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Report No: PAD1279

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON

PROPOSED ADDITIONAL CREDITS
IN THE AMOUNTS OF SDR 7.3 MILLION AND SDR 7.3 MILLION RESPECTIVELY
(US\$10 MILLION AND US\$10 MILLION EQUIVALENT RESPECTIVELY)

TO THE

REPUBLIC OF KENYA AND UNITED REPUBLIC OF TANZANIA

AND A PROPOSED ADDITIONAL IDA GRANT
IN THE AMOUNT OF SDR 1.5 MILLION
(US\$2 MILLION EQUIVALENT)

TO THE

EAST AFRICAN COMMUNITY

FOR A

LVEMP APL-1 ADDITIONAL FINANCING PROJECT

May 4, 2015

Environment and Natural Resources Global Practice (GENDR)
Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective March 31, 2015)

Currency Unit	=	US Dollar
SDR1	=	1.380 US\$
US\$1	=	0.7249 SDR

FISCAL YEAR

July 1 - June 30

ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AFR	Africa Region
APL	Adaptable Program Loan
CDD	Community Driven Development
CIWA	Cooperation in International Waters in Africa
CMI	Co-Management Initiatives
EA	Environmental Assessment
EAC	East African Community
EC	European Commission
ESIA	Environmental and Social Impact Assessment
FM	Financial Management
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographic Information System
GRS	Grievance Redress Service
IDA	International Development Association
IT	Information Technology
IRR	Internal Rate of Return
KE	Kenya
LV	Lake Victoria
LVB	Lake Victoria Basin
LVBC	Lake Victoria Basin Commission
LVETF	Lake Victoria Environmental Trust Fund
LVFO	Lake Victoria Fisheries Organization
LVEMP	Lake Victoria Environmental Management Project
M&E	Monitoring & Evaluation
NPV	Net Present Value
PAD	Project Appraisal Document

PDO	Project Development Objective
PP	Project Paper
RPF	Resettlement Policy Framework
SIDA	Swedish International Development Cooperation Agency
SLM	Sustainable Land Management
SLMS	Sustainable Land Management Strategy
SMEs	Small and Medium Enterprises
SOP	Series of Projects
SORT	Systematic Operations Risk-Rating Tool
TA	Technical Assistance
TF	Trust Fund
TZ	Tanzania
UNCCD	UN Convention to Combat Desertification
WHO	World Health Organization
WSP	Waste Stabilization Ponds
WRIS	Water Resources Information System

Regional Vice President:	Makhtar Diop
Senior Global Practice Director:	Paula Caballero
Country Director:	Colin Bruce
Practice Manager:	Magda Lovei
Task Team Leader:	Stephen Ling

AFRICA
LAKE VICTORIA ENVIRONMENTAL MANAGEMENT PROJECT (LVEMP) APL-1
ADDITIONAL FINANCING

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ADDITIONAL FINANCING DATA SHEET

LVEMP APL-1 Additional Financing (P153466)

AFRICA

GENDR

Basic Information – Parent				
Parent Project ID:	P100406	Original EA Category:	A - Full Assessment	
Current Closing Date:	30-Jun-2015			
Basic Information – Additional Financing (AF)				
Project ID:	P153466	Additional Financing Type (from AUS):	Scale Up	
Regional Vice President:	Makhtar Diop	Proposed EA Category:	A - Full Assessment	
Country Director:	Colin Bruce	Expected Effectiveness Date:	31-Aug-2015	
Senior Global Practice Director:	Paula Caballero	Expected Closing Date:	31-Dec-2017	
Practice Manager/Manager:	Magda Lovei	Report No:	PAD1279	
Team Leader(s):	Stephen Ling			
Borrower				
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The National Treasury, Republic of Kenya	Dr. Kamau Thugge	Principal Secretary	254-20-2252299	ps@treasury.go.ke

Project Financing Data–Parent (Lake Victoria Environmental Management Project Phase II- P100406)

Key Dates

Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date
P100406	IDA-45300	Effective	03-Mar-2009	22-May-2009	20-Aug-2009	30-Jun-2013	30-Jun-2015
P100406	IDA-45310	Effective	03-Mar-2009	29-Oct-2009	25-Jan-2010	30-Jun-2013	30-Jun-2015
P100406	IDA-45320	Effective	03-Mar-2009	08-May-2009	30-Jul-2009	30-Jun-2013	30-Jun-2015
P100406	TF-56812	Closed	27-Jun-2006	27-Jun-2006	27-Jun-2006	31-Dec-2007	30-Jun-2009
P100406	TF-56813	Closed	11-Jul-2006	11-Jul-2006	11-Jul-2006	31-Dec-2007	30-Jun-2009
P100406	TF-56814	Closed	29-Jun-2006	29-Jun-2006	29-Jun-2006	31-Dec-2007	30-Jun-2009
P100406	TF-90883	Closed	31-Oct-2007	31-Oct-2007	31-Oct-2007	28-Feb-2008	30-Jun-2009
P100406	TF-95196	Effective	19-Oct-2009	19-Oct-2009	13-Jan-2010	30-Jun-2013	30-Jun-2015

Disbursements

Project	Ln/Cr/TF	Status	Currency	Original	Revised	Canceled	Disbursed	Undisbursed	% Disbursed
P100406	IDA-45300	Effective	USD	32.50	32.50	0.00	31.55	0.04	97.08
P100406	IDA-45310	Effective	USD	27.50	27.50	0.00	18.03	7.63	65.58
P100406	IDA-45320	Effective	USD	30.00	30.00	0.00	28.34	0.54	94.47
P100406	TF-56812	Closed	USD	0.36	0.13	0.23	0.13	0.00	100.00
P100406	TF-56813	Closed	USD	1.41	0.50	0.91	0.50	0.00	100.00
P100406	TF-56814	Closed	USD	0.41	0.29	0.12	0.29	0.00	100.00
P100406	TF-90883	Closed	USD	0.78	0.17	0.61	0.17	0.00	100.00
P100406	TF-95196	Effective	USD	11.08	11.08	0.00	8.89	2.20	80.18

Project Financing Data –Additional Financing LVEMP APL-1 Additional Financing (P153466)

[] Loan [] Grant [X] IDA Grant
[X] Credit [] Guarantee [] Other

Total Project Cost: 22.00 Total Bank Financing: 22.00

Financing Gap: 0.00

Financing Source – Additional Financing (AF)	Amount
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	20.00
IDA Grant	2.00
Total	22.00

Policy Waivers				
Does the project depart from the CAS in content or in other significant respects?			No	
Explanation				
Does the project require any policy waiver(s)?			No	
Explanation				
Team Composition				
Bank Staff				
Name	Role	Title	Specialization	Unit
Stephen Ling	Team Leader (ADM Responsible)	Senior Natural Resources Mgmt. Spec.	Team Leader	GENDR
Joel Buku Munyori	Procurement Specialist	Senior Procurement Specialist	Procurement (Kenya)	GGODR
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Berina Uwimbabazi	Team Member	Senior Water Resources Mgmt. Spec.	Co-TTL, Uganda	GWADR
Christiaan Johannes Nieuwoudt	Team Member	Finance Officer	Loans officer	WFALA
Christine Heumesser	Team Member	Junior Professional Officer	Climate change & economics	GFADR
Edith Ruguru Mwenda	Counsel	Senior Counsel	Country lawyer	LEGAM
Edward Felix Dwumfour	Team Member	Senior Environmental Specialist	Co-TTL, Kenya	GENDR
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Hrishikesh Prakash Patel	Team Member	Consultant	Spatial analysis	GEEDR
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Jayne Angela Kwengwere	Team Member	Program Assistant	Assistant	GENDR
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Nagaraja Rao	Environmental	Senior Environmental	Water resources	GENDR

Harshadeep	Specialist	Specialist	management		
Suiko Yoshijima	Team Member	Environmental Specialist	Pollution management	GENDR	
Yasmin Tayyab	Safeguards Specialist	Senior Social Development Specialist	Social safeguards	GSURR	
Extended Team					
Name		Title	Location		
David Japp		Fisheries Management Spec.	Capetown		
Geoffrey Howard		Consultant	Nairobi		
Locations					
Country	First Administrative Division	Location	Planned	Actual	Comments
Tanzania		Simiyu River		X	
Tanzania	Mwanza Region	Mwanza Gulf		X	
Tanzania	Mwanza Region	Mwanza		X	
Tanzania	Mara Region	Musoma		X	
Tanzania	Kagera Region	Bukoba		X	
Kenya	Kisumu county	Nyando River Basin and the Lake Shore		X	
Kenya	Migori County	Migori Town and Lakeshore		X	
Kenya	Homa Bay County	Homa Bay Town and the Lake Shore		X	
Kenya	Bomet County	Bomet Town		X	
Kenya	Nandi County	Nandi Hills Town and Nyando River Basin		X	
Kenya	Siaya County	Siaya Town and Lake Shore		X	
Kenya	Busia County	Busia Town and Lakeshore		X	
Kenya	Kericho County	Kericho Town and Nyando River Basins		X	

Kenya	Kisii County	Kisii Town		X	
Uganda		Napoleon Gulf		X	
Uganda		Murchison Bay		X	
Uganda		Katonga		X	
Uganda	Kampala District	Kampala		X	
Uganda	Jinja District	Jinja		X	
Uganda	Wakiso District	Entebbe		X	
Uganda	Kampala District	Kampala District		X	
Uganda	Mukono District	Mukono District		X	
Uganda	Wakiso District	Wakiso District		X	
Institutional Data					
Parent (Lake Victoria Environmental Management Project Phase II-P100406)					
Practice Area (Lead)					
Environment & Natural Resources					
Contributing Practice Areas					
Cross Cutting Areas					
[X] Climate Change					
[] Fragile, Conflict & Violence					
[] Gender					
[] Jobs					
[] Public Private Partnership					
Sectors / Climate Change					
Sector (Maximum 5 and total % must equal 100)					
Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %	
Water, sanitation and flood protection	General water, sanitation and flood protection sector	29			
Agriculture, fishing, and forestry	Forestry	21			
Public Administration, Law, and Justice	Public administration- Water, sanitation and flood protection	18			
Water, sanitation and flood protection	Wastewater Treatment	16			

	and Disposal			
Water, sanitation and flood protection	Sanitation	16		
Total		100		
Themes				
Theme (Maximum 5 and total % must equal 100)				
Major theme	Theme	%		
Environment and natural resources management	Water resource management	40		
Environment and natural resources management	Pollution management and environmental health	15		
Rural development	Other rural development	15		
Urban development	City-wide Infrastructure and Service Delivery	15		
Environment and natural resources management	Land administration and management	15		
Total		100		
Additional Financing LVEMP APL-1 Additional Financing (P153466)				
Practice Area (Lead)				
Environment & Natural Resources				
Contributing Practice Areas				
Cross Cutting Areas				
[X] Climate Change				
[] Fragile, Conflict & Violence				
[] Gender				
[] Jobs				
[] Public Private Partnership				
Sectors / Climate Change				
Sector (Maximum 5 and total % must equal 100)				
Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Agriculture, fishing, and forestry	Agricultural extension and research	25	40	20

Water, sanitation and flood protection	General water, sanitation and flood protection sector	30	20	
Public Administration, Law, and Justice	Public administration- Water, sanitation and flood protection	20		
Water, sanitation and flood protection	Wastewater Treatment and Disposal	20		
Water, sanitation and flood protection	Sanitation	5		
Total		100		
Themes				
Theme (Maximum 5 and total % must equal 100)				
Major theme	Theme		%	
Environment and natural resources management	Water resource management		40	
Rural development	Other rural development		15	
Environment and natural resources management	Pollution management and environmental health		15	
Environment and natural resources management	Land administration and management		15	
Urban development	City-wide Infrastructure and Service Delivery		15	
Total			100	
Consultants (Will be disclosed in the Monthly Operational Summary)				
Consultants Required? Consulting services to be determined				

I. Introduction

1 This Project Paper seeks the approval of the Executive Directors to provide an Additional Financing in the amount of US\$22.0 million (US\$10 million IDA credits for Kenya and Tanzania each, a US\$2 million IDA grant for regional activities under the Lake Victoria Basin Commission, LVBC) to the Lake Victoria Environmental Management Project Phase II (LVEMP APL-1) (P100406: Credit Nos. 4530-TZ, 4531-UG, 4532-KE; GEF grant TF-94205, SIDA grant TF-95196). The support to LVBC is also expected to be augmented with a US\$0.5 million CIWA grant in parallel financing pending confirmation from the donors.

