

Sub-component 2.1: Rehabilitation of wastewater treatment facilities (IDA US$25.8 million).

31. The objective of this sub-component is to reduce point source pollution from municipal waste by supporting public investments, including: (i) rehabilitating selected wastewater treatment plants to reduce discharge of untreated effluents into the Lake; (ii) connecting primary treated effluent discharged to constructed/restored wetlands; and (iii)
providing ecological sanitary services. It will target highly eutrophic hotspots identified under LVEMP I, which include the Winam Gulf (Kenya), Murchison Bay (Uganda), and Napoleon and Mwanza Gulfs (Tanzania). It will finance critical repairs of the existing sewerage treatment facilities in major urban centers around Lake Victoria - Kisumu, Homa Bay, Mwanza, Musoma, Bukoba, Entebbe, Jinja, and Kampala. It will also support investments in low cost liquid waste treatment, such as Waste Stabilization Ponds (WSP). This sub-component will also support municipal authorities in the collection, treatment, and disposal of sludge in areas not served by the sewerage systems. Finally, it will support the construction of ecological sanitation toilets in poor and underserved peri-urban, beach, and rural communities. Priority will be given to public institution facilities, such as schools, health centers, landing beaches, and markets.

Sub-component 2.2: Promotion of cleaner production technologies (SIDA US$2.7 million).

32. The objective of this sub-component is to reduce industrial pollution, by promoting pre-treatment of factories’ wastes onsite and efficiency in raw material utilization – through sorting, reuse, and recycling activities. The major polluting industries located mainly in Kisumu and Migori (Kenya); Mwanza and Bukoba (Tanzania); and Kampala and Jinja (Uganda), will be targeted for demonstration of low cost options, such as WSP and connection of pre-treated industrial effluents discharge to constructed and/or restored wetlands. This sub-component will finance interventions aimed at reducing pollution loads from industrial effluents through: (i) adoption of Cleaner Production Technologies (CPT) piloted under LVEMP I; (ii) compliance enforcement on regional effluent standards; and (iii) public education and awareness campaigns. The main activities to be supported include: (a) training of targeted industries on cost-effective measures of reducing wastes; (b) undertaking cleaner production in-plant assessments; (c) facilitating environmentally sound technology assessments and transfers; and (d) assisting industries to prepare bankable projects for upgrading their production lines to reduce pollution and wastes.

Subcomponent 2.3: Pollution risk management and safety of navigation (IDA US$1.0 million, SIDA US$4.3 million).

33. The main objectives of this sub-component are to: (i) prevent marine vessel accidents, which could be major source of pollution, including oil spills; and (ii) improve safety of navigation for both cargo and passenger ferries, and fishing vessels. This sub-component will finance: (a) survey and mapping of marine transport routes in Lake Victoria; (b) installation of navigation equipment and facilities, such as light houses, lighted buoys, radar system, rescue operation equipment, and early warning system; and (c) implementation of a contingency plan for the oil spills and hazardous wastes management in Lake Victoria. A total of 194 locations to be equipped with aids to navigation have been identified, and out of these, 106 sites are considered as high priority. Both the main Lake Victoria transport routes and the local networks to be surveyed and equipped with aids to navigation have been identified. The Project will also finance the installation of the lake-wide communication and emergency response systems.

Component 3: Watershed management (US$42.3 million).

34. This component seeks to reduce environmental stresses from the lake basin, through the implementation of non-point sources pollution mitigation and prevention measures, thus directly contributing to the achievement of the second PDO/GEO. The reduction of the non-point sources of pollution (sediment loads, nutrients, and agro-chemicals), by scaling up
successful models of watershed management practices piloted under LVEMP I will improve water use efficiency, and generate positive downstream externalities. The Project will support community-driven investments in rehabilitating three (out of 22) priority degraded sub-catchments of Lake Victoria. These include catchments of rivers Simiyu (11,577 Km$^2$) in Tanzania; Nyando in Kenya (3,652 Km$^2$); and Katonga (15,244 Km$^2$) in Uganda. A total area of 152,000 hectares, which represents 5 percent of the total catchments area, will be rehabilitated under this component. There will be two sub-components: (i) Natural resources conservation and livelihoods improvement; and (ii) Community capacity building and participation.

