



ADAPTATION FUND

REGIONAL PROJECT/PROGRAMME PROPOSAL

PART I: PROJECT/PROGRAMME INFORMATION

| | |
|------------------------------------|---|
| Title of Project/Programme: | Adapting to Climate Change in Lake Victoria Basin |
| Countries: | Burundi, Kenya, Rwanda, Tanzania and Uganda |
| Thematic Focal Area ¹ : | Transboundary water management |
| Type of Implementing Entity: | MIE |
| Implementing Entity: | United Nations Environment Programme (UNEP) |
| Executing Entities: | Lake Victoria Basin Commission (LVBC) |
| Amount of Financing Requested: | US\$5,000,000 |

Project overview

Climate change in the Lake Victoria Basin (LVB) – a water catchment in Burundi, Kenya, Rwanda, Tanzania and Uganda – has resulted in increased mean annual temperatures and increased variability in rainfall patterns. Climate change projections predict that mean annual temperatures will continue to increase and that variability in rainfall patterns will be exacerbated. Projected climate change will result in several negative effects within the LVB, including a decrease in water quality and availability² for a number of uses, including *inter alia*: i) domestic; ii) agricultural; iii) industrial and commercial; and iv) cultural. The negative effects of climate change disproportionately affect marginalised and rural communities within the LVB by reducing the productivity of agriculture and wetlands and the abundance of fish in Lake Victoria and its tributaries. In addition, the projected effects of climate change are likely to negatively impact economic sectors within the LVB that depend on water resources, such as hydropower facilities and commercial fisheries. Therefore, to reduce the impact of climate change on local communities and water-dependent economic sectors within the LVB, the proposed project will increase climate resilience in the LVB at both a regional and local level by implementing both regional and community-based climate change adaptation interventions. The proposed project objective will be achieved through five outcomes, namely: i) strengthened institutional and technical capacity to integrate climate resilience into transboundary water catchment management; ii) improved delivery of accurate and timely climate information to regional and national policy-makers, technical officers and local communities; iii) climate change adaptation technologies, including water harvesting techniques, climate-smart agriculture and Ecosystem-based Adaptation (EbA), transferred to communities to reduce their vulnerability to climate change; iv) regional resilience to climate change promoted through innovative, community-based projects; and v) improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices.

¹ Thematic areas are: i) food security; ii) disaster risk reduction and early warning systems; iii) transboundary water management; and iv) innovation in adaptation finance.

² Collaborative research between the Lake Victoria Basin Commission (LVBC) and the USAID EA-funded Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development (PREPARED) project found that climate change is affecting both aquatic and terrestrial water resources within the LVB.

Table of contents

| | |
|---|-----|
| PART I: PROJECT/PROGRAMME INFORMATION..... | 1 |
| Project overview | 1 |
| List of abbreviations and acronyms | 4 |
| Regional Centre for Mapping of Resources for Development..... | 5 |
| Rural Livelihoods' Adaptation to Climate Change in the Horn of Africa | 5 |
| Regional Policy Steering Committee | 5 |
| Project/Programme Background and Context: | 6 |
| Geographical context..... | 6 |
| Socio-economic context | 7 |
| Environmental context | 8 |
| Non-climatic factors | 10 |
| Climate change context | 14 |
| Past and current climate change..... | 14 |
| Future climate change..... | 15 |
| Past and current effects of climate change..... | 16 |
| Future effects of climate change | 17 |
| Problem to be addressed by the proposed project | 18 |
| Project/Programme Objectives:..... | 18 |
| Project/Programme Components and Financing: | 19 |
| Projected Calendar: | 23 |
| PART II: PROJECT/PROGRAMME JUSTIFICATION | 24 |
| A. Project components | 24 |
| B. Promotion of new and innovative solutions to climate change adaptation | 35 |
| C. Economic, social and environmental benefits..... | 36 |
| Economic benefits..... | 37 |
| Social benefits | 38 |
| Environmental benefits..... | 38 |
| D. Cost-effectiveness analysis..... | 40 |
| E. Consistency with other strategies | 41 |
| F. Project alignment with technical standards | 49 |
| G. Project duplication | 49 |
| H. Learning and knowledge management component of the project..... | 54 |
| I. Consultative process | 54 |
| J. Funding justification | 55 |
| K. Project sustainability | 59 |
| L. Environmental and social impacts and risks | 60 |
| PART III: IMPLEMENTATION ARRANGEMENTS | 67 |
| A. Project arrangements | 67 |
| B. Financial and project risk management | 72 |
| C. Environmental and social risk management measures..... | 73 |
| D. Monitoring and evaluation | 78 |
| E. Results framework | 81 |
| F. Project alignment with AF results framework | 87 |
| G. Budget | 88 |
| H. Disbursement schedule..... | 99 |
| PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY | 100 |
| A. Record of endorsement on behalf of the government..... | 100 |
| B. Implementing Entity certification | 101 |

| | |
|--|-----|
| Annexes..... | 102 |
| List of Annexes..... | 102 |
| Annex 1. Stakeholder consultations..... | 103 |
| Annex 2. Terms of References (ToRs) for key project members..... | 104 |
| Annex 3. List of endorsements and endorsement letters..... | 107 |
| Annex 4. Grievance mechanism..... | 108 |

List of abbreviations and acronyms

| | |
|-----------------|---|
| AAKNet | Africa Adaptation Knowledge Network |
| AF | Adaptation Fund |
| AfDB | African Development Bank |
| C3A2 | Climate Change Adaptation Assessment |
| CBAPs | Community-based adaptation plans |
| CCASAP | Climate Change Adaptation Strategy and Action Plan |
| CCTWG | Climate Change Technical Working Group |
| CIDA | Canadian International Development Agency |
| CTA | Chief Technical Advisor |
| DEPI | Division of Environmental and Policy Implementation |
| DHI | Danish Hydraulic Institute |
| EAC | East African Community |
| EACDS | East African Community Development Strategy |
| EbA | Ecosystem-based Adaptation |
| EDSCP | Erosion, Drainage and Sediment Control Plan |
| EIAs | Environmental Impact Assessments |
| ESI | Environmental and social impact |
| ESMP | Environmental and Social Policy Management Plan |
| ESP | Environmental and Social Policy of the Adaptation Fund |
| EWS | Early warning systems |
| FEWSNET | Famine Early Warning System Network |
| GAN | Global Adaptation Network |
| GEF | Global Environment Fund |
| GIZ | Deutsche Gesellschaft für Internationale Zusammenarbeit |
| GRC | Grievance Redress Committee |
| GRM | Grievance Redress Mechanism |
| ICPAC | IGAD Climate Prediction and Applications Centre |
| IGAD | Intergovernmental Authority on Development |
| ILO | International Labour Organisation |
| INDC | Intended Nationally Determined Contributions |
| LAFREC | Landscape Approach to Forest Restoration and Conservation |
| LDCF | Least Developed Countries Fund |
| LVB | Lake Victoria Basin |
| LVBC | Lake Victoria Basin Commission |
| LVDP | Lake Victoria Development Programme |
| LVEMP II | Lake Victoria Environmental Management Programme Phase II |
| LVWATSAN | Lake Victoria Region Water and Sanitation Initiative II |
| M&E | Monitoring and evaluation |
| MoU | Memorandum of Understanding |
| MIE | Multilateral Implementing Entity |
| MTP | Medium-term Plan |
| NAPA | National Adaptation Programmes of Action |
| NBI | Nile Basin Cooperative Framework |
| NCCAP | National Climate Change Action Plan |
| NCSA | National Capacity Needs Self-Assessment |
| NDA | National Designated Authority |
| NGO | Non-governmental organisation |
| NIE | National Implementing Entity |
| NRB | Nile River Basin |
| PCU | Project Coordination Unit |
| PIR | Project Implementation Review |

| | |
|---------------------------|--|
| PM | Project Manager |
| PPR | Annual Project Progress Review |
| PREPARED | Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development |
| RCMRD | Regional Centre for Mapping of Resources for Development |
| RLACC | Rural Livelihoods' Adaptation to Climate Change in the Horn of Africa |
| RPSC | Regional Policy Steering Committee |
| Safeguards Officer | Project Coordination Unit Social Safeguards and Gender Officer |
| SAP | Strategic Actions Plan |
| SC | Sectoral Council |
| SCCF | Special Climate Change Fund |
| SDG | Sustainable Development Goals |
| SFM | Sustainable forest management |
| SRM | Stakeholder Response Mechanism |
| SusWatch | Sustainability Watch Kenya |
| ToR | Terms of Reference |
| UNDP | United Nations Development Programme |
| USAID | United States Agency for International Development |
| VIA | Vulnerability Impact Assessment |

Project/Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve, including both the regional and the country perspective. Outline the economic social, development and environmental context in which the project would operate in those countries.

Geographical context

The LVB is contained within the southern section of the Nile River Basin (NRB), between the Eastern and Western Rift Valleys. The LVB catchment area is ~195,000 km² and contains Lake Victoria, the world's second largest freshwater lake, which has a surface area of ~69,000 km², a mean depth of ~40 m and contains ~2,750 km³ of water³. Lake Victoria extends into three countries, namely Kenya, Tanzania and Uganda, while the LVB extends further to include Burundi and Rwanda (Figure 1).