2 The Additional Financing is for implementation of expanded activities that scale up the project's impact, i.e. additional watershed management subprojects in existing focal areas, construction or expansion of sanitation and sewerage facilities that were designed but not implemented under the original project due to funding constraints, and expansion and deepening of cleaner production programs. The additional financing represents roughly 20 percent of the original project financing, but is expected to increase most of the key quantitative results by 30 percent or more (see Annex 1). These additional investments will occur primarily in Kenya and Tanzania, whilst Uganda will continue to implement and complete its existing work program, having previously suffered implementation delays. Activities at the regional level will primarily concern consolidation, analysis and dissemination of project and Basin monitoring data from the national teams, and Basin-wide analysis and planning for preparation of a future phase of LVEMP¹. The AF phase will be used to actively engage a range of partners with a view to strengthening partnerships and programmatic coordination of Lake Victoria Basin investments for the next phase of LVEMP.

3 LVEMP is increasingly showing results at the local level, but progress to date is uneven amongst the Basin countries, and more systematic interventions are needed at much greater scale for impacts at the Basin level. Lessons are being learnt on the needs for wider-scale approaches, crowding-in external support and attention to sustainability (see Appraisal Summary for further discussion), but time is also needed to build the consensus and partnerships to be able to apply them meaningfully. The Additional Financing therefore represents a bridging phase, maintaining critical momentum and implementation of proven activities across all teams, whilst Uganda is allowed to complete its planned investments and an ambitious next phase of LVEMP is being prepared as an early IDA-18 operation.

4 The Additional Financing meets all criteria for a regional IDA operation:

- *Three or more countries, at least one of which is an IDA country:* the LVEMP program involves all 5 countries in the Basin (all of which are IDA countries), and three of which are included within APL-1.
- *Effects spill over country boundaries:* Lake Victoria is a shared natural resource, whose water resources, pollutants and fish stocks freely cross national boundaries. Pollution and associated issues such as water hyacinth infestations move across boundaries. Large

¹ 'LVEMP' refers to the Program overall, including present and potential future phases.

mats of water hyacinth can be seen to move considerable distance along the shores. Variations in Lake water level due to changing abstractions or run-off in one area will affect all three riparian countries, and monitoring shows that changes in fish stocks are closely related across the Lake. The benefits of managing these shared resources are felt across the riparian countries, and require the active participation of all of them. There are also considerable positive externalities from knowledge-sharing, through the development of Basin-wide models and monitoring, as well as sharing implementation lessons.

- *Clear evidence of country or regional ownership:* the Lake Victoria Basin Commission (LVBC) and the Lake Victoria Fisheries Organization (LVFO) were established as organs of the East African Community (EAC) specifically to address the sustainability challenges to the Lake Basin and fisheries, and alongside the Protocol for Sustainable Development of Lake Victoria demonstrate regional ownership for management of the Lake Basin and its resources. LVBC coordinates LVEMP at the regional level, whilst LVFO leads regional fisheries policy activities, in addition to national activities implemented by the respective governments. The Regional Policy Steering Committee, including permanent secretaries from each of the Basin countries, has repeatedly stated its commitment towards sustainable management of the Basin and the objectives of LVEMP.
- *Provides a platform for a high level of policy harmonization:* LVEMP has already assisted these regional organizations to strengthen policy harmonization through development of regional effluent water quality standards, water quality monitoring protocols, a data-sharing protocol and strategies for sustainable land management and water hyacinth control. It continues to support harmonization of fisheries and water resources policy instruments.

5 Furthermore, the new IDA grant to the EAC conforms with all eligibility criteria for regional grants:

- *Recipient being a bona fide regional organization with legal status and fiduciary capacity to receive grant funding to carry out the activities financed:* The EAC is a bona fide regional organization, formally recognized by the African Union. LVBC is established as an institution of EAC, and can implement project activities within its mandate in that capacity. It has fiduciary capacity for project management, as has been demonstrated by adequate fiduciary management to date.
- *Recipient does not meet eligibility requirements to take an IDA credit:* The EAC is authorized by its establishing treaty to raise grant funding, but is not allowed to borrow as it does not generate its own revenues and would not be in a position to repay the credit.
- *The costs and benefits of the activity to be financed with an IDA grant are not easily allocated to national programs. The activities to be financed with an IDA grant are related to regional infrastructure development, institutional cooperation for economic integration, and/or coordinated interventions to provide regional public goods.* LVBC is managing the regional coordination aspects of the project, as well as analytical work and select physical investments for the management of shared Lake resources which constitute public goods and require implementation at the Lake or Basin level.

- *Grant co-financing for the activity is not readily available from other development partners:* The regional activities have been supported to date by Global Environment Facility and bilateral (Sweden) funding to LVBC. These and other grant resources will be actively targeted for future phases of the program, but are not available in the short term. The IDA grant represents minimal, critical, stop-gap financing to support continued regional coordination and Basin-wide preparation of the next major phase of LVEMP, and is ultimately expected to leverage much greater external funding.
- *The regional entity is associated with an IDA-funded regional operation involving some of the participating member states.* The grant to the EAC would form part of the larger regional LVEMP operation, which include IDA financing to all 5 EAC members.

6 **No change will be made to the current PDO and or results indicators, but most of the quantitative targets will be revised upwards to reflect additional investments under the Additional Financing** (see Annex 1). As the scope of investment activities will be the same, there will be **no changes in environmental category of the project or additional safeguard policies triggered**. The existing safeguards documents have been reviewed and remain fully relevant (see Social and Environment Analyses below).

7 **The implementation arrangements for the project will remain as they are**, with National Project Coordination Teams under the guidance of their respective ministries in each country, a Regional Project Coordination Team under LVBC, and the Regional Policy Steering Committee providing overall guidance to the program.

8 **The current closing date for the project is June 30, 2015 and the proposed new closing date will be December 31, 2017.**

II. Background and Rationale for Additional Financing

9 **Lake Victoria is a major population and poverty center in the Africa Region, and a trans-boundary natural asset of global importance.** The Basin is home to around a third of those below the poverty line in the East African Community (Burundi, Kenya, Rwanda, Tanzania and Uganda), living on around a ninth of its land surface. The Lake supports the World's largest freshwater fishery, with a total annual landed catch value estimated at around US\$0.5 billion, supporting the livelihoods of 3 million people, providing roughly 0.5 million tons of fish to local markets and generating US\$0.25 billion in export revenues². 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. Large rural poor populations are also dependent on the degraded lands in the upper basin, particularly in Burundi, Rwanda and the Kenya highlands. In addition, the waters of the Lake and its catchment provide 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.

² LVFO 2011. Status of Fish Stocks in Lake Victoria.

10 The Lake Victoria Basin has also become a global example of environmental degradation. Historically, the introduction of the Nile Perch was associated with a mass extinction of native fish species, but Perch stocks have now themselves declined to probably less than half of their peak levels due to increased fishing effort and other environmental stresses. Environmental degradation within the Basin increasingly poses broader threats to livelihoods and welfare. Loss of forest cover and erosion of soils has chronic impacts on land productivity as well as acute impacts where gullies destroy land, property and even lives. The flow of sediments and other pollutants into the Basin's rivers and ultimately the Lake reduces the supply of potable water, and causes algal blooms that are unpleasant for lakeshore communities and limit the tourism potential of the region. One of the most striking indicators of poor ecological health is the rapid colonization of the Lake by water hyacinth. Infestations of this invasive floating plant periodically block access to kilometers of lakeshore, preventing use of the Lake for transport and fishing, as well as posing serious health and safety risks to local inhabitants.

11 LVEMP aims to tackle the environmental challenges of the Lake Victoria Basin over the long-term and basin-wide, to improve the welfare of its inhabitants. LVEMP assists poor communities in multiple ways – promoting nature-based enterprises, increasing the productivity of degraded land and Lake shores, extending the provision of sanitation services that are known to improve public health, and enhancing navigation safety for fishers and others. Working with the private sector, it is also demonstrating how cleaner production systems can benefit both economic returns and the environment. By enhancing services and livelihoods for the poor, whilst increasing the long-term productivity of the Basin's resources, LVEMP contributes directly to the Bank's corporate goals to end extreme poverty and boost shared prosperity. Through economic diversification and rehabilitating watersheds and other natural systems, it is also increasing human and ecological resilience to climate change. Ultimately, the goal is to create sustainable wealth and employment through green growth and reversing the decline in its resources, but to achieve this at the Basin scale will require a generational effort. LVEMP was designed as a regional Adaptable Program Loan (APL, now replaced by Series of Projects, SOP) with three envisioned phases and informed by the studies and lessons generated from the original Lake Victoria Environmental Management Project phase I (LVEMP I), financed by the Global Environment Facility (GEF) and implemented from 1996 to 2005. APL-1, covering the three riparian states (Kenya, Tanzania and Uganda) as well as a regional coordination and policy component (through the East African Community's Lake Victoria Basin Commission, LVBC), is due to close at the end of FY15, having already received a two year extension. LVEMP APL-2 (P118316), covering Rwanda and Burundi, started later and is due to close at the end of FY17. LVEMP was designed to be a long-term program with additional support beyond SOP-1 and SOP-2.

Alignment with national and regional priorities

12 LVEMP is directly aligned with Pillar III of the Regional Integration Assistance Strategy, Coordinated Investments to Provide Regional Public Goods, through improved management of Lake Victoria as a shared water resource, raising agricultural productivity, and regional research and technical capacity development. LVEMP also contributes to Pillars I and II of the Strategy by supporting respectively the rehabilitation of the Lake as a transport hub, and the role of the

East African Community in leading a program of practical coordination in the management of a regional asset, and demonstrates a commitment to the cross-cutting theme of Coordinated Regional and National Planning through, inter alia, the participation of the LVBC. The regional coordination and collaboration promoted through the LVEMP for the management of Lake Victoria strengthens the capacity of the East Africa Community to better integrate as a regional bloc. LVEMP also provides an example of regional cooperation in lake-basin management and development that is relevant to the high-level, multi-lateral Great Lakes Initiative, which aims to entrench the peace dividend in eastern Democratic Republic of Congo, and address sources of instability and generate shared economic development at the regional level. It shows that trans-boundary basin and natural resources management can be effective both for improving local livelihoods, and building cooperation at the community and governmental levels. LVEMP is aligned with and supports the aims of the 2003 Protocol for Sustainable Development of Lake Victoria Basin, which governs the EAC member states' cooperation for management of the Basin, and established LVBC.