**Sub-component 3.1: Natural resources conservation and livelihoods improvement (IDA US$36.0 million).**

35. **The Project will provide matching grants to communities organized under LVEMP I to promote local partnerships in addressing degradation of the watershed.** The CDD approaches existing in the Partner States will be used to scale up community-driven watershed management interventions, co-management of fisheries resources, and water hyacinth control measures. There will be two categories of CDD-type interventions: (i) natural resources conservation; and (ii) livelihoods improvement.

36. **Natural resources conservation.** These include interventions generating predominantly “public goods” or benefits, with both on-site and downstream benefits, such as sustainable soil and water management. Approximately 107,000 hectares will be brought under conservation using CDD approaches. Typical activities in the upper watershed will include rain water harvesting and storage, small water reservoirs, sediment retention dams, gully erosion control, planting multipurpose trees, afforestation, and reforestation. Littoral zone activities will include biological and manual water hyacinth control, wetlands rehabilitation, and co-management of the shared fisheries resources.

37. **Livelihoods improvement.** These interventions are largely household-based, and with substantial private benefits. They will be financed to provide incentives for communities to participate in the natural resources conservation activities. About 45,000 hectares will be brought under the livelihoods improvement interventions. These are aimed at intensifying natural resources use and reducing harvesting pressure on the fisheries and wetlands resources. They include support to income-generating activities that benefit the poor, such as horticulture, terracing, aquaculture, livestock development, and small scale irrigation activities. The Project will also promote private sector development by supporting low-cost technologies, which can help reduce post harvest losses of fish, horticultural, and livestock products, such as drying, smoking, and cold storage. Ecolabeling of the Nile perch would provide quality assurance to international markets, and result in an equitable sharing of exports benefits.

**Sub-component 3.2: Community capacity building and participation (IDA US$6.3 million).**

38. **This sub-component will focus on mobilizing communities and building their capacity in the preparation and implementation of CDD-type subprojects in watershed management.** It will also create community awareness of the key environmental issues of the LVB and the benefits of their participation in the watershed management. The Project will organize public awareness meetings for local communities to promote: (a) adoption of non-point pollution mitigation and prevention measures, including soil erosion control and the use of ecological toilets; and (b) change of unsustainable natural resources utilization behavior.
Therefore, this sub-component will finance: (i) development of modules and training on the environmental and socio-economic impacts of Lake Victoria’s watershed degradation; (ii) training on the participatory approaches in preparation, implementation (community-based procurement and financial management), and monitoring and evaluation of CDD subprojects; (iii) development of synergies and linkages with existing community awareness and education programs in the LVB; and (iv) development of mechanisms for resolving communities’ conflicts on shared or common resources use.

Component 4: Project coordination and management (a total of US$9.2 million).

39. This component will provide resources necessary for the effective coordination and communication, and monitoring and evaluation of the Project activities. At regional level, these tasks will be carried out by the LVBC, while at the national level they will be the responsibility of the National Project Coordination Teams (NPCTs). This component will have two sub-components: (i) Project coordination and communication; and (ii) Monitoring and evaluation.

Sub-component 4.1: Project coordination and communication (IDA US$3.5 million, GEF US$0.5 million, SIDA US$0.5 million).