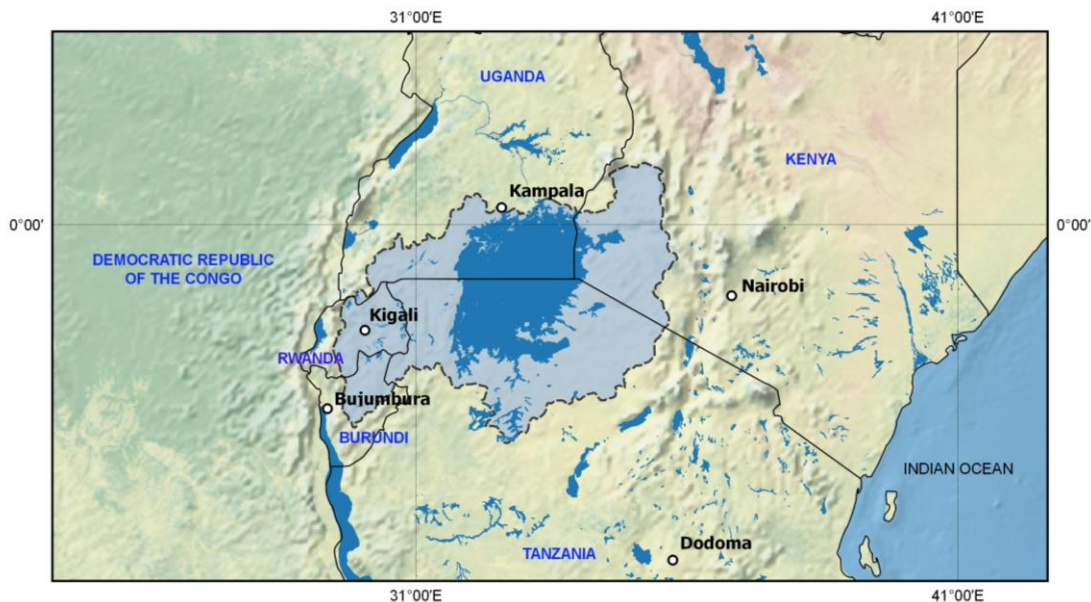


Figure 1. Map of the Lake Victoria Basin (light blue with dashed outline), which contains Lake Victoria (dark blue) and overlaps with Burundi, Kenya, Rwanda, Tanzania and Uganda. The capital city of each LVB country is indicated with a white circle.

Approximately 20% of Lake Victoria's water inflow is contributed by rivers in 17 sub-basin catchments, with the remaining ~80% of water inflow being provided by rainfall. The two largest sub-basins in the LVB – Kagera and Nzoia – provide ~48% of total water inflow from sub-basin catchments⁴. A number of smaller tributaries – from Uganda in particular – enter the lake through swamps or wetlands. The combined area of swamps and wetlands in the LVB is

³ UNEP. 2006. Lake Victoria Basin environment outlook: environment and development. UNEP, Nairobi.

⁴ Of the total water inflow to Lake Victoria from sub-basin catchments, Nzoia provides ~33% and Kagera provides ~15%. See further: Brown E & Sutcliffe JV. 2013. The water balance of Lake Kyoga, Uganda. *Hydrological Sciences* 58:342–353.

~2,600 km^{2:5}. Large rivers within the LVB include *inter alia*: i) Bukora and Katonga – originating in Uganda; ii) Nzoia, Sio, Mara, Yala, Awach, Gucha, Migori and Sondu – originating in Kenya; and iii) Mori, Simiyu, Grumeti, Mbalageti and Magogo-Moame – originating in Tanzania.

The LVB contains three broad eco-regions, namely the: i) Victorian Basin Forest-Savanna Mosaic in the north and west; ii) Southern Acacia Commiphora bushlands and thickets in the east and south-east; and iii) Central Zambezian Miombo Woodlands in the south-west⁶. There is considerable variation in rainfall volumes in the LVB, from ~1,200 mm/year in the north to 2,000 mm/year in the south-west to 3,000 mm/year in the Rwenzori Mountains in the west⁷.

Table 1. Size and percentage values of the LVB countries' overlap with Lake Victoria's surface area, Lake Victoria's shoreline and the Lake Victoria Basin's surface area^{8,9}.

| Country | Lake Victoria surface area | | Lake Victoria shoreline | | Lake Victoria Basin surface area | |
|--------------|----------------------------|----|-------------------------|----|----------------------------------|----|
| | km ² | % | km | % | km ² | % |
| Burundi | 0 | 0 | 0 | 0 | 13,060 | 7 |
| Kenya | 4,113 | 6 | 550 | 17 | 38,910 | 22 |
| Rwanda | 0 | 0 | 0 | 0 | 20,550 | 11 |
| Tanzania | 33,756 | 49 | 1,150 | 33 | 79,570 | 44 |
| Uganda | 31,001 | 45 | 1,750 | 50 | 28,850 | 16 |
| Total | 68,870 | | 3,450 | | 180,940 | |

Socio-economic context

The combined population of the LVB is ~30 million people, with an average population density of ~165 people/km² and a maximum population density of ~1,200 people/km² (in Kenya)¹⁰. The population is growing at ~3% annually¹¹, with an average life expectancy of ~45 for men and ~48 for women¹². Livelihood activities undertaken in the LVB, include *inter alia*: i) fishing¹³; ii) farming; iii) bee-keeping; iii) trading; and iv) mining^{14;15}. Agriculture in the LVB is comprised of small-scale and commercial farming and includes both subsistence¹⁶ and cash crops¹⁷.

⁵ Brown S, Brinson MM & Lugo AE. 1979. Structure and function of riparian wetlands. General technical report, WO-US Department of Agriculture, Forest Service.

⁶ Saundry P & Fund W. 2012. Lake Victoria. The Encyclopaedia of Earth. Available at: http://editors.eol.org/eoearth/wiki/Lake_Victoria [accessed 28.11.2016].

⁷ Abteu W & Melesse AM. 2014. The Nile River Basin. In: AM Melesse et al. (eds), The Nile River Basin. Springer, Basel.

⁸ Shepherd K, Walsh M, Mugo F, Ong C, Hansen TS, Swallow B, Awiti A, Hai M, Nyantika D, Ombao D, Grunder M, Mbote F & Mungai D. 2000. Improved land management in the Lake Victoria Basin: linking land and lake, research and extension, catchment and lake basin. International Centre for Research in Agroforestry, Nairobi.

⁹ "Lake Victoria existing adaptation initiatives and linkages to this proposed project" presentation by Fredrick Mhina Mngube, July 2016.

¹⁰ Oekstra D & Corbett J. 1995. Sustainable agricultural growth for highlands of East and Central Africa: prospects to 2020. Paper presented at: The Ecoregions of the Developing World: a Lens for Assessing Food, Agriculture and the Environment to the Year 2020.

¹¹ Awange J & Ong'ang'a O. 2006. Lake Victoria: Ecology, Resources, Environment. Springer, Berlin.

¹² Lake Victoria Basin Commission. 2007. Regional transboundary diagnostic analysis of the Lake Victoria Basin. East African Community, Kisumu.

¹³ Fishing is the primary livelihood activity ~3 million people within the LVB.

¹⁴ Mining activities predominantly target sand and gold, although a number of other minerals are mined across the LVB.

Livelihoods in the LVB are largely underpinned by natural resources. For example, between 1988 and 2002, the sudden increase in the Nile perch population correlated to localised increases of the human population by as much as 150% in Mwanza and Shinyanga (Tanzania)¹⁸. At national levels, the exploitation of the LVB's natural resources contributes a considerable proportion of national GDPs. In Kenya, for example, ~22% of GDP is attributed to the economic activities supported by natural resources¹⁹. Regionally, the fisheries sector²⁰ supports the livelihoods of ~3 million people²¹, with annual catch yields of ~500,000–750,000 tonnes – an equivalent of ~US\$300–400 million, of which ~US\$250 million represents export values^{22;23}.

Lake Victoria facilitates regional transportation with major transport routes connecting the towns of Musoma, Mwanza, Bukoba (Tanzania), Port Bell, Jinja (Uganda) and Kisumu (Kenya)²⁴. In addition, Lake Victoria is the primary water source used to generate electricity through hydropower stations in the LVB. All five LVB countries rely on hydropower for a percentage of their total electricity consumption, specifically: i) ~95% in Burundi; ii) ~50% in Kenya; iii) ~5% in Rwanda; iv) ~50% in Tanzania; and v) ~20% in Rwanda²⁵. Although growth in the hydropower sector in the LVB has been promising, recent declines in water volume in Lake Victoria, coupled with environmental concerns – such as the negative effect of hydropower dams on papyrus wetlands²⁶ – have resulted in re-evaluations of the regional potential of hydropower in the LVB²⁷.

Environmental context

The LVB has a considerable diversity of natural resources, including fertile soils, forests, minerals, fish, wildlife and an extensive network of rivers and wetlands²⁸. Selected features of natural resources within the LVB include the following.

- The soils within the LVB are generally fertile and include *inter alia*: i) Ferrasols; ii) Vertisols; iii) Acrisols; iv) Nitosols; and v) Cambisols.²⁹
- Forests in the LVB provide a range of goods and services, including timber for furniture and building, and habitat for a variety of flora and fauna, including elephant (*Loxodonta africana*) and 60 species of frog³⁰.

¹⁵ UNEP. 2006. Lake Victoria Basin environment outlook.

¹⁶ For example, maize, bananas, cassava, sorghum, millet, rice and sweet potatoes.

¹⁷ For example, coffee, cotton and sugar cane.

¹⁸ UNEP. 2006. Lake Victoria Basin environment outlook.

¹⁹ UNEP. 2006. Lake Victoria Basin environment outlook.

²⁰ This includes both commercial fishing, artisanal fishing and fish processing.

²¹ Njiru M, Sitoki L, Nyamweya C, Jembe T, Aura C, Waithaka E & Masese F. 2012. Habitat degradation in Lake Victoria fisheries. *Advances in Environmental Research* 27:1–34.

²² Uganda Coalition for Sustainable Development. 2007. Voicing out Lake Victoria concerns to the CHOGM and CPF. Uganda Coalition for Sustainable Development, Kampala.

²³ East African Community. 2006. Special report on the declining of water levels in Lake Victoria. East African Community, Arusha.

²⁴ East African Community. 2006. Special report.

²⁵ The World Bank. Energy and mining data. Available at: <http://data.worldbank.org/topic/energy-and-mining> [accessed 28.11.2016].

²⁶ Kiwango YA & Wolanski E. 2008. Papyrus wetlands, nutrients balance, fisheries collapse, food security and Lake Victoria level decline in 2000–2006. *Wetlands Ecology and Management* 16:89–96.

²⁷ Lubovich K. 2009. Cooperation and competition: managing transboundary water resources in the Lake Victoria Region, Working Paper No. 5. USAID, Washington D.C.

²⁸ UNEP. 2006. Lake Victoria Basin environment outlook.

²⁹ Kulinda KAA. 2006. Social and policy framework: context of people and livelihood. UNEP, Nairobi.