13 LVEMP contributes to national priorities and development strategies (e.g., Kenya's Vision 2030 recognizes that growth depends on sustainable environmental and natural resources management), and there is keen political interest in the Lake specifically from national and local government levels. LVEMP is consistent with the Partnership Strategies in each of the participating countries through enhancing the sustainable management of a key productive asset, as well as contributions to livelihoods of the poor and vulnerable. Each of the three riparian states is deeply concerned about the environmental health and productivity of the Lake system, as expressed in the 2003 Protocol for Sustainable Development of Lake Victoria, which established LVBC to promote collaborative economic development alongside sustainable environmental management of the Basin.

14 The LVEMP task team is working closely with the task team of the Lake Victoria Transport Project (P151606, FY17), a new and regionally important initiative under preparation. LVEMP is helping to facilitate some of the early project identification activities, and synergies are being identified to ensure that this and future phases of LVEMP are developed as a coordinated package of mutually complementary support for the economic and environmental health of the Basin. The Lake Victoria Transport Project will address the direct environmental risks to and from expanding Lake shipping, informed and supported by the wider Basin management programs under LVEMP, whilst both projects will work to ensure induced and directly promoted economic developments are synergized and sustainable. The transport project is expected to: (i) adopt and expand the navigation safety and spill response activities that started under LVEMP; (ii) incorporate water hyacinth management within and around port and key transport infrastructure, potentially including expansion of the use of mechanical harvesters being introduced under LVEMP; and (iii) address waste management issues arising from the expansion of Lake transport, including possibly financing special sewage lines for ports that are being designed under LVEMP. LVEMP will continue to implement broader programs that complement these actions, such as Basin-wide management of invasive species, watershed management to reduce sedimentation, and monitoring (including development of hydro-meteorological monitoring systems in the longer term). Both operations will support livelihood development for local communities, with the transport project potentially focusing more on

provision of local market access infrastructure, and LVEMP more on the software (i.e. training of communities, and other capacity-based interventions along the value chain).

History and progress of the operation

15 LVEMP APL-1 (P100406) was approved on March 3, 2009 and became effective on July 30, 2009 in Kenya, on August 20, 2009 in Tanzania, on January 25, 2010 in Uganda, and on January 13, 2010 for the grant to the East African Community. The project was restructured twice: in June 2012 and in May 2014. The first (level 1) restructuring sought to streamline the results framework to improve the realism of some policy-related targets, drop related dated covenants, extend the closing date of the project, and allocate a proportion of watershed management funds from Community Driven Development (CDD) sub-grants to ‘co-management initiatives’ (CMIs)³. The second (level 2) restructuring was undertaken to reflect an increase in SIDA funding available to LVBC (following exchange rate variations), and reallocate funds back to CDD sub-grants (following more rapid implementation progress than expected at the time of the first restructuring). The revised closing date of the project is June 30, 2015. APL-2 (SOP-2), which included Rwanda and Burundi in the Program, was approved on June 13, 2011 and closes on June 30, 2017.

16 The revised PDO, after the level 1 restructuring of 2012, is *to contribute to: (i) the improvement of the collaborative management of the trans-boundary natural resources of the LVB among the Partner States; and (ii) the improvement of environmental management of targeted pollution hotspots and selected degraded sub-catchments for the benefit of communities who depend on the natural resources of LVB.*

17 **The project experienced a slow start, but is now performing well, delivering genuine win-win investments that bring improvements in local living conditions, whilst also reducing the pollution load into the Lake.** Implementation was slow during the first couple of years. The project was restructured in 2012 to improve the realism of some policy-related targets and to streamline implementation. Since late 2012, overall disbursement has increased from around 20 percent to over 85 percent, with disbursement rates of 99 percent, 89 percent and 56 percent for Tanzania, Kenya and Uganda respectively. Disbursement in Uganda is low due to a 10-month freeze on project implementation from November 2012 to September 2013, following discovery of financial management irregularities. All ineligible expenditures have been refunded to the Bank as of December 2014. Audit reports are up to date for all APL-1 project teams.

18 There are no outstanding legal covenants for the project. Dated covenants relating to policy reforms were dropped at the 2012 restructuring, despite significant progress already made, as the project could not guarantee the timing of their formal adoption.

³ CMIs are community-based activities, but implemented directly by the project in a participatory manner, rather than through cash grants provided to community groups. CDD projects were observed to be limited in scope and frequently more focused on livelihood activities than environmental enhancement. The CMIs were introduced to deliver larger-scale and more systematic environmental interventions, which would complement the CDD grants.

19 **Five of seven PDO indicators appear clearly on track, whilst data gaps for the remaining two and several intermediate indicators are being addressed.** The project teams have performed well over the last two years, but due to the persistent (if decreasing) implementation lag and the need for improved monitoring data, performance was rated as moderately satisfactory for both Likelihood of Achieving the Project Development Objectives (DO) and Implementation Progress (IP) over an extended period. With recent improvements in outputs and documentation, however, both DO and IP have been rated *Satisfactory* since November 2014. All other project performance ratings are currently *Satisfactory* or *Moderately Satisfactory*. Activities in LVEMP are being implemented across four components:

Component 1: Strengthening institutional capacity for managing shared water and fisheries resources

20 Activities under this component focus on capacity building of the regional, national, and local institutions responsible for coordination, research, management of resources, and enforcement of environmental standards in order to harmonize policy, and regulatory standards; and undertake ecosystem monitoring and applied research. 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 sustainable financing of the natural resources management interventions; and (iii) develop regional frameworks for the management of key transboundary natural resources – water and fisheries.

21 A number of policy documents have been developed under the component and are undergoing final approvals, including harmonized water policies across basin countries, harmonized effluent water quality standards and a data-sharing protocol. A common fisheries policy and a revision to the Lake Victoria Fisheries Management Plan are in process. Community-based biological and/or manual control of water hyacinth is operating in more than 50 shoreline hot-spots. The Lake is currently relatively clear of heavy infestations. Hyacinth control in Kenya will soon be augmented with a mechanical harvester (for removing dense vegetation mats from key infrastructure), and remote-sensing based monitoring systems are being trialed. Basin-wide monitoring of water quality is also under development. Data is being collected in many areas, but analysis and reporting need to be standardized, for which a Water Resources Information System has been developed. However, proposals to establish dedicated trust funds for fisheries and environmental management have not achieved much traction with ministries of finance, and more work is needed for their economic justification.

Component 2: Point source pollution control and prevention

22 This component finances investments aimed at reducing point sources of pollution in priority hotspots, identified during LVEMP I. Major activities include (i) rehabilitation and improvement of wastewater treatment facilities; (ii) promotion of resource efficient and cleaner production technologies within local industries; and (iii) safety of navigation and management of maritime pollution risks. Sanitation and wastewater investments include provision of public toilets, rehabilitation and extension of sewerage and wastewater treatment facilities, and some cleaning and management of storm-water drainage channels.

23 Investments in works and equipment currently underway are expected to benefit over 100,000 people, reducing local health risks as well as the organic waste reaching the Lake, and

additional designs have been prepared. Cleaner production advisory services have been very successful, leveraging over US\$90 million in private sector investments with Internal Rates of Return (IRR) typically around 35 percent, whilst reducing the burden of pollution on local residents and the Lake as a whole. Hydrographic surveys and placement of navigation markers in 37 locations is expected to make a modest, but important contribution to navigation safety within the current year. Training on emergency spill response has already begun.

Component 3: Watershed management

24 This component reduces non-point sources of pollution (i.e. agricultural run-off and associated sediment, nutrients and agro-chemicals) by scaling up successful models of watershed management practices piloted under LVEMP I and other related national projects, which improve on-farm productivity, and generate positive downstream externalities. Watershed management is being implemented through community-driven investments to build capacity and ownership amongst the population who will be responsible for its maintenance. More than 600 watershed management subprojects are benefiting more than 300,000 people through reducing soil loss, maintaining agricultural productivity and enhancing livelihoods. The project combines wide-scale interventions (such as restoration of riparian vegetation buffers along river sections) with grants to community groups for linked livelihood activities. Several packages of linked activities (such as re-vegetation of riparian buffer zones with provision of alternative water points for livestock and bee-keeping within buffers) are emerging as effective interventions. Although systematic information on the impact of these programs is still being collated, there is considerable anecdotal evidence of impressive improvements in agricultural production and incomes.

Component 4: Project coordination and management

25 This component provides resources necessary for the effective coordination and communication, and monitoring and evaluation of the project activities. Project management, reporting and outreach have improved greatly since the project mid-term review and restructuring, although work is still needed on the development of informative and compelling communications products.

Rationale for Additional Financing request

26 Requests for additional financing have been received from the Government of Kenya (October 13, 2014), the Government of Tanzania (October 28, 2014) and the East African Community (November 19, 2014). The Government of Uganda requested (November 23, 2014) an extension of the project closing date without additional funds for the period of the Additional Financing. Due to the implementation lag in Uganda (following the earlier freeze) the existing funds will not be fully absorbed by the scheduled closing date.

27 The scale of the environmental challenges in the Lake Victoria Basin requires a long-term and large-scale intervention, as was envisaged in the original program structure. There is great potential for expansion and enhancement of the program, but the complexity of scope and number of stakeholders means that significant time is required to prepare a robust next phase. Implementation in Kenya, Tanzania and for regional activities under LVBC is largely on track, although completion of some larger sanitation and navigation safety investments by June 2015

remains challenging, and there are concerns over sustainability of several investments being delivered right at the end of the project. For instance, if the project were to close on June 30, 2015, new sanitation works would be constructed and new community livelihood activities initiated without any project follow-up to monitor their operation or provide further technical support.

28 **The Regional Policy Steering Committee originally requested an additional one year extension of the project on July 16, 2014,** to allow for completion of planned activities, and preparation of a new phase of program support on the understanding (as expressed in the original PAD and design for a series of projects) that long-term support was needed. Subsequent discussion with counterparts and within the Bank, however, has built consensus around an alternate proposal to extend the project for 2.5 years *and* provide additional financing to the Kenya, Tanzania and Regional project teams, in recognition of the following:

- It will provide for expansion of already proven investments that are performing well, whilst allowing Uganda to complete implementation of its original program of activities and achieve its anticipated results.
- It will greatly enhance sustainability of the existing investments.
- Allow for construction of sanitation and sewerage facilities that were designed but not implemented under the original project due to funding constraints.
- The four year hiatus between LVEMP I and LVEMP II APL-1 proved extremely costly in terms of the loss of institutional and technical memory, and the time-taken to re-mobilize during the slow LVEMP II start-up. It is therefore critical, that (i) the extension period is long enough to complete preparation of the next phase, and (ii) the other project teams receive additional financing to maintain momentum and strengthen achievements whilst Uganda completes its program.
- The range of interventions and stakeholders involved requires significant effort to be expended on analytical work and consensus-building, and it is therefore unlikely that thorough preparation of an ambitious next phase could be completed within a year.
- It will allow the next phase of LVEMP to be prepared in parallel with the Lake Victoria Transport Project, enhancing synergies through joint design of sustainable livelihoods intervention.
- The Additional Financing would provide for senior experts to work with LVBC to facilitate a process and develop shared roadmaps for policy reform based on the identification of key long-term objectives, stakeholders & perspectives, advocacy requirements and progress milestones. This work would particularly focus on the complex policy agendas around sustainable fisheries and integrated water resources management institutions, including the role of LVBC and financing mechanisms.