40. This sub-component will finance the incremental operating costs of the various organizations responsible for Project implementation, including the Regional Policy Steering Committee (RPSC), National Project Steering Committee (NPSC), and the National Technical Advisory Committee (NTAC). It will also meet the capital and operating costs of the Regional Project Coordination Team (RPCT) to be located in the LVBC Secretariat; and the NPCTs to be mainstreamed in the National Focal Point Ministries (NFPMs). It will also finance the development of: (i) an internal communications system to facilitate information sharing; and (ii) information sharing protocol to enhance exchange of data among LVBC, NFPMs, and main implementing agencies. Finally, it will finance the outreach program, which includes: (i) development and implementation of regional and national public awareness and education materials for the sustainable use of LVB resources; and (ii) outreach activities to seek the support of key policy-makers. The outreach program will target the East African Legislative Assembly (EALA), national parliaments, local politicians, donor community, and the general public.

Sub-component 4.2: Monitoring and Evaluation (M&E) (IDA US$4.7 million).

41. This sub-component will provide resources for: (i) establishing the regional and national GIS-based M&E and Management Information System (MIS); and (ii) collection, analyses, storage, and dissemination of data and information on the Project’s implementation performance, outcomes, and impact, based on the indicators provided in the Results Framework. Sources of data for feeding the M&E system will include: (a) Administrative data collected through the Project MIS, such as progress, technical, and financial reports; (b) specially designed qualitative and quantitative household survey instruments; (c) existing and newly collected geo-referenced data; and (d) scientifically collected environmental and ecosystem health data. The communities participating in implementing watershed management interventions will also be involved in Project monitoring and evaluation. Community-based M&E activities will regularly track the performance of the CDD subprojects.
6. Financing under APL1

Source: (Sum.)
BORROWER/RECIPIENT 7.8
International Development Association (IDA) 90.0
Global Environment Facility (GEF) 6.8
SWEDEN: Swedish Intl. Dev. Cooperation Agency (SIDA) 8.0

Total 112.6

7. Implementation

42. The Project management organization is based on a two-pronged institutional arrangement, i.e., at the regional and at national levels.

Regional Institutional Arrangements

43. Regional Policy Steering Committee (RPSC). This shall provide the overall policy guidance to ensure that Project components and activities implemented nationally blend as intended to fulfill the regional objectives of LVEMP II.

44. Lake Victoria Basin Commission (LVBC). The LVBC is a permanent apex institution of the EAC with the mandate to coordinate and promote integrated management of the Lake Victoria basin ecosystem. While the LVEMP II implementation will primarily be the responsibility of national institutions, the LVBC Secretariat will be responsible for the coordination of the Project regionally. However, the current capacity of LVBC Secretariat is not enough for it to cope with the responsibilities that the implementation of LVEMP II demands. Thus, the introduction of a Regional Project Coordination Team (RPCT), to be anchored and mainstreamed within the LVBC Secretariat.

45. Regional Project Coordination Team (RPCT). This will be established with a full-time Regional Project Coordinator (RPC), who would be required for the overall management and coordination of the Project. The LVBC Secretariat, through the RPCT, will be responsible for planning, initiating and being overall in charge of those LVEMP II Project activities, which are classified as truly regional in scope, but with implementation carried out both at the regional and national levels.

National Project Management Set-up

46. National Policy Steering Committee (NPSC). This entity will be mainly responsible for the following aspects: (i) national level policy guidance on all issues relating to the Project; (ii) approval of national Project investments; (iii) approval and supervision of Project annual work plans and budgets; and (iv) resolving implementation bottlenecks and providing positive impetus to facilitate achievement of the Project’s development objectives (results/outcomes).

47. National Focal Point Ministries (NFPM). The NFPMs in the Partner States, which will serve as the main implementing agencies for their respective country, have been designated as follows:
- Kenya - Ministry of Environment and Mineral Resources;
- Tanzania - Ministry of Water; and
- Uganda - Ministry of Water and Environment.
48. **National Technical Advisory Committee (NTAC).** This will comprise no more than ten members, all technically competent in the key sectors relevant to the Project. Its members will include representatives from the local government, universities and research institutions, the private sector, and NGOs, as deemed best suited for providing advice concerning methods and approaches for the successful implementation of the investment projects, including CDD sub-projects.