- Wetlands produce goods, such as *inter alia*: i) raw material for handicrafts and fuel; ii) support for fisheries, grazing, agriculture and outdoor recreation; and iii) habitat for wildlife.³¹ In addition, wetlands within the LVB provide ecosystem services, including buffering the negative effects of excess nutrient loads and sedimentation by absorbing nutrients such as nitrogen and phosphorous.
- The LVB has rich mineral deposits including *inter alia* gold and diamonds.

As a result of the unsustainable use of natural resources, a number of negative environmental effects have resulted. Specifically, these effects are detailed below.

- Agricultural practices such as clear-cutting of vegetation has resulted in **soil erosion**. As topsoil erodes, rainfall carries it into tributaries and Lake Victoria itself, increasing the concentration of nutrients in the water³², nitrogen in particular³³. As a result of this nutrient runoff into Lake Victoria, the concentration of algae in 2006 was ~400% greater compared to the 1960s³⁴. The negative consequences of this algal growth are anoxic water conditions and increased fish mortality.
- Widespread and on-going **deforestation** has reduced the coverage of forests and the availability of associated goods – such as timber – and services – such as preventing soil erosion and providing habitat for wildlife species – within the LVB³⁵. Deforestation is undertaken largely to provide woodfuel and timber. For example, in Lupeta (Tanzania) 97% of households use woodfuel for cooking and 53% of households use woodfuel exclusively for cooking³⁶.
- Across the LVB, **wetlands have been severely degraded**³⁷ because of *inter alia*: i) intensive cultivation of crops such as sugar cane, sweet potatoes and yams in shallow wetlands³⁸; ii) excavation of sand and clay for brickworks; iii) the invasion of water hyacinth; and iv) the disposal of waste and wastewater.
- **Mining and mineral extraction** has resulted in a considerable number of negative environmental effects, including *inter alia*: i) large-scale deforestation to provide mining infrastructure; ii) soil degradation as top soil is covered by gravel and sub-soils during mining operations; and iii) contamination of ground and surface water with heavy metals, such as mercury³⁹.
- **Fish abundance in the LVB has declined** because of: i) intensive fishing efforts; ii) changes in Lake Victoria's hydrology⁴⁰; iii) anthropogenic pollution; and iv) the invasion of exotic species⁴¹. Commercial fishing efforts are now showing decreased catch yields,

³⁰ UNEP. 2006. Lake Victoria Basin environment outlook.

³¹ Kulinda 2006. Social and policy framework.

³² Machiwa PK. 2002. Water quality management and sustainability: The experience of Lake Victoria Environmental Management Project: paper presented at the WaterNet/WAFRSA Symposium, Dar es Salaam.

³³ Kiwango & Wolanski 2008. Papyrus wetlands.

³⁴ The Global International Waters Assessment. 2006. East African Rift Valley lakes. GIWA Regional Assessment, 47.

³⁵ Kulinda 2006. Social and policy framework.

³⁶ Preston KM. 2012. Fuelwood collection and consumption: a case study in Lupeta, Tanzania. MSc Thesis, Michigan Technological University.

³⁷ In Uganda, it is estimated that ~75% of wetlands have been affected by anthropogenic activities and that ~15% of wetlands are severely degraded, see: Kayombo, S. & Jorgensen, S.E. 2006. Lake Victoria: experience and lessons learned brief. International Lake Environment Committee, Kusatsu.

³⁸ Kayombo S & Jorgensen SE. 2006. Lake Victoria: experience and lessons learned brief. International Lake Environment Committee, Kusatsu.

³⁹ Kulinda 2006. Social and policy framework.

⁴⁰ As a result of both reduced water volumes and the invasion of the water hyacinth.

⁴¹ Lake Victoria Fisheries Organisation. 2008. State of fish stocks. LVFO, Jinja.

despite intensified fishing efforts – indicated by an increased number of fisherfolk, boats, nets and hooks – and improved fisheries’ management⁴².

- **Water quality** in the LVB has been reduced by the eutrophication associated with the persistent and widespread occurrence of the water hyacinth (*Eichhornia crassipes*)⁴³. In addition, water hyacinth obstructs water transport, decreases oxygen content in the water of the LVB, impairs fishing efforts and reduces fish density. The collective economic losses caused by water hyacinth in the LVB were estimated at ~US\$6–10 million in 2000⁴⁴. Furthermore, water quality is reduced as a result of anthropogenic pollution, both in urban centres – through the discharge of untreated industrial effluent – and in rural areas – through agricultural activities and human and animal waste⁴⁵.

In addition to reduced water quality, **water abundance** has decreased in the LVB as a result of both anthropogenic and climate-related factors. Specifically, both increasing mean annual temperature – which increases the rate of evapotranspiration over the lake’s large surface area – and decreased rainfall volumes, have been identified as the primary climate-related factors contributing to reduced water abundance in the LVB⁴⁶.

Non-climatic factors

Communities within the LVB face numerous challenges unrelated to climate change. As discussed above, environmental challenges within the LVB include *inter alia*: i) soil erosion; ii) deforestation; iii) wetland degradation; iv) poor water quality; and v) limited water availability. These environmental challenges will have several negative impacts on local communities. In particular, because of the widespread dependence of farming and fishing livelihoods within the LVB on ecosystem goods and services, the negative environmental effects listed above are expected to increase *inter alia*: i) pressure on subsistence livelihoods and commercial activities; and ii) the risk of food insecurity.

Overall, these threats represent a barrier to achieving sustainable development in the LVB⁴⁷. Priority non-climatic environmental threats can be separated by country as follows.

- Burundi: deforestation, soil erosion, degradation of river banks, mining and wildlife hunting.
- Kenya: deforestation, soil erosion, water pollution, sedimentation, eutrophication, increase in water hyacinth and loss of wetlands.
- Rwanda: deforestation, soil erosion, degradation of river banks, wildlife hunting, overgrazing and desertification.
- Tanzania: deforestation, soil degradation, water pollution, declining water levels, desertification, poaching and shortage of potable water.
- Uganda: deforestation, water pollution, draining of wetlands, encroachment of shorelines and declining water level.

⁴² Lake Victoria Fisheries Organisation 2008.

⁴³ Eutrophication occurs in lakes and other slow-moving water bodies when excess nutrient loads, especially from nitrogen and phosphorus, stimulate excessive plant growth. As the plants bloom and then eventually die, the decomposing material reduces dissolved oxygen in the water creating anoxic zones that can be fatal to other lake organisms.

⁴⁴ The World Bank. 2000. The inspection panel investigation report. Kenya: Lake Victoria Environmental Management Project and The World Bank, Washington D.C.

⁴⁵ The Agreed Curve states that Uganda may release an amount of water equal to the natural discharge of the lake to the White Nile, which should maintain the natural hydrological balance of the lake system. For further information, see: Kiwango & Wolanski 2008. Papyrus wetlands.

⁴⁶ Awange JL, Ogalo L, Bae K-H, Were P, Omondi P, Omute P & Omullo M. 2008. Falling Lake Victoria water levels: is climate a contributing factor? *Climatic Change* 89:281–297.

⁴⁷ Lake Victoria Basin Commission Strategic Action Plan 2007.

Non-climatic threats can largely be divided into three ecosystem categories: i) wetland; ii) aquatic; and iii) terrestrial.⁴⁸

Threats to wetlands in the LVB are most often because of pressure to the shoreline and river bank. Such pressures include *inter alia*: i) road construction; ii) waste dumping; and iii) draining for agriculture. Increasing the destruction of wetland ecosystems can result in increasing vulnerability of local communities to flood hazards. Economic losses associated with flood damage are significant when taking into account destruction of property, importing relief foods and the loss of human life. Furthermore, the loss of vegetation cover leads to poor soil infiltration and has the result of local communities having to travel far distances for access to potable water.

Threats to aquatic ecosystems have been addressed above, namely the introduction of the Nile perch and the resultant decrease in fish species biodiversity in Lake Victoria. This has affected the communities situated along the lakeshore, which relied on the native fish species for subsistence.

Terrestrial ecosystem threats are primarily within the forest and the over-harvesting of indigenous tree species. Moreover, the increasing encroachment of plantations and settlements have resulted in the LVB catchment being dominated by exotic tree species. This loss in forest cover has been experienced across all five LVB countries. The long-term consequences of increased exotic species in the forest include: i) local herbalists – who serve the majority of the communities – can no longer depend on the indigenous tree species; and ii) loss of indigenous knowledge that is critical to maintaining sustainable management of forest ecosystems.

In addition to environmental challenges, communities within the LVB experience several challenges to their health⁴⁹. For example, the occurrence of HIV/AIDS is greater in the LVB than in neighbouring regions⁵⁰, which is attributed to frequent localised migrations within fisher communities. A combination of inadequate toilet facilities within LVB communities and pollution of water resources by agricultural chemicals causes water-related illnesses, such as dysentery and diarrhoea⁵¹. Despite the health risks to communities within the LVB, medical treatment facilities often experience shortages of both supplies and skilled staff, thereby exacerbating these health risks.

There are a number of projects both in conceptual stage and under implementation that specifically focus on addressing these non-climatic factors across the LVB. Examples of these projects are outlined below.

The **Community Disaster Risk Management in Burundi** (budget: US\$40,085,000) is a Least Developed Countries Fund (LDCF) and United Nations Development Programme (UNDP) project endorsed in 2014. The objective of the project is to strengthen community capacity to withstand disaster risks and to increase preparedness in Burundi. Objectives include long-term environmental management practices. This project will contribute to overcome the non-climatic barriers in Burundi including soil erosion and degradation of river banks. Strengthening

⁴⁸ Lake Victoria Basin Commission Strategic Action Plan 2007.

⁴⁹ Karanja DMS. 2006. Health, diseases, and nutrition in the Lake Victoria Basin. LVEMP Project Report.

⁵⁰ Pathfinder International. 2013. Health of people and the environment, Lake Victoria Basin Project: Baseline Study Synthesis Report. Pathfinder International, Watertown.