29 Following the strong recent progress under LVEMP APL-1, the possibility of ending the project in June 2015 without consideration for further support was not considered appropriate. The implementing agencies' commitment to complete delivery of the planned SOP-1 results and their interest in pursuing the original intention of a subsequent program

phase were clear. Given the need for a long-term program of action and the sustainability issues, as indicated above, halting the program at its current stage would severely undermine the value of the considerable investments made to date, in addition to the missed opportunity to build on current momentum.

III. Proposed Changes

Summary of Proposed Changes

The total additional funding requested is US\$22.0 million: US\$10 million in IDA credits for Kenya and Tanzania each, plus a US\$2 million IDA grant for regional activities under LVBC. An additional US\$0.5 million CIWA grant is pending confirmation from the donors. No additional financing is sought for Uganda given that a significant part of its original credit is expected to still be available after the end of FY15. Modest IDA resources are being used to support the regional activities under LVBC for the first time because the process to secure additional GEF funds is too lengthy to allow for timely preparation of the Additional Financing, and SIDA is undergoing a review of its regional support programs which will also not be completed in time. Both funding sources will be firmly targeted to support a significantly larger next phase of LVEMP, hopefully alongside additional donor contributions.

The bulk of the additional financing would support continued expansion of ongoing investments, i.e. additional watershed management subprojects in existing focal areas, construction of sanitation and sewerage facilities (or additional components thereof) that were designed but not implemented under the original project due to funding constraints, and expansion and deepening of cleaner production programs. The additional financing represents roughly 20 percent of the original project financing, but is expected to increase most of the key quantitative results by around 30 percent or more (see Annex 1). These will be complemented by monitoring and support for existing investments to ensure operations and maintenance are fully and robustly established. Regional activities would focus on (i) completing the establishment and routine updating of systematic Basin models and monitoring systems, drawing on data collected at the national level, and (ii) preparing / collating additional Basin-wide studies as a basis for the preparation of the next phase of the Program. Details of the anticipated additional activities and expenditures are provided in Annex 2.

During the Additional Financing stage, incremental improvements will be made to lay the groundwork for a more ambitious and efficient next phase of LVEMP:

- **Address sustainability issues** by ensuring continuing monitoring and support to community groups on business management and marketing, wealth creation and employment and livelihoods investments including nature-based enterprises, and to local authorities on management of new infrastructure and equipment.
- **Reinforce routine Basin monitoring** using standardized protocols.
- **Prioritize further investments** in each country by combining systematic modelling of pollution loads, mapping of current and planned investments and cost-benefit analysis for remaining investment gaps. Detailed designs will also be prepared for some of these investments in anticipation of the next phase of the program, alongside proposed project documents for the next phase.
- **Expand and deepen the successful cleaner production program.** Explore opportunities to combine voluntary technical assistance approach with strengthening of pollution regulatory systems, rating and disclosure systems and eco-certification. Extend program to smaller enterprises through promotion of simple methods to address common issues, rather than full assessments, and analysis of financing for cleaner production investments.

<p>Engage with the private sector and regulatory agencies.</p> <ul style="list-style-type: none"> • Develop policy roadmaps in support of key reforms, including focused agenda, stakeholder analysis and engagement, advocacy materials (and support for academic networks and applied research where needed, including in environmental economics), convening public forums around Lake Victoria issues, etc. <p>The implementation arrangements for the project will remain as they are, with National Project Coordination Teams under the guidance of their respective ministries in each country, a Regional Project Coordination Team under LVBC, and the Regional Policy Steering Committee providing overall guidance to the program.</p> <p>As the scope of investment activities will be the same, there will be no changes in environmental category of the project or additional safeguard policies triggered. The existing safeguards documents have been reviewed and remain fully relevant (see Social and Environment Analyses below).</p>	
Change in Implementing Agency	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change in Project's Development Objectives	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change in Results Framework	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]
Change in Safeguard Policies Triggered	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change of EA category	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Other Changes to Safeguards	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change in Legal Covenants	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change in Loan Closing Date(s)	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]
Cancellations Proposed	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change in Disbursement Arrangements	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Reallocation between Disbursement Categories	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change in Disbursement Estimates	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]
Change to Components and Cost	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]
Change in Institutional Arrangements	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change in Financial Management	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]
Change in Procurement	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Change in Implementation Schedule	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]
Other Change(s)	Yes [<input type="checkbox"/>] No [<input checked="" type="checkbox"/>]
Development Objective/Results	

Project's Development Objectives						
Original PDO						
The Project development/global environmental objectives (PDO/GEO) are to: (i) improve collaborative management of the transboundary natural resources of Lake Victoria basin for the shared benefits of the EAC Partner States; and (ii) reduce environmental degradation to improve the livelihoods of communities, which depend on the natural resources of Lake Victoria basin.						
Current PDO						
The objectives of the Project are to contribute to: (i) the improvement of the collaborative management of the trans-boundary natural resources of the LVB among the Partner States; and (ii) the improvement of environmental management of targeted pollution hotspots and selected degraded sub-catchments for the benefit of communities who depend on the natural resources of LVB.						
Change in Results Framework						
Explanation:						
No change will be made to the current PDO and or results indicators, but most of the quantitative targets will be revised upwards to reflect additional investments under the Additional Financing (see Annex 1). The number of urban pollution hotspots addressed will increase from 6 to 9, and the area of land brought under sustainable land management from 6,150 ha to 8,000 ha. The number of project beneficiaries was earlier underestimated, having already exceeded the existing target by close to an order of magnitude. The end-of-project target will rise to 450,000, roughly a 50 percent increase on the current figure, due mainly to incremental benefits from watershed management, sanitation and wastewater treatment.						
Compliance						
Covenants - Additional Financing (LVEMP APL-1 Additional Financing - P153466)						
Source of Funds	Finance Agreement Reference	Description of Covenants	Date Due	Recurrent	Frequency	Action
				<input type="checkbox"/>		
Conditions						
Source Of Fund		Name		Type		
Description of Condition						
Risk						
Risk Category				Rating (H, S, M, L)		

1. Political and Governance	M				
2. Macroeconomic	L				
3. Sector Strategies and Policies	M				
4. Technical Design of Project or Program	S				
5. Institutional Capacity for Implementation and Sustainability	S				
6. Fiduciary	S				
7. Environment and Social	M				
8. Stakeholders	M				
9. Other					
OVERALL	M				
Finance					
Loan Closing Date - Additional Financing (LVEMP APL-1 Additional Financing - P153466)					
Source of Funds	Proposed Additional Financing Loan Closing Date				
International Development Association	31 December, 2017				
Loan Closing Date(s) - Parent (Lake Victoria Environmental Management Project Phase II - P100406)					
Explanation:					
The original closing date for the project is June 30, 2015 and the proposed new closing date will be December 31, 2017. All the existing IDA credits (4530-TZ, 4531-UG, 4532-KE) and the SIDA grant to LVBC (TF-96195) would be extended to allow for continuity and full utilization of funds.					
Ln/Cr/TF	Status	Original Closing Date	Current Closing Date	Proposed Closing Date	Previous Closing Date(s)
IDA-45300	Effective	30-Jun-2013	30-Jun-2015	31-Dec-2017	30-Jun-2013, 30-Jun-2015
IDA-45310	Effective	30-Jun-2013	30-Jun-2015	31-Dec-2017	30-Jun-2013, 30-Jun-2015
IDA-45320	Effective	30-Jun-2013	30-Jun-2015	31-Dec-2017	30-Jun-2013, 30-Jun-2015
TF-56812	Closed	31-Dec-2007	30-Jun-2009		30-Jun-2009, 23-Dec-2009
TF-56813	Closed	31-Dec-2007	30-Jun-2009		31-Dec-2007, 29-Feb-2008, 30-Jun-

					2009, 04-Sep-2009
TF-56814	Closed	31-Dec-2007	30-Jun-2009		29-Feb-2008, 30-Jun-2009, 25-Sep-2009
TF-90883	Closed	28-Feb-2008	30-Jun-2009		28-Feb-2008, 30-Jun-2009, 19-Jan-2010
TF-95196	Effective	30-Jun-2013	30-Jun-2015	31-Dec-2017	30-Jun-2013, 30-Jun-2015
Change in Disbursement Estimates (including all sources of Financing)					
Explanation:					
The additional activities will be implemented across the period of the Additional Financing.					
Expected Disbursements (in USD Million) (including all Sources of Financing)					
Fiscal Year	2016	2017	2018		
Annual	10.00	10.00	2.50		
Cumulative	10.00	20.00	22.50		
Allocations - Additional Financing (LVEMP APL-1 Additional Financing - P153466)					
Source of Fund	Currency	Category of Expenditure	Allocation	Disbursement %(Type Total)	
			Proposed	Proposed	
IDA-KE	USD	Subprojects for Part 3(a) of the Project	0.73	7.30	
IDA-KE	USD	Goods, works, consultants' services, Operating Costs and Training for the Project (except Part 3(a) of the Project)	9.27	92.70	
		Total:	10.00		
IDA-TZ	USD	Subprojects for Part 3(a) of the Project	1.73	17.30	
IDA-TZ	USD	Goods, works, consultants' services, Operating Costs and Training for the Project (except Part 3(a) of the Project)	8.27	82.70	
		Total:	10.00		

IDAT-EAC	USD	Goods, consultants' services, Training and Workshops, and Incremental Operating Costs for the Project	2.00	100.00																																		
		Total:	2.00																																			
CIWA ⁴	USD	Goods, consultants' services, Training and Workshops, and Incremental Operating Costs for the Project	0.50	20.00																																		
		Total:	0.50																																			
Components																																						
Change to Components and Cost																																						
<p>Explanation:</p> <p>No components or major activities are being dropped, and no additional investments are foreseen on navigation safety given that the new Lake Victoria Transport project is expected to take over and expand these programs before the end of the Additional Financing period. There will also be limited work on the development of new policy instruments; the main focus will be on monitoring implementation of existing policies and a strategic stock-taking on more complex and challenging policy agendas (such as reduction in fishing effort or establishing fisheries levy trust funds) with a view to developing shared roadmaps to progress during the next phase of LVEMP.</p> <p>No re-allocations of existing funds are expected between subproject grants and other expenses. The anticipated breakdown of additional funds between the components, including the forthcoming CIWA parallel financing is summarized in the tables below.</p> <table border="1"> <thead> <tr> <th rowspan="2">Component</th><th colspan="4">Indicative allocation (US\$ millions)</th></tr> <tr> <th>Kenya</th><th>Tanzania</th><th>LVBC</th><th>Total</th></tr> </thead> <tbody> <tr> <td>1: Strengthening institutional capacity for managing shared water and fisheries resources</td><td>1.5</td><td>2.1</td><td>1.9</td><td>5.5</td></tr> <tr> <td>2: Point source pollution control and prevention</td><td>4.5</td><td>3.8</td><td>0.2</td><td>8.5</td></tr> <tr> <td>3: Watershed management</td><td>2.0</td><td>2.0</td><td></td><td>4.0</td></tr> <tr> <td>4: Project coordination and management</td><td>2.0</td><td>2.1</td><td>0.4</td><td>4.5</td></tr> <tr> <td>Total</td><td>10.0</td><td>10.0</td><td>2.5</td><td>22.5</td></tr> </tbody> </table>					Component	Indicative allocation (US\$ millions)				Kenya	Tanzania	LVBC	Total	1: Strengthening institutional capacity for managing shared water and fisheries resources	1.5	2.1	1.9	5.5	2: Point source pollution control and prevention	4.5	3.8	0.2	8.5	3: Watershed management	2.0	2.0		4.0	4: Project coordination and management	2.0	2.1	0.4	4.5	Total	10.0	10.0	2.5	22.5
Component	Indicative allocation (US\$ millions)																																					
	Kenya	Tanzania	LVBC	Total																																		
1: Strengthening institutional capacity for managing shared water and fisheries resources	1.5	2.1	1.9	5.5																																		
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3: Watershed management	2.0	2.0		4.0																																		
4: Project coordination and management	2.0	2.1	0.4	4.5																																		
Total	10.0	10.0	2.5	22.5																																		
Current Component Name	Proposed Component Name	Current Cost (US\$M)	Proposed Cost (US\$M)	Action																																		

⁴ The parallel CIWA grant financing is pending confirmation from the CIWA donors.