49. **National Project Coordination Team (NPCT).** The coordination and management structure at the national level will mirror the regional structure outlined above. It is proposed to establish, in each country, an LVEMP II National Project Coordination Team (NPCT) headed by a NPC. It is proposed to have NPCT embedded in the NFPM, and within this institution, it will organizationally be linked to the NFPO. In addition to the NPC, the NPCT will include National Technical Experts (NTE), tasked with the role of ensuring that the Project components/activities are implemented effectively and in accordance with approved work plans and budgets. In each country, the NPC will consolidate the inputs from the NPCT members concerning annual work plans and budgets, implementation progress, and financial and procurement management status.

8. **Sustainability**

50. **Financial sustainability.** At national level, financial sustainability would be possible if under coordination of LVBC, individual countries make commitments for long-term financing of the management of the LVB as a shared resource. This includes mainstreaming LVB management activities in both the Ear’s and Countries’ long-term development strategies. Further, the operationalization of the FLTFs in Kenya, Tanzania, and Uganda would most likely be able to meet operational budget requirements for the fisheries management. The LVB Water Offices/Authorities would be strengthened, to enhance their capacity to mobilize financial resources through local contributions from water user fees, and pollution charges.

51. **Institutional sustainability.** At the regional and national levels, institutional sustainability would be achieved because the Project will be implemented through the existing institutions of the EAC and participating countries. Depending on individual performance, technical staff employed under the Project, would be retained by the LVBC Secretariat after the Project’s closing date. Most of the technical staff constituting Pacts would be selected competitively from their respective sectors. Consequently, they are most likely to continue working for these Government departments well beyond the closing of the Project. At district and community levels, all Project interventions would be implemented through the existing structures, which in most cases are permanent.

52. **Environmental sustainability.** Given that most of the interventions are aiming at strengthening the governance of the shared transboundary natural resources and environmental management, and would be undertaken by communities through participatory approaches, their sustainability is most likely. To sustain the community level environmental health gains, the Project support would include both soil and water conservation, and livelihood improvement interventions. The private benefits accruing from the latter would provide incentives for sustaining Project interventions.
9. Lessons Learned from Past Operations in the Country/Sector

53. The following are the main lessons learned from LVEMP I implementation, GEF’s work under the Lake Basin Management Initiative, and IEG review and they have been taken into account in the design of LVEMP II.

54. Basin perspective is critical to address the key environmental issues of Lake Victoria. The Project is addressing environmental concerns by using the ILBM approach, which is focusing on the Lake and its entire watershed, using sub-catchments as the sub-basins management planning units.

55. On and off-site consequences of land degradation can only be systematically addressed through upscaling of SLM in the specific countries and ecosystems. Under the LVEMP II, successful soil and water conservation interventions piloted in specific-countries and ecosystems during LVEMP I will be upscaled.

56. Environmental benefits must be strongly linked to improved livelihoods for local people and communities. The CDD watershed management subprojects will comprise the natural resources conservation interventions, which generate predominantly public goods or benefits, and livelihood improvement activities that are largely household-based, and with substantial private benefits.

57. Raising awareness and ensuring the public and parliamentarians’ participation is critical for long-term financial sustainability. The Project has a public awareness and participation component, which aims at improving regional and national outreach, and community awareness and participation.

58. Scientific research must be targeted, provide usable information for management decisions, and be widely accessible. A competitive adaptive research approach, which is aimed at filling knowledge gaps and/or addressing specific Lake ecosystem and socio-economic problems, has been adopted.