⁵¹ Muyodi FJ, Hecky RE, Kitamirike JM & Odong R. 2009. Trends in health risks from water-related diseases and cyanotoxins in Ugandan portion of Lake Victoria Basin. *Lakes and Reservoirs Research & Management* 14:247–257.

community capacity through training will provide sustainable solutions to environmental degradation in Burundi by setting up long-term mechanisms such as training-of-trainers. Dealing with the terrestrial threats in Burundi will provide the base work for later developments to address the wetland and aquatic threats. Further to this, the community capacity building will allow for community members to explore additional income-generating activities through alternative livelihoods. For example, implementing measures for preparedness in Burundi includes *inter alia* stabilising river banks through planting which in turn provides options for crops to be planted that can serve as an additional livelihood. In the long-term, addressing these threats may lower the amount of wildlife hunting and deforestation that takes place as a result of alternative, less-intensive livelihoods being presented to communities.

The Sixth Operational Phase of the Global Environment Fund (GEF) Small Grants Programme in Kenya (budget: US\$8,472,968) is a GEF/UNDP initiative approved in June 2016. This phase of the grants programme aims to enhance and maintain socio-ecological resilience through community-based initiatives in selected areas in Kenya. It will further contribute to alleviating non-climatic factors for Kenyan communities such as water pollution and the occurrence of disease. Focusing on threats in the land degradation, biodiversity and climate change themes, the sixth phase will include the following outcomes: i) multi-stakeholder partnerships developed in three ecologically-sensitive areas to execute participatory adaptive management plans to enhance socio-ecological landscape resilience and global environmental benefits; ii) enhanced ecosystem services and biodiversity conservation through community-based interventions; iii) improved flow of agro-ecosystem services to sustain food production and livelihoods through community-based interventions; iv) improved community livelihoods by developing eco-friendly community-enterprises and improving market access; v) multi-stakeholder partnerships develop plans for community-based integrated low-emission systems; and vi) community and local civil society organisations increase their organisational and financial skills through training and access to micro-credit.

The Scaling Up Sustainable Land Management and Biodiversity Conservation to Reduce Environmental Degradation in Small Scale Agriculture in Western Kenya project (budget: US\$10,863,800) is a GEF/UNEP initiative. The project was endorsed in July 2016 with the development objective to promote adoption and adaptation of sustainable land and forest ecosystem management practices with a focus in Kenyan ecosystems. This project has two central outcomes involving capacity building and strengthening: i) reduced land degradation, improved soil health and increased productivity of agro-ecosystems; and ii) the capacity of ten identified community forest associations strengthened to manage forests and implement sustainable forest management and biodiversity conservation. Both these outcomes include specific target indicators for *inter alia* amount of forest and biodiversity protected. Therefore, this GEF/UNEP initiative contributes to addressing various non-climatic threats in Kenya, including deforestation, soil erosion and sedimentation.

The Landscape Approach to Forest Restoration and Conservation project (LAFREC; budget: US\$63,182,548) is a World Bank and Multi-Trust Funds initiative endorsed in 2014 in Rwanda. The objective of the initiative is to restore and maintain critical landscapes in Rwanda that provide global environmental benefits and contribute to enhanced resilient economic development and livelihoods. Specific goals of LAFREC include forest rehabilitation and sustainable land management which contribute to addressing non-climatic threats in Rwanda such as *inter alia* deforestation, desertification and soil erosion. LAFREC involves three inter-related components, namely: i) nation-wide multi-sectoral landscape restoration planning and institutional development; ii) demonstration of land and forest restoration and conservation at the priority landscapes including restoration management training and providing physical

investment support for land and forest restoration; and iii) landscape-level restoration in support of greater adaptation and resilience of local communities to the effects of climate change including vulnerability assessments, capacity building and targeted investments to enhance community resilience against floods and droughts.

Sustainable Forest Management (SFM) of the Miombo Woodland Resources of Western Tanzania (budget: US\$11,945,000) is a GEF/UNDP project, endorsed in 2011 and under implementation in Tanzania. The SFM project aims to provide land users and forest managers with enabling mechanisms for climate-resilient SFM adoption specific to the Miombo Woodlands. Enabling mechanisms include: i) policy; ii) financial; iii) institutional; and iv) capacity. The SFM project has four inter-related components, namely: i) policy regulatory framework and institutional arrangements support sustainable forest management; ii) strengthening skills and capacities for knowledge-based community-based forest management and reduced pressure on woodlands; iii) adoption of sustainable charcoal and energy switch to reduce pressure on woodlands; and iv) markets and technology supported to expand livelihood options to reduce pressure on agriculture and natural resources and increase income in pilot wards. The SFM project also integrates a fifth smaller component that supports project management to ensure the efficient delivery of results and managements. The SFM project targets specific non-climatic factors in Tanzania including *inter alia* deforestation, soil degradation and community health-related threats.

The **Efficient and Environmentally Sound Drinking Water and Sanitation Services** programme in Tanzania is being jointly run by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Ministry of Water to establish legal and regulatory frameworks as a prerequisite for improved water services in the country. The programme has been in implementation since 2014 and specifically aims to increase the population's access to potable water. Further to this, the advisory services provided to the Tanzanian Government address climate-related aspects of water supply and sanitation and aims to adapt water management accordingly. The programme addresses non-climatic factors in Tanzania such as *inter alia* water pollution and shortage of potable water, however benefits go further to include health-related community benefits. Improving on the water quality in Tanzania will reduce the risk of diseases and their spread through communities.

The **Building Resilience to Climate Change in the Water and Sanitation Sector** (budget: US\$46,620,000) is a LDCF and African Development Bank (AfDB) project in Uganda. The LDCF/AfDB project was endorsed in 2014 to enhance the resilience of poor communities to the impacts of flooding, focusing on water pollution and sanitation. The focus of the LDCF/AfDB project is on the following inter-related outcomes: i) improving the integrity of mountain ecosystems in Uganda; ii) improving the availability of and faulty water resources in the Victoria Water Management Zone; iii) lower the risk of landslides and flooding in the Mount Elgon region; iv) increase access to climate-resilient sanitation in flood-prone peri-urban areas; v) improve health status and reduce water-borne diseases in flood-prone peri-urban areas; vi) improve availability of safe and clean water for domestic consumption in drought-prone areas; vii) improve crop production levels through availability of water from gravity schemes; viii) improve livestock farming through improved water availability; and ix) improve awareness of technologies, measures and practices to increase resilience to climate change in flood- and drought-prone regions. These components assist in addressing the non-climatic threats to Ugandan communities including water pollution, water-borne diseases and health issues relating to water and sanitation.

Climate change context

Past and current climate change

Over the past four decades, considerable climatic changes have occurred in the **LVB**. For example, the volume of summer monsoon rainfall declined across much of East Africa⁵². Reduced summer monsoon rainfall volume has corresponded with a decrease in mean annual rainfall⁵³, an increase in annual temperatures and an increase in the frequency of natural disasters such as floods and droughts⁵⁴. A comparison of temperature data from 1950–2000 with temperature data from 2001–2005 shows that maximum temperatures have increased by an average of 1°C⁵⁵. Country-specific climate changes are detailed below.

In **Burundi**, the mean annual temperature has increased between 0.7 and 0.9°C since 1930. There has been an overall decrease in annual precipitation, with the long, wet season ending sooner and the short, wet season starting later. However, within this overall decrease in rainfall volume, there is notable variation. For example, rainfall volume in the rain season – October to May – has increased since 1951 at a rate of 3.3 mm per month, per decade⁵⁶, and observations from 1999–2006 show a shortening of the rainy season coupled with an extension of the dry season in north-eastern Burundi⁵⁷.

Since the 1960s, the mean annual temperature in **Kenya** has increased by 1°C, at an average rate of 0.21°C per decade – an increase that has been most rapid in March–May (0.29°C per decade) and slowest in June–September (0.19°C per decade)⁵⁸. Although variability in rainfall patterns have been recorded across Kenya, overall trends indicate a neutral or decreasing trend, which reflects the recorded decline in rainfall volume during the long rain season⁵⁹.

Although climate data for **Rwanda** is scarce, some trends have been recorded, for example: i) between 1971 and 2009, the mean annual temperature increased by 1.2°C; ii) mean annual rainfall volumes decreased by 80 mm between 1961 and 2006; and iii) the length of the rain seasons – March to May and September to November – decreased⁶⁰.

⁵² IPCC. 2014. Climate change 2014: synthesis report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC, Geneva.

⁵³ Donald Anthony Mwiturubani. Monograph 170: Chapter 4. *Climate change and access to water resources in the Lake Victoria Basin*. Available at:

http://mercury.ethz.ch/serviceengine/Files/ISN/117761/ichaptersection_singledocument/ee7c3713-e87b-44e8-8d98-6b9492dc1ce1/en/Pages+from+Mono170-5.pdf [accessed 28.11.2016].

⁵⁴ Gotenberg University, School of Economics and Commercial Law. 2007. Environmental Policy brief for the Lake Victoria Basin. Gotenberg University, Gotenberg. Available at:

http://www.vub.ac.be/klimostoolkit/sites/default/files/documents/env_policy_brief_lake_victoria.pdf

⁵⁵ ICPAC, Kenya & SEI, United Kingdom. 2009. Economics of climate change: Kenya, Rwanda and Burundi. DFID, London.

⁵⁶ Burundi dashboard. Available at:

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCCode=BDI&ThisTab=ClimateBaseline

⁵⁷ ICPAC, Kenya & SEI, United Kingdom. 2009. Economics of climate change.

⁵⁸ Kenya dashboard. Available at:

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCCode=KEN&ThisTab=ClimateBaseline

⁵⁹ East African Sustainability Watch Network. 2014. Lake Victoria climate change readiness brief, No.3: progress and level of implantation of the East African Community climate change policy commitments in the Lake Victoria Basin with respect to agriculture, nutrition and food security. Available at:

http://www.ugandacoalition.or.ug/sites/default/files/Lake%20Victoria%20CC%20Readness%20brief%20No.%203%20English_0.pdf

⁶⁰ Rwanda dashboard. Available at:

Similar to Kenya and Rwanda, the mean annual temperature in **Tanzania** has increased by ~1°C since 1960, with the largest increases occurring in January and February. While mean annual rainfall in Tanzania has decreased since 1960 by 2.8 mm per month per decade, variation in rainfall patterns has increased, for example a significant increase of 11 mm per decade in the volume of rainfall events of 5 days or less – March to May⁶¹.