Strengthening institutional capacity for managing shared water and fisheries resources	Strengthening institutional capacity for managing shared water and fisheries resources	22.40	27.90	Revised
Point source pollution control and prevention	Point source pollution control and prevention	37.20	45.70	Revised
Watershed management	Watershed management	43.60	47.60	Revised
Project coordination and management	Project coordination and management	11.60	16.10	Revised
	Total:	114.80	137.30	
Other Change(s)				
Change in Financial Management				
<p>Explanation:</p> <p>The audit submission deadline for LVBC will be extended from 6 to 9 months after the end of the financial year. This change was discussed at the last restructuring, but ultimately not included due to the desire to harmonize audit time-lines across all EAC programs. However, it has since been accepted that due to the approvals needed from each EAC country for the LVBC audit, the 6 month deadline is unrealistic. In all other respects, the financial management arrangements will remain as they are.</p>				
Change in Implementation Schedule				
<p>Explanation:</p> <p>Project completion date will be December 31, 2017.</p>				

IV. Appraisal Summary

Economic and Financial Analysis
<p>Explanation:</p> <p>The ex-ante economic and financial analysis of LVEMP APL 1 demonstrated a significant positive NPV of the project activities as well as an IRR above the assumed discount rate of 10 – 12 percent. The Additional Financing continues and expands these activities in Kenya and Tanzania, ensuring their sustainability as well as laying the groundwork for the preparation of a next phase of investment which encompasses all five Basin countries. Thus a similarly favorable cost-benefit ratio can be expected. For the proposed activities in component 2 and 3 a stream of quantifiable and intangible expected benefits can be documented based on quantitative and qualitative information from the literature, providing insights about the type and magnitude of benefits the AF could achieve. A detailed economic and financial analysis – with view towards the next project phase – will be carried out in the course of the AF.</p>

Economic and Financial analyses of the existing project stressed the economic desirability of this type of investment. NPVs were estimated for different areas of investment at the Basin level (as distinguishing between regional and national benefits was difficult given transboundary inter-linkages). The ex-ante analysis estimated an overall project NPV of at least US\$31.9 million, assuming a 10 percent discount rate, comprised of US\$7.1 million for fisheries management, US\$8.3 million for point-source pollution management, US\$13.9 million for watershed management and US\$2.6 million for industrial pollution management.

Systematic data on the development impacts of investments under the existing project are in the process of being collated, and a sufficient basis for a meaningful ex-post economic analysis does not yet exist. However, anecdotal information suggests that benefits may be at least as significant as those estimated during preparation. The number of beneficiaries from sanitation and wastewater management investments is likely to be considerably higher than original estimates, and at least some of the watershed subprojects are returning substantial increases in agricultural production and incomes. Under the cleaner production program, some financial data were collected from a survey of 30 leading private sector participants (i.e. around a third of all the industries actively implementing improvements). As a direct result of the program, these 30 enterprises had invested over US\$80 million in improved production techniques, representing around 30 times the cost of the program to the project, or close to the entire IDA funding for the project. This figure is skewed by a single company that had invested US\$54 million to reduce air pollution, but the remaining 29 had each invested an average of around US\$1 million, producing direct financial returns with typical IRRs of around 35 percent through reduced resource use and wastage (i.e. without accounting for broader environmental or health benefits).

Given that the Additional Financing investments will be of the same nature as existing activities, the ex-ante economic justification for the project is assumed to still apply. In fact, it may be a conservative estimate due to strong performance of existing activities (as discussed above) and to improving implementation efficiency; the Additional Financing represents 20 percent of the original project financing, but is expected to increase most of the key quantitative results indicators by around 30 percent or more (see Annex 1).

The economic returns of the types of investments involved in LVEMP are well supported in the literature. Studies have found that sanitation investments in developing countries yield returns several times higher than costs in terms of health benefits (e.g. WHO, 2004; Prues-Uesten, et al. 2008), without accounting for a range of intangible benefits related to dignity, comfort, privacy, security and social acceptance. Recent economic studies by the World Bank concluded that impacts resulting from poor sanitation and hygiene cost Kenya the equivalent of 0.9 percent of GDP, and Tanzania the equivalent of 1 percent of GDP. Several socio-economic studies have demonstrated that sustainable land management (SLM) approaches (as pursued in the watershed management component) can improve yields and increase climate resilience compared to conventional practices (World Bank, 2011; Nkonya et al. 2014; Bryan et al., 2013; UNCCD, 2009). In the Kenya Agricultural Carbon project SLM practices have increased farmers' yields by up to 15-20 percent, and other regional studies have yielded even greater returns. The adoption of SLM practices also has *regional benefits*, by reduction of sediment loads and non-point source pollution, and hydrological regulation and carbon sequestration services.

Finally, the delayed start of many of the investments under the existing project means that the continuation of monitoring and technical support during the Additional Financing will be critical to ensuring their proper operation and maintenance. The marginal return from this small incremental expenditure for the sustainability of sizable capital investments is considered to be very high.

The public good nature of the natural resources within the Lake Victoria Basin, and the externalities associated with their degradation justify public investments in improved management. However, LVEMP has been successfully leveraging complementary investments from private enterprises and local communities, and will continue to expand these efforts. The World Bank brings considerable value addition to the program given its regional convening power, investments in related programs (e.g. Nile Basin, national sanitation and regional transport development programs), and its engagement in supporting LVEMP since the development of the first phase project in the 1990s.

Technical Analysis

Explanation:

The design of LVEMP II was based on analytical work carried out under LVEMP I, which characterized the Basin-wide challenges, and the pollution and sediment loadings in various tributaries. A couple of priority catchments within the watershed were therefore identified for investments, but the detailed planning of watershed management programs during the early stages of LVEMP tended to be based on participatory identification of ‘hotspots’ with local authorities, rather than rigorous spatial or quantitative analysis. Following well-received trials during LVEMP I, the watershed management activities were to be delivered via CDD sub-grants, which gave the community groups the decision as to the precise nature and location of activities. This approach strengthened ownership by local communities, but was increasingly understood to require extended engagement and capacity-building time with community groups before any tangible investments took place, and resulted in a scattered and piecemeal selection of activities, many of which favored livelihood over environmental objectives, and whose impact at a catchment level was questionable. This realization has led to an evolution of the approach over the course of LVEMP II, with larger “co-management initiatives” (CMIs) introduced to provide more rapid and systematic interventions with a stronger focus on natural resources management.

The experimentation through the CDD program has, however, led to considerable learning and the emergence of complementary CMI and CDD activities as effective packages of intervention; for instance combining re-vegetation and protection of riparian buffer zones with bee-keeping and provision of alternative water sources, or combining improved, stall-fed cattle systems with provision of biodigesters to reduce demand for wood fuels. The Additional Financing will seek to accelerate this trend towards more systematic interventions through the use of Geographic Information System (GIS) analysis to identify priority broad-scale intervention, which will be complemented by locally-selected, livelihood-based CDDs.

A further issue for the watershed management component is the ex-post monitoring of the livelihood and environmental benefits from subprojects, as well as their sustainability. The project

is now developing a standardized matrix for data collection during the AF phase, to include data on the livelihood benefits, such as the number of direct and indirect beneficiaries, and environmental, such as the number of hectares under sustainable land management technologies. In addition to this, the project team has also developed simple financial models for typical activities to identify the data needed for simple farm-level cost-benefit analyses of the interventions. Such analyses can have high potential for increasing the wide scale uptake of the practices being introduced under the project.

Both watershed and wastewater management activities are increasingly coming to fruition, but more focus is needed on their sustainability. Simple sustainability plans for the watershed management subprojects are being developed to be piloted under the Additional Financing, and operational plans will similarly be developed with local authorities / county governments to clarify management requirements and commitments for new sewage and wastewater facilities.

Project monitoring systems are also starting to yield more results, but it has been a gradual process and much time has been spent to date on developing IT infrastructure with limited data, rather than delivering outputs and developing data management systems in concert with the accumulation of data. The Additional Financing phase will put an emphasis on the step-by-step development of these systems, including standard analyses and reporting formats as a precondition to the design of further basin management interventions during the next phase of LVEMP. Monitoring systems will also be extended to include indicators for the implementation of new policy instruments. For those policy reforms which have not gained traction (e.g. the proposal to establish fishery levy trust funds), the project will step back and identify political barriers, information gaps or other hurdles and the strategy to overcome them.

The cleaner production program has delivered successful outcomes. As discussed above the total private sector investment leveraged by the technical assistance provided probably exceeds the entire Bank funding to date for LVEMP II. However, the program is still limited in its reach, working predominantly with the largest enterprises and not institutionalized in either public or private sector systems. In addition to continued implementation of the existing approach, the Additional Financing will also seek to engage Small and Medium Enterprises (SMEs) and investigate, if necessary, their access to finance for cleaner production investments.

Overall, the Additional Financing will maintain the same basic scope of activities, whilst making incremental improvements to their reach and cost-effectiveness, and emphasizing data collection and impact analysis. Lessons are being learnt, which the Additional Financing will begin to apply, whilst building consensus for more fundamental reforms to the program during the next phase:

- The needs within the Basin vastly exceed the current scale of investments. This implies that (i) investments need to be better modelled, targeted and monitored to establish the most cost-effective interventions, and (ii) partnerships are critical to success. The Additional Financing will greatly augment the analytical base for designing future activities, extend coordination beyond LVBC-led activities by reviewing all public programs, and build on the already successful engagement with the private sector to extend cleaner production programs to SMEs and mobilize private resources for greening supply chains.
- Delivery of activities on the ground has significantly accelerated, but greater focus is

needed on their sustainability. The Additional Financing will ensure continuing monitoring and support to community groups on business management and marketing, and to local authorities on management of new infrastructure and equipment.

- Policy reform has stalled where critical objectives are not clearly identified and justified, and political economies are ignored. The Additional Financing will step back and aim to elaborate realistic roadmaps in contentious policy areas, including focused agenda, stakeholder analysis and engagement, advocacy materials (and support for academic networks and applied research where needed, including in environmental economics), convening public forums around Lake Victoria issues, etc.

The vision is for a flagship, cross-cutting and sustained Basin management program (linked to the Lake Victoria Transport Project) that will: (i) employ systematic monitoring and diagnostics to identify the most cost-effective interventions to improve Basin health and green resilient growth that supports livelihood and maintains the sustainability of economic development; and (ii) leverage capacity and investments from a variety of public and private partners, filling specific and strategic gaps.

The PDO remains valid and relevant. The list of PDO and intermediate indicators are realistic and achievable and provide an acceptable foundation for evaluation of project outcomes at project completion. The PDO covers two major outcomes: (1) collaborative management of the trans-boundary natural resources; and (2) environmental management of targeted pollution hotspots and selected degraded sub-catchments for the benefit of communities who depend on the natural resources.