59. Planning for sustainability of outcomes and activities at both national and regional levels. The Project implementation is mainstreamed in the National Focal Point Ministries and LVBC, which is a regional institution. The Project will also support the operationalization of the Fish Levy Trust Funds, which are expected to finance fisheries management activities in each country.
10. Safeguard Policies (including public consultation)

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment (OP/BP 4.01)</td>
<td>[X]</td>
<td>[]</td>
</tr>
<tr>
<td>Natural Habitats (OP/BP 4.04)</td>
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<td>Pest Management (OP 4.09)</td>
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<td>Physical Cultural Resources (OP/BP 4.11)</td>
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<td>Involuntary Resettlement (OP/BP 4.12)</td>
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<td>Indigenous Peoples (OP/BP 4.10)</td>
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<td>Forests (OP/BP 4.36)</td>
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<td>Safety of Dams (OP/BP 4.37)</td>
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<td>[]</td>
</tr>
<tr>
<td>Projects in Disputed Areas (OP/BP 7.60)*</td>
<td>[X]</td>
<td>[]</td>
</tr>
<tr>
<td>Projects on International Waterways (OP/BP 7.50)</td>
<td>[X]</td>
<td>[]</td>
</tr>
</tbody>
</table>

60. **This Project has been assigned an environmental risk Category A.** Applicable safeguard policies for the Project are: (i) Environmental Assessment (OP/BP 4.01); (ii) Natural Habitats (OP/BP 4.04); (iii) Pest Management (OP 4.09); (iv) Involuntary Resettlement (OP/BP 4.12); (v) Safety of Dams (OP/BP 4.37); and (vi) Projects on International Waterways (OP/BP 7.50).

61. **Apart from the three Safeguard documents (ESMF, RPF and IPM), the Notification Letters for Projects on International Waterways were sent to the parties of the Nile Basin Agreement on December 27, 2007.** All safeguard documents were cleared by the respective National Environmental Management Authorities (NEMAs) and the Bank. They were then disclosed at the World Bank’s Infoshop on March 6, 2008; and in countries – Kenya (March 13, 2008), Tanzania (March 12, 2008), and in Uganda (March 14, 2008). Mitigation measures under the Natural Habitats safeguard policy are covered under each ESMF. The Project will not finance sub-projects which destroy natural habitats. Instead, it will support those which reverse degraded natural habitats, such as overexploited wetlands. Also, the ESMF prepared in each country provides screening guidelines for small dams subproject investments. The mitigation measures proposed in these documents and their monitoring plans are an integral part of the Project design. Therefore, each subproject’s progress report will essentially include safeguards monitoring.

11. List of Factual Technical Documents

**EAST AFRICAN COMMUNITY SECRETARIAT (TDA & SAP)**

1. Annexes - Final Regional Transboundary Diagnostic Analysis (TDA) for LVB, January 2007.
5. Project Procurement Plan (PPP), March 2008.

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*By supporting the proposed Project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas.*

KENYA

2. National Management Framework: Monitoring and Communication for LVB.
3. Assessment of the Potential of Land Suitability Mapping with Environmental Overlays and Potential Usefulness of Spatial Planning for Managing the LVB.
5. Final Report, June 2006: Private Sector Development for the LVB.
7. Assessment of Natural Resources Intervention and Investments for LVB, February 2007.

TANZANIA

UGANDA

5. Consultancy Services on Preparation of National Transboundary Diagnostic Analysis (TDA) for LV – Final Report, March 2006.

WORLD BANK

2. BNWPP - Priority Assessment for Pollution Load Reduction in LVEMP-II.
3. A Framework of Analysis in reference to ILBM.
5. BNWPP - Development of the Hydrological Information System for IWRM in the Lake Victoria Basin (LVB-HIS).
6. BNWPP - Technical Notes on Integrated Lake Basin Management (ILBM) approach for the LVEMP II.

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12. Contact point

Contact: Ladisy Komba Chengula
Title: Sr. Natural Resources Mgmt. Spec.
Tel: (254-20) 322-6416
Fax: (254-20) 322-6384
Email: Lchengula@worldbank.org
Location: Nairobi, Kenya (IBRD)

13. For more information contact:

The InfoShop
The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-4500
Fax: (202) 522-1500
Email: pic@worldbank.org
Web: http://www.worldbank.org/infoshop