Mean annual temperatures in **Uganda**, between 1951 and 1980, have increased by 0.5–1.2°C for minimum temperatures and 0.6–0.9°C for maximum temperatures. There has been considerable variation in rainfall patterns in Uganda, particularly in the last two decades, for example: i) the onset and cessation of rainfall seasons has become more erratic; ii) rainfall events have produced greater volumes; and iii) the frequency of drought events has increased⁶². Despite this increase in rainfall variation, there has been no significant change in average annual rainfall over the last 60 years⁶³.

Future climate change

The projected changes in climate in the **LVB** include an increase in mean annual temperature of 0.2–0.5°C per decade in the 21st century. This increase in temperature is expected to cause an increase of 5–20% in the volume of annual rainfall in wet months (December–February) and a decrease of 5–10% in the volume of annual rainfall in the dry months (June–August). Furthermore, changes in rainfall patterns are expected to be largely unpredictable, with prolonged periods of both drought and intense rainfall⁶⁴.

In **Burundi**, mean annual rainfall is expected to increase by 3–10%, with increases in rainfall volume in November–March of more than 25% and decreases in rainfall in May–October of 4–16%. The mean annual temperature in Burundi is expected to increase by 0.4°C per decade, with an overall increase of 2.3°C by 2050⁶⁵.

By the year 2060, the average annual temperature in **Kenya** is expected to increase by 1–2.8°C. Projections of future rainfall indicate a consistent increase in annual rainfall volume, with the largest predicted increases – ~3–49 mm per month – occurring between October and May⁶⁶.

In **Rwanda**, climate projections show an increase in mean annual temperature of 1.3–1.9°C by 2050, and an increase of 2.3–3.3°C by 2100. In addition, mean annual rainfall is expected to increase, but with current data limitations, it is not feasible to predict the magnitude of this increase⁶⁷.

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCode=RWA&ThisTab=ClimateBaseline

⁶¹ Tanzania dashboard. Available at:

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCode=TZA&ThisTab=ClimateBaseline

⁶² Uganda experienced seven droughts in a period of ten years from 1991–2000.

⁶³ USAID. 2013. Uganda climate change vulnerability assessment report. Available at:

<http://community.eldis.org/.5b9bfce3/ARCC-Uganda%20VA-Report.pdf>

⁶⁴ Mwiturubani DA. 2010. Climate change and access to water resources in the Lake Victoria Basin. *Institute for Security Studies: Monograph* 170:63–79. Available at:

http://mercury.ethz.ch/serviceengine/Files/ISN/117761/ichaptersection_singledocument/ee7c3713-e87b-44e8-8d98-6b9492dc1ce1/en/Pages+from+Mono170-5.pdf

⁶⁵ ICPAC, Kenya & SEI, United Kingdom. 2009. Economics of climate change.

⁶⁶ Kenya risk screening overview: climate change knowledge portal. Available at:

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCode=KEN&ThisTab=RiskOverview

⁶⁷ Rwanda Risk screening overview: climate change knowledge portal. Available at:

The mean annual temperature in **Tanzania** is predicted to increase by 1–2.7°C by 2060 and by 1.5–4.5°C by 2090, with an increased occurrence and duration of heatwaves. The mean annual rainfall in Tanzania is predicted to increase, as well as the variation in rainfall patterns. Specifically, an increase in the frequency of both intense rainfall events and drought periods is predicted⁶⁸.

In **Uganda**, the mean annual temperature is expected to increase by 1.5°C by 2020 and by up to 4.3°C by 2080. Increased variability in rainfall patterns is expected, but these changes cannot be predicted with certainty. In general, a change in the frequency of extreme climate events, such as heatwaves, droughts, floods and storms is expected. In addition, Uganda's mean annual rainfall is expected to increase, although the distribution of these increases across Uganda will not be uniform and will vary according to the distribution of intense rainfall events⁶⁹.

Past and current effects of climate change

While changes in climate have varied at national levels across the LVB, the negative effects associated with these changes in climate have been consistent at a regional level. Specifically, as a result of reduced rainfall volume and increased variation in rainfall patterns, the volume of water in Lake Victoria has decreased⁷⁰. In Burundi, reduced rainfall volume and increased annual temperatures have resulted in a drying trend and desertification in the low-lying, peripheral areas⁷¹. In Kenya, the increased unpredictability and intensity of rainfall events⁷² has increased the frequency of flooding events⁷³. Across the LVB, a number of prolonged drought events have occurred, specifically in 1983/1984, 1991/1992, 1995/1996 and 2004/2005, all of which have resulted in famine⁷⁴.

Climate change has negatively affected the agricultural sector. Firstly, temporal and spatial variability in rainfall have resulted in a decrease in agricultural productivity in the LVB. This decrease in productivity is widespread⁷⁵ as rain-fed agriculture is practiced by 60% of the population in the LVB and contributes ~40% to national GDPs⁷⁶. Secondly, increased annual temperatures have resulted in heat stress in livestock, which reduces growth rates, reproductive rates, milk production, wool production as well as the health and welfare of livestock animals⁷⁷. Therefore, climate change is contributing to food insecurity in the LVB and increasing the vulnerability people whose livelihoods are underpinned by agriculture.

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCCode=RWA&ThisTab=RiskOverview

⁶⁸ Tanzania Risk screening overview: climate change knowledge portal. Available at:

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCCode=TZA&ThisTab=RiskOverview

⁶⁹ East African Sustainability Watch Network. 2014. Lake Victoria climate change readiness brief, No.3: progress and level of implementation of the East African Community climate change policy commitments in the Lake Victoria Basin with respect to agriculture, nutrition and food security. Available at:

http://www.ugandacoalition.or.ug/sites/default/files/Lake%20Victoria%20CC%20Readness%20brief%20No.%203%20English_0.pdf

⁷⁰ Mwiturubani 2010. Climate change and access to water resources.

⁷¹ Netherlands Commission for Environmental Assessment – Dutch Sustainability Unit: Climate Change Profile: Burundi. Available at: http://api.commissiener.nl/docs/os/i71/i7152/climate_change_profile_burundi.pdf

⁷² East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No.3.

⁷³ East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No.3.

⁷⁴ Awange JL, Aluoch J, Ogallo LA, Omulo M & Omondi P. 2007. Frequency and severity of drought in the Lake Victoria region (Kenya) and its effects on food security. *Climate Research* 33:135–142.

⁷⁵ East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No.3.

⁷⁶ East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No.3.

⁷⁷ East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No.3.

The fisheries sector in the LVB has been adversely affected by the changes in distribution and/or quantity of freshwater resources. While a number of factors have contributed to these changes, reduced rainfall has exacerbated the decline in fish populations. In Uganda, for example, the annual catch of Nile perch has decreased by ~26% during the 2005–2011 period (94,903 to 70,061 tonnes). The catch of tilapia is also reported to have decreased by 34% over the same period (29,450 to 19,350 tonnes)⁷⁸.

Climate variability has resulted in fluctuations in the volume of water in Lake Victoria. These fluctuations have adversely affected the generating capacity of hydropower facilities and infrastructure within the LVB. For example, in 2002 and 2004, the declining volume of water in Lake Victoria coupled with an increasing demand for electricity led to several power shortages and blackouts in Kampala (Uganda)⁷⁹.

Future effects of climate change

As a result of the predicted increase in the frequency of intense rainfall events, flooding is expected to occur, particularly in low-lying areas of the LVB. The frequency of droughts is also predicted to increase, by 40–60% in Burundi, for example⁸⁰. Floods are expected to increase in frequency and magnitude in the low-lying areas. As ~80% of Lake Victoria's water volume is provided by direct rainfall, the predicted spatial variation in rainfall patterns will result in changes in water availability⁸¹.

A predicted decline of 50–150 mm in rainfall volume per season in the LVB, coupled with increased variability in rainfall patterns, is expected to reduce the productivity of farming – for example a ~10% reduction of total grain production in East Africa by 2080⁸² is predicted. In addition, the increased frequency and severity of extreme weather events is expected to increase livestock mortality⁸³. Therefore, under the future conditions of climate change, regional food insecurity will be exacerbated and vulnerability of local communities within the LVB to climate change will be increased as livelihoods underpinned by agriculture become increasingly marginal.

Because livelihoods and several national sectors within the LVB are reliant on natural resources, climate change may indirectly result in negative socio-economic effects. To illustrate this point, reduced water availability across the LVB may provoke conflict as competition for water increases. The specific effects are detailed below.

- At the household level, water is used in very specific activities such as farming and household chores largely undertaken by women. As the local communities within the LVB adopt a patriarchal system, potential conflicts may lead to women being disproportionately affected by having to walk longer distances daily to access water.
- At the community level, the influx of people from areas of water scarcity to areas of water abundance may lead to conflicts between different communities. Such inter-community conflict may require involvement from district or national-level government institutions.

⁷⁸ East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No.3.

⁷⁹ Hepworth N & Goulden M. 2008. Climate Change in Uganda: understanding the implications and appraising the response. LTS International, Edinburgh.

⁸⁰ Burundi Risk screening overview: climate change knowledge portal. Available at:

http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCode=BDI&ThisTab=RiskOverview

⁸¹ East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No.3.

⁸² Mwiturubani 2010. Climate change and access to water resources.

⁸³ East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No.3.

- At the national/transboundary level, the decisions taken to manage water resources will have upstream and downstream consequences. Decisions taken in self-interest by one country – for example draining Lake Victoria to increase hydropower generation – that is detrimental to a neighbouring country might provoke an international dispute and reduce the likelihood of cooperation in regional resource management initiatives⁸⁴.

Problem to be addressed by the proposed project

The problem to be addressed by the proposed project is that climate change is inadequately integrated into regional transboundary water catchment management within the LVB. This is increasing the vulnerability of LVB communities. This problem is expected to intensify under the conditions of future climate change, specifically increasing variability in rainfall patterns and increasing mean annual temperatures. To address this problem, the proposed project will focus on overcoming a number of specific challenges listed below.

- Institutional capacity to include climate change adaptation into plans, strategies and policies for transboundary water management and development initiatives is limited.
- The delivery of climate information to policy and decision-makers and communities in the LVB is limited and therefore the effectiveness of long-term planning in transboundary water management is reduced.
- Livelihoods of local communities within the LVB are not climate resilient and therefore these communities are vulnerable to the effects of climate change, particularly to the reduced water quality and availability.
- Technical capacity within local communities to implement activities that promote climate change adaptation is limited.
- Sharing of knowledge within the LVB on climate change adaptation and transboundary water catchment management is limited.