- 1) Trans-boundary environmental management is measured directly by the indicator on water hyacinth hotspots. Monitoring and control of water hyacinth require collaborative management by the Basin countries, as the weed moves between them. The two policy PDO indicators reflect outputs that serve as proxy indicators for environmental management as they are expected to establish. Finally, the SLM practices indicator reflects activities within individual countries which have trans-boundary effects on water quality.
- 2) Environmental management of pollution hotspots is measured by the indicator on urban centers with technical designs and/or investments to address major point source pollution hotspots. Ideally, an indicator measuring reduction in pollution should have been included. Given the time required for identification of these hotspots, design of mitigation activities, investments and full implementation, it is not realistic to measure actual reduction in pollution in the present phase of the project, although improvements in models and monitoring is expected to facilitate this in future. The aspect of environmental management of sub-catchments is captured by the SLM indicator. The benefit for local people is captured by the intermediate indicators on sanitation as well as the indicators both at PDO and intermediate level related to improved SLM practices.

There are no changes proposed to the implementation arrangements. Although fiduciary risk is rated substantial, financial management and procurement performance are considered adequate. The same designated accounts and funds flow arrangements used under the original project will continue under the Additional Financing, although new and separate project accounts will be maintained by LVBC for the new IDA and CIWA grants (pending confirmation of the latter).

Social Analysis
Explanation:
<p>No changes are proposed to the original safeguards frameworks (disclosed March 6, 2008 in country and March 14, 2008 via Infoshop) and category for the project (Category A-full assessment), which remain relevant and adequate for the existing project and incremental activities under the Additional Financing. Overall safeguard compliance and management for LVEMP II has been improving over the last four years of implementation. Project coordination units in each of the countries have full time safeguards staff and the mechanisms for coordination and overall safeguards oversight are well established in partner countries. Environmental and Social screening is carried out for both CDD and CMI subprojects and Environmental and Social Management Plans. Grievance and Redress Mechanism and procedures are established locally, project affected communities can lodge complaints regarding compensation and other adverse impacts to these established mechanism specific to the district and locality. Implementation of mitigation measures is carried out as part of the project implementation plan, and the Bank team has fielded several missions specifically focused on assessing and supporting safeguards implementation.</p> <p>Involuntary Resettlement (OP/BP 4.12) is triggered. The Indigenous People's Policy (OP/BP 4.10) was also triggered due to the presence of groups meeting the policies criteria within areas of the Basin in Kenya. However, project activities have not concerned these groups to date. The social safeguards plans for the pipeline investments are up to date. ESIA's for CDDs and CMIs have also been conducted where needed, based on the type/nature, location, sensitivity and scale of the project and magnitude of its potential environmental and social impacts. Sustainability of the CDD sub projects is a challenge, and will be addressed by developing adequate CDD livelihood business plans assuring the ownership and hence the sustainability of the CDD investments.</p> <p>The demarcating protection zones for rivers and lakes puts into effect existing prohibitions on farmers cultivating within the riparian zone and results, to a small extent, in loss of livelihoods for affected households. Given the difficulty of enforcing the demarcation policy, and to prepare a traditional Resettlement Plan, the inclusion of the households from the protection zone in the CDD income generating sub-projects remains the most constructive response for the restoration of livelihood for the affected households. This approach has worked well and has incentivized communities to self-regulate the demarcation policy, and in addition restored their income by participating in the CDDs sub-projects.</p> <p>Under the Additional Financing, households that meet the criteria of Project Affected Households as per the RPF will continue to be identified as part of the planning process. This will require identification of affected households that will lose access to the protected areas for cultivation through an inventory exercise, and then planning of CDD sub-projects to address their needs. This inventory of project affected households will be mandatory to ensure compliance with the RPF and inclusion of these households as the main targeted beneficiaries of the CDD livelihood sub-projects will be a requirement to ensure that the incomes of these households is restored.</p>

To date, 13 ESIAs/ESMPs and two RAPs already finalized for investments under the existing project have been produced, and disclosed locally and at the InfoShop.

Gender is important within LVEMP as many natural resource related activities are highly gender-specific – e.g. fish are largely caught by men and largely sold by women. While LVEMP PDO does not target women specifically, all project interventions and investments are gender-informed across all three scoring dimensions of analysis, actions, and monitoring & evaluation at the design and implementation phase of the investments in the project and as such reflected in the ISRs.

Environmental Analysis

Explanation:

No changes are proposed to the original safeguards frameworks (disclosed March 6, 2008 in country and March 14, 2008 via Infoshop) and category for the project (Category A-full assessment), which remain relevant and adequate for the existing project and incremental activities under the Additional Financing. The project was rated as Category A during preparation due to the unique biological characteristics of the Lake and Basin, the inclusion of (as then unspecified) wastewater treatment works, and sensitivities relating to an Inspection Panel case brought over water hyacinth disposal under LVEMP I. However, none of the project investments to date would qualify as Category A activities.

As with the original project, the Additional Financing will trigger: OP/BP 4.01 on Environmental Assessment; Natural Habitats (OP/BP 4.04); Pest Management (OP/BP 4.09); Safety of Dams (OP/BP 4.37) and Projects on International Waterways (OP/BP 7.50). No additional new safeguards will be triggered. Overall safeguard compliance has been improving over the last four years of implementation. Mechanisms for coordination and overall safeguards oversight are well established in all partner countries. Environmental and Social screening has been carried out for both CDD and CMI subprojects and Environmental and Social Management Plans are in place. Implementation of mitigation measures is carried out as part of the project implementation plans. To date, 13 ESIAs/ESMPs and two RAPs already finalized for investments under the existing project have been produced, and disclosed locally and at the InfoShop.

Risk

Explanation:

The overall risk rating for the Additional Financing will remain Moderate, as there is no fundamental change in design. LVEMP poses few risks in terms of negative external impacts. Despite the category A safeguards rating (due to the inclusion of wastewater treatment works), most of the project investments are relatively small-scale, and environmentally and socially benign. The biggest risks are to project performance due to the inherent breadth and complexity of the project and the strains that puts on available capacity. Implementation capacity has been strengthened significantly over the last two years, particularly in Kenya and Tanzania, but the underlying complexity of the project means challenges remain. Gaps in the governance and control environments also pose non-negligible cost-effectiveness and reputational risks. The SORT assessment above is based on current residual risk, and therefore takes into account recent performance, and steps already taken to ensure that the development objectives are achievable

and to strengthen fiduciary management in Uganda and elsewhere. It is also precautionary in tending to adopt the higher level of risk in those areas where the risk assessment varies between project teams. For instance, Financial management risk is currently assessed as moderate for LVBC, substantial for Tanzania and Uganda, and has recently varied between moderate and substantial for Kenya. The overall level of fiduciary risk is set at substantial, reflecting the higher end of this scale.

Key ongoing risks in LVEMP will also be relevant to the Additional Financing, but are manageable:

- Fundamental reform of water resources use policies remains politically difficult. Key policy issues have to be carefully framed, supported with factual evidence, and expectations need to be appropriately managed. However, this does not substantively affect the project's ability to continue to make progress and build cooperation in other areas.
- During the Bank's 2012 in depth audit of the project in Uganda and subsequent June 30, 2012 Annual External Audit and June 24, 2013 Forensic Audit various weaknesses in FM, governance and suspected fraudulent activities were noted, leading to a freeze on project implementation from November 2012. The freeze was lifted after governance improvements through mainstreaming of the project into the Ministry operations for enhanced oversight and appointment of a new project coordinator. The project also recruited a new project accountant and Ministry appointed an internal auditor to carry regular review of project activities. The Government also reviewed its procedures on cash management including having cash withdrawal ceilings and prohibiting depositing project activity funds into individual staff bank accounts. The Bank has also continued to carry out the semiannual FM reviews that include sample site visits to project sites. The subsequent external audits for June 2013 and 2014 were unqualified with no major internal control weaknesses, and ineligible expenditures have been re-paid in full. Small amounts of ineligible expenditures have also been identified (and refunded) under other project teams. Close financial management supervision and support will need to continue.
- The complexity of the project design threatens the efficiency of implementation. In the short run, this is best managed by scaling up those activities which are already established and understood. Going forward, LVEMP will seek to improve local targeting of investments and strengthened partnerships with other public and private actors to reduce the scope of activities being directly implemented by teams. But a large degree of complexity is inevitable given the nature of the program, and will require continuing close monitoring and support.

A climate risk assessment for the Additional Financing has been completed using the new Bank climate risk assessment tool. It did not identify any major threats to the project.

V. World Bank Grievance Redress

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Africa: Lake Victoria Environmental Management Project Phase II

REVISED RESULTS FRAMEWORK

Project Development Objectives							
Original Project Development Objective - Parent:							
The Project development/global environmental objectives (PDO/GEO) are to: (i) improve collaborative management of the transboundary natural resources of Lake Victoria basin for the shared benefits of the EAC Partner States; and (ii) reduce environmental degradation to improve the livelihoods of communities, which depend on the natural resources of Lake Victoria basin.							
Current Project Development Objective - Parent:							
The objectives of the Project are to contribute to: (i) the improvement of the collaborative management of the trans-boundary natural resources of the LVB among the Partner States; and (ii) the improvement of environmental management of targeted pollution hotspots and selected degraded sub-catchments for the benefit of communities who depend on the natural resources of LVB.							
Proposed Project Development Objective - Additional Financing (AF):							
Same as the current Project Development Objective for the parent project.							
Results							
Core sector indicators are considered: Yes				Results reporting level: Project Level			
Project Development Objective Indicators							
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Continued	A draft harmonized policy on fisheries management and agreement on a strategy and timeframe for adoption, submitted by LVBC and approved by the Council of Ministers	<input type="checkbox"/>	Yes/No	Value	No	No	Yes
				Date	30-Jan-2011	25-Mar-2015	29-Dec-2017
				Comment	Review started under LVEMP I	Draft Fisheries and Aquaculture Policy for EAC prepared by the RTWG and presented to	

						stakeholders for validation on December 9, 2015 in Jinja and will be subsequently tabled before 14th SECOM and EAC COM.	
Continued	A draft harmonized policy on water management and agreement on a strategy and timeframe for adoption, submitted by LVBC and approved by the Council of Ministers	<input type="checkbox"/>	Yes/No	Value	No	No	Yes
				Date	31-Jan-2011	25-Mar-2014	29-Dec-2017
				Comment	Review started under LVEMP I	The draft harmonized Policy on Water Management has been prepared and was submitted for approved by the 13th SECOM in July, 2014. The revised bill will be submitted to the 14th SECOM and thereafter adopted by the 30th EAC Council of Ministers for Implementation.	
Revised	Number of urban pollution hotspots addressed through investment to control wastewater pollution	<input type="checkbox"/>	Number	Value	0.00	0.00	9.00
				Date	19-Jan-2011	25-Mar-2015	29-Dec-2017
				Comment		Constructions of 4 sewage treatment	

						facilities underway.	
Revised	Number of hectares under sustainable land management practices in the targeted sub-catchments	<input type="checkbox"/>	Hectare(Ha)	Value	0.00	4742.00	8000.00
				Date	19-Jan-2011	25-Mar-2015	29-Dec-2017
				Comment			SLM includes rehabilitation of forests and riparian habitat buffers, as well as improved agricultural practices.
Continued	A regional strategy on water hyacinth monitoring and control, submitted by LVBC and approved by the Council of Ministers	<input type="checkbox"/>	Yes/No	Value	No	Yes	Yes
				Date	19-Jan-2011	30-Jun-2015	29-Dec-2017
				Comment			
Revised	Number of identified water hyacinth hotspots with active monitoring and removal activities	<input type="checkbox"/>	Number	Value	0.00	26.00	41.00
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment			
Revised	Direct project beneficiaries	<input checked="" type="checkbox"/>	Number	Value	0.00	352126.00	450000.00
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment	Number and percentage cumulative		
Continued	Female beneficiaries	<input checked="" type="checkbox"/>	Percentage Sub Type Supplemental	Value	0.00	30.00	30.00