Project/Programme Objectives:

List the main objectives of the project/programme.

The overall objective of this proposed project is to “reduce vulnerability to the negative effects of climate change in the five Lake Victoria Basin countries, namely Burundi, Kenya, Rwanda, Tanzania and Uganda, by building climate resilience”. To achieve this objective, there are five proposed project outcomes. These are listed below.

1. Strengthened institutional and technical capacity to integrate climate resilience into transboundary water catchment management.
2. Improved delivery of accurate and timely climate information to regional and national policymakers, technical officers and local communities.
3. Climate change adaptation technologies transferred to communities to reduce their vulnerability to climate change.
4. Regional resilience to climate change promoted through innovative, community-based projects.
5. Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices.

⁸⁴ Mwiturubani 2010. Climate change and access to water resources.

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, outcomes, outputs and countries in which activities would be executed, and the corresponding budgets.

For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions/projects.

Table 2. Logical framework for the proposed project, including indicative activities and budget estimates per component.

| Expected Outcomes | Expected Outputs | Indicative activities | Countries | Amount (US\$) |
|---|--|--|---|---------------|
| Component 1. Improving regional management of a transboundary water catchment | | | | |
| 1. Strengthened institutional and technical capacity to integrate climate resilience into transboundary water catchment management. | 1.1. Strengthened institutional coordination mechanism to sustain a climate-resilient approach to transboundary water catchment management. | 1.1.1. Strengthen – building on the stakeholder engagement strategy prepared by the CCTWG – and sustain the flow of information between the following: i) projects and organisations collecting climate data within the LVB; ii) regional climate information platforms; iii) experts and technical staff responsible for water catchment management and climate change adaptation; and iv) regional policy and decision-makers. | Burundi, Kenya, Rwanda, Tanzania and Uganda | 490,000 |
| | | 1.1.2. Support meetings of the CCTWG to plan and implement climate-resilient approaches to transboundary water catchment management. | | |
| | | 1.1.3. Undertake regional capacity-building exercises in water catchment management in the context of climate change in organisations such as <i>inter alia</i> : i) LVBC; ii) CCTWG; iii) EAC Climate Change Unit; and iv) Lake Victoria Region Local Authority Cooperation. | | |
| | 1.2. Training provided to government ministries and agencies, civil society and the private sector to address climate change-related challenges in transboundary water catchment management. | 1.2.1. Develop/revise training material on climate change adaptation and water catchment management. | | |
| | | 1.2.2. Provide training on climate change adaptation and water catchment management at the regional level to national government representatives from the climate change, environment, water and local government sectors in each of the five Partner States. | | |
| | | 1.2.3. Provide training on climate change, climate change adaptation and water management at national workshops which will include civil society, NGOs and the private sector. | | |

| Expected Outcomes | Expected Outputs | Indicative activities | Countries | Amount (US\$) |
|--|--|---|---|---------------|
| Component 2. Climate information dissemination | | | | |
| 2. Improved delivery of accurate and timely climate information to regional and national policymakers, technical officers and local communities. | 2.1. Tailored climate information packages to guide both operational and long-term strategic planning. | 2.1.1. Train representatives from the national meteorological agencies in each of the five Partner States on downscaling regional climate information to the national level. | Burundi, Kenya, Rwanda, Tanzania and Uganda | 450,000 |
| | | 2.1.2. Develop tailored climate information packages for: i) policy- and decision-makers; and ii) local communities. | | |
| | 2.2. Climate information dissemination mechanism strengthened to deliver climate information to national policy-makers, LVBC technical officers and local communities. | 2.2.1. Identify cost-effective means of strengthening existing climate information dissemination mechanisms, including ICPAC, FEWSNET, RCMRD and DHI. | | |
| | | 2.2.2. Strengthen existing climate information dissemination mechanisms – including the LVBC information hub – to develop an LVB-specific platform for climate information. | | |
| | | 2.2.3. Deliver climate information for long-term strategic planning to policy- and decision-makers in regional organisations as well as technical staff in national ministries within the LVB. | | |
| 2.2.4. Pilot innovative information-sharing mechanisms – such as the provision of climate information through mobile networks – to deliver climate information to communities in a locally relevant and accessible format. | | | | |
| Component 3. Regional approach to climate change adaptation in vulnerable communities | | | | |
| 3. Climate change adaptation technologies transferred to communities to reduce their vulnerability to climate change. | 3.1. Project intervention sites and appropriate adaptation technologies identified. | 3.1.1. Apply findings/lessons learned from past and current LVBC programmes (LVWATSAN, LVEMP II and PREPARED Vulnerability Assessment) to identify potential project intervention sites. | Burundi, Kenya, Rwanda, Tanzania and Uganda | 1,700,000 |
| | | 3.1.2. Conduct a stocktake of adaptation interventions detailed in existing national strategies and action plans, recommendations from other regional projects and findings of scientific research in the LVB to identify appropriate adaptation technologies to be implemented regionally. | | |
| | 3.2. Extension officers and local communities trained on climate change adaptation technologies including water conservation | 3.2.1. Train extension officers and local community members at selected intervention sites on climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA activities. | | |

| Expected Outcomes | Expected Outputs | Indicative activities | Countries | Amount (US\$) |
|---|--|---|---|---------------|
| | practices, climate-smart agricultural techniques and EbA activities. | 3.2.2. Establish demonstration sites for climate change adaptation technologies at selected intervention sites. | | |
| | | 3.2.3. Organise information exchange visits where people from communities surrounding the project intervention sites are exposed to the climate change adaptation technologies. | | |
| | 3.3. Climate change adaptation technologies demonstrated at selected project intervention sites. | 3.3.1. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Burundi. | | |
| | | 3.3.2. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Kenya. | | |
| | | 3.3.3. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Rwanda. | | |
| | | 3.3.4. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Tanzania. | | |
| | | 3.3.5. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Uganda. | | |
| Component 4. Community-based approaches to climate change adaptation | | | | |
| 4. Regional resilience to climate change promoted through innovative, community-based projects. | 4.1. Small-scale projects funded to promote innovative approaches to climate change adaptation. | 4.1.1. Host workshops with communities at intervention sites selected in Component 3 to identify specific climate change impacts and appropriate community-based adaptation interventions. | Burundi, Kenya, Rwanda, Tanzania and Uganda | 1,250,000 |
| | | 4.1.2. Provide training to local communities or relevant local-level government or NGOs on how to develop a project proposal and the necessary financial, administrative and monitoring procedures for a small-scale project. | | |
| | | 4.1.3. Review project proposals and select successful project proponents. | | |
| | | 4.1.4. Provide small grants to project proponents to implement small-scale, | | |

| Expected Outcomes | Expected Outputs | Indicative activities | Countries | Amount (US\$) |
|---|--|---|---|---------------|
| | | community-based adaptation projects in Burundi. | | |
| | | 4.1.5. Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Kenya. | | |
| | | 4.1.6. Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Rwanda. | | |
| | | 4.1.7. Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Tanzania. | | |
| | | 4.1.8. Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Uganda. | | |
| | | 4.1.9. Undertake monitoring and evaluation of small-scale projects to provide information for Outcome 5. | | |
| Component 5. Knowledge management and learning | | | | |
| 5. Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices. | 5.1. A forum established to promote the collaboration of research initiatives across the Lake Victoria Basin, with a focus on adaptation to climate change. | 5.1.1. Hold regional workshops with researchers and technical experts to plan interdisciplinary research projects on climate change adaptation and water catchment management. | Burundi, Kenya, Rwanda, Tanzania and Uganda | 318,489 |
| | | 5.1.2. Establish a forum of researchers and technical experts working on climate change adaptation to coordinate climate change research initiatives across the LVB. | | |
| | | 5.1.3. Promote knowledge sharing through the Global Adaptation Network (GAN), Africa Adaptation Knowledge Network (AAKNet) and Africa Adaptation Initiative. | | |
| | 5.2. Awareness-raising campaign to share lessons learned with stakeholders, ranging from policy- and decision-makers to vulnerable communities in the Lake Victoria Basin. | 5.2.1. Develop a detailed communications strategy – building on the communication and outreach strategy prepared by the CCTWG – to share lessons learned from the project with relevant national and regional stakeholders through appropriate media. | | |
| | | 5.2.2. Produce awareness-raising materials on water management and climate change adaptation. | | |

| Expected Outcomes | Expected Outputs | Indicative activities | Countries | Amount (US\$) |
|---|------------------|---|-----------|------------------|
| | | 5.2.3. Undertake awareness-raising campaigns for vulnerable communities to share lessons on water management and climate change adaptation. | | |
| | | 5.2.4. Distribute awareness-raising materials – translated into local languages where appropriate – to policy and decision-makers in national ministries and regional organisations to raise awareness on transboundary water management in the context of climate change and lessons learned from adaptation interventions demonstrated through Component 3 and 4. | | |
| | | 5.2.5. Host exhibitions to showcase the successful regional and community-based approaches to climate change adaptation demonstrated through Component 3 and 4. | | |
| 6. Project/Programme Execution cost (9.5%) | | | | 399,806 |
| 7. Total Project/Programme Cost | | | | 4,608,295 |
| 8. Project/Programme Cycle Management Fee charged by the Implementing Entity (8.5%) | | | | 391,705 |
| Amount of Financing Requested | | | | 5,000,000 |

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme.

Table 3. Projected milestone dates for the proposed project.

| Milestones | Expected dates |
|---|----------------|
| Start of Project/Programme Implementation | July 2017 |
| Mid-term Review (if planned) | January 2019 |
| Project/Programme Closing | June 2020 |
| Terminal Evaluation | March 2020 |

PART II: PROJECT/PROGRAMME JUSTIFICATION

A. Project components

Describe the project/programme components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience, and how they would build added value through the regional approach, compared to implementing similar activities in each country individually. For the case of a programme, show how the combination of individual projects would contribute to the overall increase in resilience.

To achieve its objective, the proposed project will focus both on strengthening regional coordination across the LVB and on implementing concrete on-the-ground adaptation activities in the selected intervention sites. The proposed project will include five components, the details of which are provided below.

Component 1. Improving regional management of a transboundary water catchment

Outcome 1. Strengthened institutional and technical capacity to integrate climate resilience into transboundary water catchment management.

Output 1.1. Strengthened institutional coordination mechanism to sustain a climate-resilient approach to water catchment management.

To improve regional coordination in transboundary water catchment management and climate change adaptation, existing transboundary institutional coordination mechanisms will be strengthened. Currently, the Climate Change Technical Working Group (CCTWG) of the East African Community (EAC) serves as a coordination mechanism between regional organisations and projects. As such, the proposed project will strengthen the functioning of the CCTWG by supporting meetings of the group to discuss and coordinate climate change adaptation in the context of transboundary water catchment management. In addition, the proposed project will strengthen coordination between the CCTWG and other relevant stakeholders based on the recommendations of the stakeholder engagement plan developed by the CCTWG with the support of the Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development (PREPARED) programme⁸⁵. Strengthening the existing institutional coordination mechanisms will ensure the most effective flow of information between *inter alia*: i) projects and organisations collecting climate data within the LVB; ii) regional climate information platforms; iii) experts and technical staff responsible for water catchment management and climate change adaptation; and iv) regional policy- and decision-makers.

Indicative activities to be implemented under Output 1.1 are outlined below.

1.1.1. Strengthen – building on the stakeholder engagement strategy prepared by the CCTWG – and sustain the flow of information between the following: i) projects and organisations collecting climate data within the LVB; ii) regional climate information platforms; iii) experts and technical staff responsible for water catchment management and climate change adaptation; and iv) regional policy and decision-makers.

⁸⁵ The PREPARED programme and its objectives and outcomes are outlined under Part II: G.

1.1.2. Support meetings of the CCTWG to plan and implement climate-resilient approaches to transboundary water catchment management.

Currently, financial constraints limit the EAC from organising regular meetings of the CCTWG. To overcome this, the PREPARED project provides support for meetings of the CCTWG, however, this project is expected to end in 2017. To promote the continued functioning of the CCTWG and therefore the improved coordination of climate change adaptation and water catchment management in the LVB, the proposed project will work with the LVBC and PREPARED to continue support to the CCTWG.

1.1.3. Undertake regional capacity-building exercises in water catchment management in the context of climate change in organisations such as *inter alia*: i) LVBC; ii) CCTWG; iii) EAC Climate Change Unit; and iv) Lake Victoria Region Local Authority Cooperation.

This activity will include the provision of technical advice to the relevant organisations as well as the provision of materials and goods to support their functioning.

Output 1.2. Training provided to government ministries and agencies, civil society and the private sector to address climate change-related challenges in transboundary water catchment management.

The success of the transboundary institutional coordination mechanism developed under Output 1.1 will depend on adequate knowledge and capacity of regional and national institutions within the LVB to undertake transboundary water catchment management and climate change adaptation. Therefore, the focus of Output 1.2 will be on providing training to a range of regional and national organisations within the LVB. This training will include modules on *inter alia*: i) best-practice adaptation practices; ii) integrating climate change into transboundary water catchment management; and iii) gender considerations in climate change adaptation and water management.

Indicative activities to be implemented under Output 1.2 are outlined below.

1.2.1. Develop/revise training material on climate change adaptation and water catchment management.

Under this activity, existing training materials will be tailored to the specific needs of the five Partner States.

1.2.2. Provide training on climate change adaptation and water catchment management at the regional level to national government representatives from the climate change, environment and water sectors in each of the five Partner States.

This training will make use of the tailored training manuals for each of the five Partner States. The training will be organised at a regional level with representatives from the climate change, environment and water sectors in each Partner State. The training will promote regional coordination and a unified approach to climate change adaptation and water catchment management.

1.2.3. Provide training on climate change, climate change adaptation and water management at national workshops which will include civil society, non-governmental organisation (NGOs) and the private sector.

The training will be organised at a national level, and will be extended out of solely government representatives to include civil society, NGOs and the private sector. Training individuals outside of government in each country will promote both the upscaling and sustainability of the project's approach and interventions.

Component 2. Climate information dissemination

Outcome 2. Improved delivery of accurate and timely climate information to regional and national policymakers, technical officers and local communities.

Output 2.1. Tailored climate information packages to guide both operational and long-term strategic planning.

With the large geographical area of the LVB, there are several initiatives at the regional level – for example, IGAD Climate Prediction and Application Centre (ICPAC), Famine Early Warning Systems Network (FEWSNET), Regional Centre for Mapping of Resources for Development (RCMRD) and UNEP-Danish Hydraulic Institute (DHI) – that collect climate information. However, this information is not always available to policy-makers, technical officers and local communities in a format that is accessible and able to inform decision-making. To combat this gap, the PREPARED programme⁸⁶ is developing the Climate Information Network (CIN), which serves as an interactive forum for both users and providers of climate information. However, this network targets stakeholders engaged in regional-level activities and provides climate information at the regional scale. Output 2.1 will build on the work undertaken by the CIN to downscale this regional climate information into tailored packages that will guide both national- and community-level activities. Activities in Output 2.1 will therefore focus on developing tailored climate information that will supply relevant information to guide both operational (community-level) and long-term strategic (national-level) planning. This output will provide support to the PREPARED programme, specifically to further institutionalising the GeoCLIM technology. This GeoCLIM software is a regional gridded data set that combines past and present climate hazards with available data from weather stations to provide a prediction for seasonal rainfall.

Indicative activities to be implemented under Output 2.1 are outlined below.

2.1.1 Train representatives from the national meteorological agencies in each of the five Partner States on downscaling regional climate information on the national level.

The training will take place at national workshops and include representatives from the climate change and meteorological departments within each Partner State.

2.1.2 Develop tailored climate information packages for: i) policy- and decision-makers; and ii) local communities.

These packages will include *inter alia* how to interpret and respond to different climate information.

Output 2.2, Climate information dissemination mechanism strengthened to deliver climate information to national policy-makers, LVBC technical officers and local communities.

⁸⁶ The PREPARED programme and its objectives and outcomes are outlined under Part II: G.

The tailored climate information packages developed under Output 2.1 will be shared through strengthened climate information dissemination mechanisms under Output 2.2. At the regional level, the climate information mechanisms to be strengthened will be determined by existing regional organisations and will likely include those operated by ICPAC and the LVBC information hub. These regional mechanisms will be used to disseminate tailored climate information packages, specific to the LVB, to policy-makers and technical officers. Through this dissemination, climate information will be shared with local communities at the selected project intervention sites and innovative information-sharing mechanisms – such as the provision of climate information through mobile networks⁸⁷ – will be piloted. Through strengthening the delivery of climate information dissemination mechanisms to stakeholders, users and service providers, this output will support the PREPARED programme – which is currently under implementation in East Africa.

Indicative activities to be implemented under Output 2.2 are outlined below.

2.2.1 Identify cost-effective means of strengthening existing climate information dissemination mechanisms, including ICPAC, FEWSNET, RCMRD and DHI.

This will be done by reviewing all existing climate information dissemination mechanisms to determine the most-effective channels. This will be measured through *inter alia* cost, timeliness, reach and source reliability. Consultations will be conducted with end-users of the information as well as providers and any intermediaries. A regional workshop including representatives from ICPAC, FEWSNET, RCMRD and DHI will be organised to identify agree on the most-effective means of strengthening existing mechanisms.

2.2.2 Strengthen existing climate information dissemination mechanisms – including the LVBC information hub – to develop an LVB-specific platform for climate information.

This activity will build on the results of activity 2.2.1, and will adapt existing mechanisms to create an LVB-specific platform for climate information dissemination.

2.2.3 Deliver climate information for long-term strategic planning to policy- and decision-makers in regional organisations, as well as technical staff in national ministries, within the LVB.

Climate information relevant to long-term planning in the water, environment, climate change and agricultural sectors will be communicated to policy- and decision-makers. This may be through electronic means, a centralised database and/or tailored information briefs.

2.2.4 Pilot innovative information-sharing mechanisms – such as the provision of climate information through mobile networks – to deliver climate information to communities in a locally relevant and accessible format.

There are various means for dissemination climate information to communities. The most widespread way is through the initiation of a community chief or leader in holding a meeting and relaying the information to the entire community at once. Another method is through local radio stations. The proposed project will investigate these various methods and pilot a select few across the five Partner States to test their effectivity and reach.

⁸⁷ Such a mechanism has been trialled by the PREPARED project in Kenya and may be replicated in this proposed project. The PREPARED programme and its objectives and outcomes are outlined under Part II: G.

Component 3. Regional approach to climate change adaptation in vulnerable communities

Outcome 3. Climate change adaptation technologies transferred to communities to reduce their vulnerability to climate change.

Output 3.1. Project intervention sites and appropriate adaptation technologies identified.

To promote a regional approach to climate change adaptation among local communities, appropriate adaptation technologies will be identified. The technologies identified will be based on best-practices across the LVB and will address climate change threats experienced across the region. These technologies will be selected based on the recommendations from existing studies (such as the PREPARED VIA and C3A2 assessment), projects and national strategies, and will include water conservation practices, climate-smart agricultural techniques and EbA activities. The technologies selected through this output will then be implemented under Output 3.3.

To ensure that the proposed project's on-the-ground interventions are implemented in accessible sites where local communities are vulnerable to the effects of climate change, project intervention sites have been identified building on the results of a climate change Vulnerability, Impacts and Adaptation Assessment (VIA) for the LVB undertaken by PREPARED⁸⁸. The VIA overlaid various indicators of climate change vulnerability⁸⁹ to identify priority climate hotspots throughout the LVB⁹⁰ (see Part II: G for additional information). Through a process of stakeholder engagement and a review of the PREPARED VIA, specific districts within these hotspots have been identified within each of the five Partner States. Four priority hotspot areas have been identified for the proposed project implementation (Figure 2). These priority areas are not restricted to a single Partner State, with areas overlapping Burundi, Rwanda and Tanzania in one of them. The proposed districts for interventions are grouped per priority area as follows:

- Kirundo and Muyinga (Burundi); Kayonza, Kirehe and Ngoma (Rwanda); and Kagera (Tanzania);
- Busia, Homa Bay, Migori and Siaya (Kenya);
- Kiruhura, Rakai, Masaka, Mpigi and Mubende (Uganda); and
- Shinyanga and Tabora (Tanzania).