Intermediate Results Indicators							
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Continued	Regional standards for industrial and municipal effluent discharges for adoption by participating countries in place	<input type="checkbox"/>	Yes/No	Value	No	Yes	Yes
				Date	15-Sep-2011	24-Oct-2014	29-Dec-2017
				Comment			
Continued	Fisheries Management Plan (FMP) updated	<input type="checkbox"/>	Yes/No	Value	No	No	Yes
				Date	15-Sep-2011	18-Mar-2015	29-Dec-2017
				Comment	Existing plan prepared during LVEMP I	Draft plan consulted with partners. Revision underway.	
Continued	GIS-based database and WRIS developed and available for public access	<input type="checkbox"/>	Yes/No	Value	No	No	Yes
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment		WRIS established, but needs to be populated and made accessible.	
Continued	Harmonized monitoring protocols and schedules in place	<input type="checkbox"/>	Yes/No	Value	No	No	Yes
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment		Protocols have been developed, but need to be fully implemented.	
Revised	Number of preliminary technical designs for	<input type="checkbox"/>	Number	Value	0.00	8.00	15.00
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017

	wastewater treatment facilities			Comment			
Revised	Number of sanitation facilities (public/schools) constructed/provided	<input type="checkbox"/>	Number	Value	0.00	37.00	67.00
				Date	15-Sep-2011	28-Feb-2015	29-Dec-2017
				Comment			
Revised	Number of people provided with access to improved sanitation facilities under the project	<input type="checkbox"/>	Number	Value	0.00	31820.00	150000.00
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment			
Revised	Number of targeted industries trained on Cleaner Production Technologies	<input type="checkbox"/>	Number	Value	0.00	222.00	280.00
				Date	19-Jan-2011	25-Mar-2015	29-Dec-2017
				Comment			
Continued	Percentage of targeted industries adopting cleaner production in-plant assessments and/or generated cleaner production options	<input type="checkbox"/>	Percentage	Value	0.00	38.00	35.00
				Date	19-Jan-2011	28-Feb-2015	29-Dec-2017
				Comment		89 of original 233 targeted.	I.e. 98 of the 280 now targeted.
Continued	Number of locations equipped with aids to navigation	<input type="checkbox"/>	Number	Value	0.00	0.00	8.00
				Date	15-Sep-2011	28-Oct-2014	29-Dec-2017
				Comment		Installation work underway.	
Revised	Number of individuals trained in improved sustainable land management (SLM) practices	<input type="checkbox"/>	Number	Value	0.00	10661.00	12000.00
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment			SLM includes rehabilitation of forests and riparian habitat buffers, as well as improved

							agricultural practices.
Revised	Number of Individuals adopting improved SLM under the project	<input type="checkbox"/>	Number	Value	0.00	7823.00	10000.00
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment			SLM includes rehabilitation of forests and riparian habitat buffers, as well as improved agricultural practices.
Continued	Cumulative hectares of degraded wetlands restored and/or rehabilitated by communities in targeted sub-catchments	<input type="checkbox"/>	Hectare(Ha)	Value	0.00	544.80	1450.00
				Date	15-Jan-2011	25-Mar-2015	29-Dec-2017
				Comment			Includes restoration of wetland habitats within riparian buffers.
Revised	Number of CDD sub-projects implemented under the project	<input type="checkbox"/>	Number	Value	0.00	445.00	660.00
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment			Includes some additional sub-grants to be provided to existing CDD groups.
Continued	Communication notes, with summary reports on project achievements and progress on indicators, are made available	<input type="checkbox"/>	Yes/No	Value	No	Yes	Yes
				Date	15-Sep-2011	25-Mar-2015	29-Dec-2017
				Comment		Newsletters have	

	to stakeholders at least on a quarterly basis.					been produced in TZ, KE and LVBC, but don't include results indicators. UG quarterly and annual reports made available to public, one e-newsletter produced.	
Continued	M&E and MIS system implemented and updated according to schedule	<input type="checkbox"/>	Yes/No	Value	No	No	Yes
				Date	15-Sep-2011	28-Oct-2014	29-Dec-2017
				Comment		System developed, but not updated as yet	

The Results Framework establishes aggregate indicator targets at the project level to maintain flexibility in delivery. The contribution of each team to the aggregate results is assessed and shared, however, and will be fully documented at the close of the project.

Revisions to the Results Framework		Comments/ Rationale for Change
PDO		
<i>Current</i>	<i>Proposed</i>	
The objectives of the Project are to contribute to: (i) the improvement of the collaborative management of the trans-boundary natural resources of the LVB among the Partner States; and (ii) the improvement of environmental management of targeted pollution hotspots and selected degraded sub-catchments for the benefit of communities who depend on the natural resources of LVB.	No Change	The PDO is still valid and achievable with the planned project interventions.
PDO Indicators		
<i>Current</i>	<i>Proposed Change</i>	
1. A draft harmonized policy on water management and agreement on a strategy and timeframe for adoption, submitted by LVBC and approved by the Council of Ministers.	Continued	
2. A draft harmonized policy on fisheries management and agreement on a strategy and timeframe for adoption, submitted by LVBC and approved by the Council of Ministers.	Continued	
3. Number of urban pollution hotspots addressed through investments to control wastewater pollution	End of project target increased from 6 to 9.	Additional financing and implementation time will allow completion of works at 3 sites in KE and 4 in TZ, rather than 2.
4. Number of hectares under sustainable land management practices in the targeted sub-	End of project target increased from 6,150 to 8,000	Additional financing and implementation time will allow additional areas to be

catchments		treated. Roughly two thirds of the additional area will be implemented in KE, the rest in TZ.
5. A regional strategy on water hyacinth monitoring and control, submitted by LVBC and approved by the Council of Ministers	Continued	
6. Number of identified water hyacinth hotspots with active monitoring and removal activities	End of project target increased from 21 to 41	Additional financing and implementation time will allow inclusion of an additional 13 sites in TZ and 7 in KE.
7. Direct project beneficiaries	End of project target increased from 37,000 to 450,000	Initial estimate was too conservative, and around 50,000 additional beneficiaries are expected from additional watershed and sanitation investments in each of KE and TZ.
Of which female	Continued	
Intermediate Results Indicators		
<i>Current</i>	<i>Proposed</i>	
Regional standards for industrial and municipal effluent discharges for adoption by participating countries in place	Continued	
Fisheries Management Plan (FMP) updated	Continued	
GIS-based database and WRIS developed and available for public access	Continued	
Harmonized monitoring protocols and schedules in place	Continued	
Number of preliminary technical designs for wastewater treatment facilities	End of project target increased from 10 to 15	Additional financing and implementation time will allow completion of additional designs in preparation for the next phase of LVEMP; 2 in KE and 3 in TZ.
Number of sanitation facilities (public/schools)	End of project target increased from 44 to 67	Additional financing and implementation time will

constructed/provided		allow completion of 13 additional facilities in KE and 10 in TZ.
Number of people provided with access to improved sanitation facilities under the project	End of project target increased from 28,000 to 150,000	Initial estimate was too conservative, and at least 20,000 additional beneficiaries are expected from additional watershed and sanitation investments in each of KE and TZ.
Number of Targeted industries trained on Cleaner Production Technologies	End of project target increased from 233 to 280	Additional financing and implementation time will allow training of 15-20 additional industries in each APL-1 country.
Percentage of targeted industries adopting cleaner production in-plant assessments and/or generated cleaner production options	Continued	
Number of locations equipped with aids to navigation	Continued	
Number of individuals trained in improved sustainable land management (SLM) practices	End of project target increased from 7,000 to 12,000	At least 2,500 additional farmers trained under new CDDs in each of KE and TZ.
Number of individuals adopting improved SLM under the project	End of project target increased from 2,400 to 10,000	Initial estimate was too conservative, and around 2,000 additional trained farmers are expected to adopt SLM in each of KE and TZ.
Cumulative hectares of degraded wetlands restored and/or rehabilitated by communities in targeted sub-catchments	Continued	
Number of CDD sub-projects implemented under the Project	End of project target increased from 590 to 660	Additional financing and implementation time will allow completion of over 20 additional sub-grants in KE and over 50 in TZ.
Communication notes, with summary reports on project achievements and progress on indicators, are made available to stakeholders at least on a quarterly basis	Continued	

M&E and MIS system implemented and updated according to schedule	Continued	
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Annex 2: Detailed Description of Additional Project Activities

1 The bulk of the Additional Financing would support continued expansion of ongoing investments, i.e. additional watershed management subprojects in existing focal areas, construction of sanitation and sewerage facilities that were designed but not implemented under the original project due to funding constraints, and expansion and deepening of cleaner production programs. The Additional Financing represents roughly 20 percent of the original project financing, but is expected to increase most of the key quantitative results by around 30 percent or more (see Annex 1). These will be complemented by monitoring and support for existing investments to ensure operations and maintenance are fully and robustly established.

Component 1: Strengthening institutional capacity for managing shared water and fisheries resources

2 The objective of this component is to support the stakeholders in the harmonization of policies for the collaborative management of trans-boundary natural resources in LVB. Several reports, plans and policies have been prepared on: (i) options for establishing the Lake Victoria Environmental Fund (LVEF); (ii) harmonized standards for industrial and municipal effluent discharge into water bodies in LVB; (iii) basin-wide sustainable land management strategy; (iv) water hyacinth surveillance and management strategy for LVB; (v) development of a shared Water Resources Information System; and (vi) reviews of the Lake fisheries management plan and policies. Research and monitoring vessels, and water quality laboratories have been procured and equipped. Kenya is also in the process of procuring a mechanical water hyacinth harvester.

3 The focus during the Additional Financing will not be on the development of new policy instruments, but rather the monitoring of adoption and impacts of those already developed, including regional effluent water quality standards and data-sharing protocols. The review of fisheries policies and revision of the Lake Victoria Fisheries Management Plan will be completed, the scope of the work having expanded somewhat due to the recent inclusion of Rwanda and Burundi within the Lake Victoria Fisheries Organization (LVFO).

4 The Additional Financing will continue to implement and strengthen Basin environmental monitoring & reporting systems, ensuring that data being collected on water quality, water hyacinth distribution and fisheries are routinely collated, analyzed and made accessible via standardized and informative reporting formats. This will build on the Water Resources Information System (WRIS) infrastructure already established, as well as ongoing work supported by the European Space Agency to develop remote-sensing monitoring tools (including for water hyacinth). Fisheries monitoring will continue with additional rounds of catch assessment, frame (i.e. gear) surveys and acoustic surveys. The monitoring program will be supported by capital investments in the rehabilitation of three additional water quality labs and purchase of three small patrol boats in Tanzania. In Kenya, the Additional Financing will also support the initial operations and maintenance, and then full handover to local authorities of the mechanical water hyacinth harvester as part of an integrated water hyacinth

control program. Kenya will also use AF to support the Kisumu Water Quality Laboratory towards accreditation/certification.

5 Linked to the monitoring, a set of studies and analytical works will be prepared to provide a robust information base for the next phase of LVEMP. These will be coordinated by LVBC as the final outputs will be at the regional level, but each of the country teams will be required to actively participate in the provision of data, and in their intellectual development and analysis:

- Basin pollution model: Erosion risk and point-source pollution models are already under development for the Basin. These will be linked through development of a pollution transport (i.e. hydrological) component, which will allow: (i) prediction of the contribution of different pollution sources to total pollution loading on the Lake; (ii) prediction of the relative impact of measures to reduce pollution generation at source (e.g. soil conservation) and to transport of pollutants into the Lake (e.g. riparian or wetland habitat restoration); and (iii) model testing against Basin water quality data. The aim would be to have pollution models and maps formally adopted as a basis for targeting of future investments.
- Economic assessment and cost-benefit analysis of environmental and climate resilience investments within the Basin: Despite a broad understanding of the importance of the Lake, there are few well-established and detailed economic data, e.g. figures on the total contribution of Lake fisheries to local incomes or government revenues. This work would substantiate the rationale for further investments in the management of Lake Basin resource, provided justification to proposal to establish fish levy and environmental management funds, and assess the need for further research and analysis.
- Basin profile: A spatial and quantitative baseline of current activities and investments within the basin is needed to identify the gaps to be addressed in the next phase of LVEMP. This would involve systematic collation and mapping of data on: major economic activities / livelihoods & infrastructure; agro-ecological / land use zones, their current productivity & potentials for improvement; provision of municipal sanitation & waste management services; natural habitats & ecologically sensitive areas; climate vulnerabilities; donor projects & public investments. Some of this data would be incorporated as layers in the Basin pollution models, and others would complement them through identifying linkages to poverty and vulnerability.
- Value chain studies: Detailed analysis of key value chains (i.e. those associated with particular environmental risks or opportunities) will be needed to identify entry points for developing green livelihoods and employment, and building partnerships with the private sector for sustainable supply chains. This work will be conducted in coordination with the preparation of the Lake Victoria transport project to ensure that improvements in market access are taken into account, and that investments from both projects are synergized in the development of key transport-dependent value chains (e.g. tourism development, fresh fish supply).
- Policy roadmaps: In critical areas for the management of shared resources, broad policy goals are fairly well established, but a politically feasible process for arriving at them has not been, and consequently little progress is evident. The Additional Financing would provide for senior experts to facilitate a process and develop shared roadmaps for policy reform based on the identification of key long-term objectives, stakeholders & perspectives, advocacy requirements and progress milestones. This work would particularly focus on the complex

policy agendas around sustainable fisheries and integrated water resources management institutions, including the role of LVBC and financing mechanisms.

6 Knowledge networks will also be strengthened through internships to support knowledge networking, facilitation of at least one high profile international conference on the Lake Basin, and providing membership in international professional organizations.

Component 2: Point source pollution control and prevention

7 The objective of this component is to decrease the instances of point source pollution in LVB, including the discharge of untreated municipal and industrial wastewater, and spills of oil and other toxic substances from navigation accidents and other sources. Design studies have been prepared for a number of sanitation and wastewater management investments, a subset of which are currently under procurement or construction. Under the regional activities, LVBC is improving navigation safety by preparing hydrographic surveys and installing navigation aids, and providing training on response to oil spills and other environmental emergencies. LVBC has also engaged the Kenya Cleaner Production Center to implement cleaner production programs through their counterparts in each of the Basin countries.

8 The Additional Financing will provide for post-construction monitoring of sanitation investments, and technical support where needed, to ensure that these are being properly managed and maintained by municipalities and communities. It will also expand the number of investments, focusing on (i) construction of existing designs which could not be implemented under the existing project resources, (ii) expansion of sewerage services by connecting households and introducing mobile equipment for sludge collection from septic tanks, and (iii) preparation of additional designs and feasibility studies to be constructed under the next phase. In Tanzania, the Additional Financing will expand household sewerage connections in Mwanza, and undertake the rehabilitation of Mwanza City Abattoir and construction of an associated artificial wetland, which could not be financed under the existing funding. It will also procure septic tank exhausters for Mwanza, Kagera and Mara Regions to serve Mwanza and Musoma cities. Fourteen additional public toilets will be constructed. In Kenya, the Additional Financing will allow completion of rehabilitation/constructions of sewage treatment facilities at Kisumu, Homa Bay, and Bomet. The existing funds would not have been adequate for the full implementation of the required works at all three sites. In order to provide on-site sanitation services to the municipalities, five additional exhausters will be purchased for priority towns that have not benefitted from the seven (7) purchased under the current funding. In addition to 17 bio-toilets under construction, 13 additional bio toilets will be constructed. All the thirteen (13) additional bio-toilets will be constructed in selected schools. Additional Financing will also be used to undertake feasibility and designs for 2 (two) new towns for sewage treatment facilities, 2(two) new wetlands management plans and procure 2 (two) tippers for water hyacinth disposal and upscaling of watershed activities, including additional 22 (twenty two) CDDs and CMIIs.

9 Additional Financing will be used to provide capacity building in operations and maintenance, and help local authorities management of the rehabilitated works become

financially autonomous. The technical designs and environmental impact assessments (EIAs) for sewerage system rehabilitation at Homa Bay and Bomet, which have been prepared but not implemented, will be updated in preparation for the next phase. In order to maximize synergies, LVEMP support to point sources pollution control will be closely coordinated with the planned and ongoing urban water and sanitation projects financed by the World Bank and other development agencies.

10 The Additional Financing will continue to mainstream the Cleaner Production program within each of the countries. Preparation will also assess the scope for expanding the cleaner production activities, e.g. through application to small and medium enterprises (SMEs), parallel strengthening of regulatory agencies, etc. The objective of this sub-component is to reduce industrial pollution, by promoting the pre-treatment of factories' wastes onsite and efficiency in raw material utilization – through sorting, reusing, and recycling activities. The major polluting industries, located mainly in Kisumu and Migori (Kenya); Mwanza, Musoma and Bukoba (Tanzania); and Kampala, Entebbe and Jinja (Uganda) will be targeted for demonstration of low cost options, such as Waste Stabilization Ponds (WSP), and connection of pre-treated industrial effluent discharge to constructed and/or restored wetlands. Main activities will continue to include: (a) training of industries on cost effective measures of reducing wastes; (b) undertaking cleaner production in-plant assessment; (c) facilitating environmentally sound technology assessment and transfer; and (d) assisting industries in preparing bankable projects for upgrading their production lines to reduce pollution and wastes.

11 Additional investments on navigation safety and spill response are likely to be limited given the modest funds available at the regional level and the fact that this agenda will transfer to the proposed Lake Victoria Transport Project.

Component 3: Watershed management

12 The objective of this component is to decrease the inputs of sediments into water bodies in LVB while also supporting local governments and communities in improving environmental management in their territory, as well as the livelihoods of local stakeholders. It is being implemented through co-management activities combined with more than 600 CDD sub-grants, together instituted a range of land management and livelihood improvements.

13 The Additional Financing will maintain technical support to community groups to ensure that current activities are fully implemented and properly maintained. It will expand the number and area of activities within current target catchments. Capacity building in value addition of CDD products is a new addition to the scope of activities, and can potentially increase the uptake of introduced activities, and increase the sustainability of the interventions. Preparation will also assess the scope for (i) developing capacity-focused, extensive interventions (e.g. establishing a network of conservation agriculture field schools), and (ii) initiating activities within new target sub catchments. Monitoring and evaluations systems for watershed management activities will also be strengthened through a focus on

coordinating data collection on variables of interest that help to reflect how the projects are having impacts at the watershed/ basin scales in the respective countries.

14 In Tanzania (TZ), the AF will fund implementation of 75 CDD subprojects, which have already been approved, but cannot be covered under the existing budget. The additional CDD subprojects will continue the scaling up of SLM, improved agricultural practices and livelihood enhancement activities in the Maswa, Bariadi, Magu and Busega districts with existing community groups. The specific activities include horticulture and cereal farming, bee keeping and sunflower cultivation, and aquaculture. It is estimated that through the completion of the 75 CDDs that approximately 150 ha of land in the LVB will be brought under SLM. Value addition to agricultural products is recognized as a key requirement for increasing the economic returns from CDD products for example, honey, sunflower oil, milk and vegetable, and so the AF will also finance new sub-grants to existing groups for value addition activities and establishment of a value addition training center. The AF will also contribute to the implementation of four wetland management plans in Tanzania, which have already been developed through the LVEMP, and will be implemented in collaboration with local community groups. Natural rehabilitation of the wetlands will be a key activity in the wetlands management and will result in the additional restoration/ rehabilitation of 107 ha of wetland habitat.

15 In Kenya four wetland management plans will be implemented through additional CMIs and another two wetland management plans prepared. Additional CMIs will rehabilitate and restore degraded hillsides and river banks; implement sub-catchment plans in agriculture and livestock; and undertake activities for water harvesting and spring protection. Additional CDD sub grants will scale up existing activities within beneficiary communities, funding investments in: improved agricultural practices around crop and livestock management and soil and water conservation, aquaculture, value addition, renewable energy supply, rehabilitation of degraded hills, and manual removal and biological control of water hyacinth. Additional support to capacity building will focus on marketing, watershed management through training workshops, community exchanges and study tours.

16 Greater focus will also be placed on coordinating data collection to assess impacts at the watershed/ basin scales. For example in Kenya, data is being collected from a network of silt traps that will provide empirical evidence of changes in sediment outflows from the project areas. The Additional Financing will also begin preparing a potential next phase of LVEMP. This preparation would include identifying capacity gaps in the basin-scale monitoring framework, and designing preliminary roadmaps (key steps and milestones) for achieving watershed objectives at greater scale, including major interventions such as basin-scale soil erosion and sediment transport modeling to prioritize target areas for future intervention.

Component 4: Project coordination and management

17 Existing project management and administration systems will be maintained during the Additional Financing phase. No significant changes to implementation structures are expected. However, additional emphasis will be placed on communicating the growing

record of project achievements. At the regional level, there will be a specific focus on the production of a core set of high-quality communications products, including series of sector-specific factsheets and photo-stories, and a documentary film on the history of the Basin, linked environment and social challenges, and effective measures to address them.

18 The design of the new phase of LVEMP will require preparation of project proposals, revisions to safeguards frameworks, institutional assessments, consultations, and technical and administrative manuals at the regional and national levels. This is in addition to technical analytics and design studies produced under the component above.

Regional activities

19 At the regional level, LVBC will conduct the following additional activities:

Component 1 –

- Continue to coordinate Basin monitoring systems, through collation of data generated at national levels, convening coordination workshops where required, and generation and dissemination of standard analytics and reports.
- Continue to support coordination of fisheries-related activities through LVFO, including extension of the Fisheries Policy to include Rwanda and Burundi, and coordination and part-financing of routine Lake fisheries monitoring via frame, catch and hydro-acoustic surveys.
- Develop the basin-wide studies and analytics discussed above, drawing on national-level data and expertise.
- Monitor implementation of policy instruments earlier prepared under component 1.

Component 2 –

- Continue to support regional coordination of the cleaner production program, including technical support and oversight by the Kenya National Cleaner Production Center, coordination workshops, and production of regional progress and results reports. All national-level cleaner production activities will be financed through the national project teams during the AF, however.

Component 4 –

- Continue to oversee implementation of the LVEMP Basin-wide, including production of consolidated progress reports and convening Regional Policy Steering Committee meetings.
- Prepare project documents for next phase of LVEMP, including a consolidated project proposal covering the whole program, and an updated implementation manual specifically for the regional activities.
- Develop core regional communications products, including photo-stories of various sectors, and a documentary film.