⁸⁸ The PREPARED programme, including its objectives and outcomes, and the VIA are outlined under Part II: G.

⁸⁹ Climate information from GeoCLIM database, Land use, Poverty index, Population density, Malaria stability index, Market access and Access to improved drinking water.

⁹⁰ Priority hotspots including *inter alia* Rwegura River (Burundi), Chohoha Lake (Burundi and Rwanda), Yala Swamp (Kenya), Mara River Basin (Kenya and Tanzania), Nyabugogo Swamp (Rwanda), Mwanza Gulf (Tanzania), Sango Bay (Tanzania and Uganda) and Lake Nabugabo (Uganda).

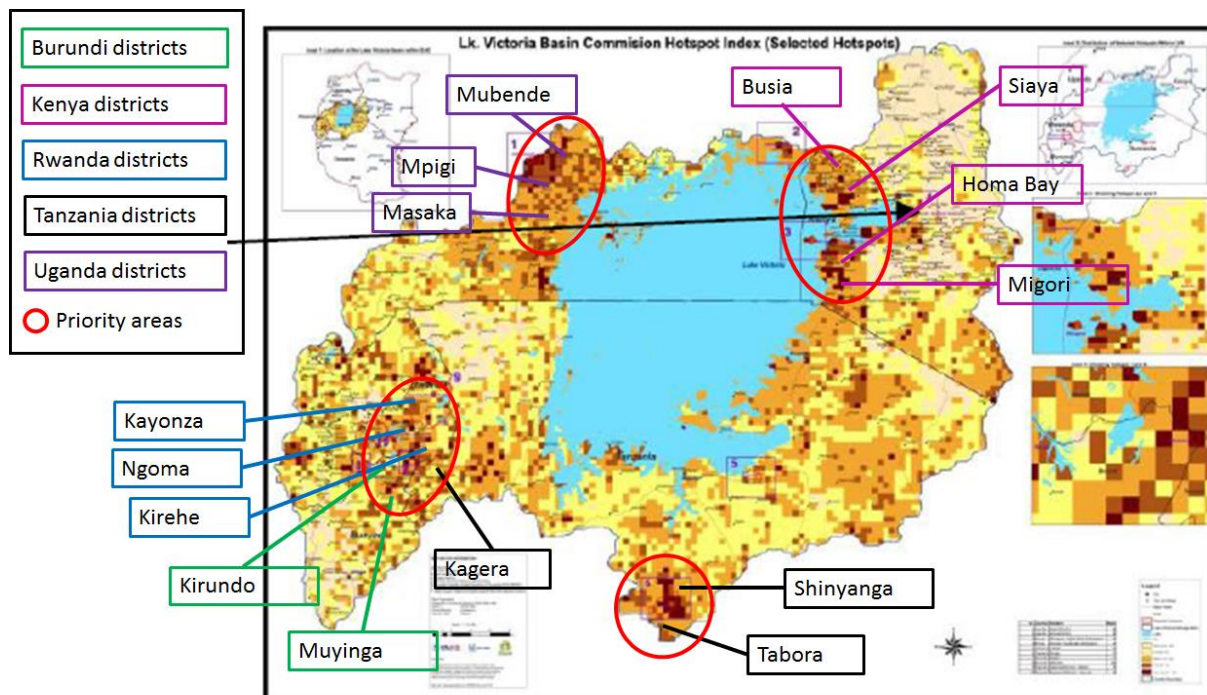


Figure 2: Climate change vulnerability hotspots identified in the LVB.

Under Output 3.1, these selected intervention sites will be validated by national project teams and specific target communities living within these interventions sites will be identified. This will ensure that project interventions target the most vulnerable communities and address national priorities within each of the Partner States.

Indicative activities to be implemented under Output 3.1 are outlined below.

3.1.1. Apply findings/lessons learned from past and current LVBC programmes – Lake Victoria Region Water and Sanitation Initiative II (LWATSAN), Lake Victoria Environmental Management Programme Phase II (LVEMP II) and the PREPARED Vulnerability Assessment (VIA) – to identify potential project intervention sites.

Based on the PREPARED VIA and the results of the PREPARED Community Climate Change Adaptation Assessment (C3A2)⁹¹, the following districts have been preliminarily identified as areas for intervention sites to be chosen:

- Kirundo and Musinga, Burundi;
- Busia, Homa Bay, Migori and Siaya, Kenya;
- Kayonza, Kirehe and Ngoma, Rwanda;
- Kagera, Shinyanga and Tabora, Tanzania; and
- Masaka, Mpigi and Mubende, Uganda.

This activity will draw on lessons from previous and current programmes being run in the LVB to validate the districts selected during the project preparation phase. In addition, the national

⁹¹ The PREPARED programme, including its objectives and outcomes, the VIA and the C3A2 assessment are outlined under Part II: G.

project teams will conduct additional national-level consultations to identify the specific communities where climate change adaptation interventions will be implemented.

3.1.2 Conduct a stocktake of adaptation interventions detailed in existing national strategies and action plans, recommendations from other regional projects and findings of scientific research in the LVB to identify appropriate adaptation technologies to be implemented regionally.

A review of all the existing adaptation interventions that have been implemented across the LVB will be done based on the existing national strategies of each Partner State. This activity will build on Activity 3.1.1 by applying lessons learned from previous and existing programmes in the LVB to further adapt technologies and interventions. The most up-to-date research will be referenced to develop flexible and efficient adaptation techniques for intervention at the selected sites. The interventions identified will include specific water conservation practices, climate-smart agricultural techniques and EbA activities.

Output 3.2. Extension officers and local communities trained on climate change adaptation technologies, including water conservation practices, climate-smart agricultural techniques and EbA activities.

To promote local ownership of the proposed project interventions and to increase local-level technical capacity, extension officers and local community members – including women and vulnerable groups – will be trained and equipped to undertake: i) water conservation practices; ii) climate-smart agricultural techniques; and iii) EbA activities.

Indicative activities to be implemented under Output 3.2 are outlined below.

3.2.1 Train extension officers and local community members at selected intervention sites on climate change adaptation technologies, including water conservation practices, climate-smart agricultural techniques and EbA activities.

These practices, techniques and activities will build awareness amongst trainees of the different approaches to climate change adaptation. Further, it will allow trainees to train others – including *inter alia* colleagues, fellow community and family members – thereby promoting the upscaling of the project interventions.

3.2.2 Establish demonstration sites for climate change adaptation technologies at selected intervention sites.

Demonstration sites, where best best-practice water conservation practices, climate-smart agricultural techniques and EbA activities will be implemented – will be established at the target communities identified under Output 3.1.

3.2.3. Organise information exchange visits where people from communities surrounding the project intervention sites are exposed to the climate change adaptation technologies.

These information exchanges may be organised around community and village meetings. Some community leaders and/or chiefs host regular meetings to discuss general issues and well-being. Information on the proposed project and the intervention sites can be disseminated at these gatherings. In this way, the meetings facilitate discussion, interest and awareness in

the proposed project, the specific site interventions, and climate change and the various impacts on their livelihoods.

Output 3.3. Climate change adaptation technologies demonstrated at selected project intervention sites.

Once appropriate sites and climate change adaptation technologies have been identified– under Output 3.1 – and training has been provided – under Output 3.2 – on-the-ground adaptation interventions will be implemented, including water conservation practices, climate-smart agricultural techniques and EbA activities. These on-the-ground interventions will reduce the vulnerability of communities within the selected project sites to the negative effects of climate change. Lessons learned from these adaptation interventions will be shared at a regional level under Component 5. In addition, regional and long-term research initiatives promoted under Component 5 will be encouraged to include adaptation interventions in Component 3 as sources of data.

The implementation of appropriate water conservation practices, climate-smart agricultural techniques and EbA activities will be managed by the relevant local government institution at the selected intervention site. Implementing similar adaptation technologies in different geographic locations with varying socio-economic contexts will allow for range of lessons and best-practice to be learned through the proposed project. This will contribute towards the development of a regional approach to climate change adaptation.

Indicative activities to be implemented under Output 3.3 are outlined below. Each activity is specific to an LVB Partner State and, as such, is defined as a separate activity.

3.3.1 Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Burundi.

3.3.2 Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Kenya.

3.3.3 Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Rwanda.

3.3.4 Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Tanzania.

3.3.5 Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Uganda.

Component 4. Community-based approaches to climate change adaptation

Outcome 4. Regional resilience to climate change promoted through innovative, community-based projects.

Output 4.1. Small-scale projects funded to promote innovative approaches to climate change adaptation.

To promote innovative approaches to climate change adaptation, small-scale community-based projects will be implemented in target communities. These small-scale interventions will differ

from the water conservation practices, climate-smart agricultural techniques and EbA implemented through Component 3 in that they will address climate change impacts specific to the target communities rather than addressing regional impacts. This will allow for new and innovative approaches to climate change adaptation that take advantage of indigenous knowledge to be implemented. This will, in turn, allow for additional lessons to be learned to inform climate change adaptation across the LVB.

The small-scale projects will be implemented in the target communities – identified under Output 3.1 – in each of the five Partner States. To identify the specific climate change impacts in each of these communities, the proposed project will draw on Community Climate Change Adaptation Assessment (C3A2) methodology developed through the PREPARED project. C3A2 is a toolkit that can be used to assess community perceptions to climate variability, hazards and risks, and use the information acquired to determine local adaptation practices to deal with seasonal and long-term variability (see Part II:G for additional details). The results of the C3A2 can then be used to inform the design of community-based adaptation plans (CBAPs). PREPARED plans to use C3A2 in four new communities in the Mara River Basin (two each in Tanzania and Kenya) in 2017, and also in the other partner states as described in Output 3.1. A PREPARED consultant will be training C3A2 teams and PREPARED will be willing to add trainees from the proposed project. These trainees, under LVBC Secretariat supervision, would then conduct the C3A2 studies in the selected communities and facilitate the development of CBAPs.

Communities – or relevant organisations working in the target communities – will then be encouraged to submit project proposals to implement the adaptation interventions identified in the CBAPs. Technical guidance and selection criteria will be provided to project proponents to develop a project proposal with the necessary financial, administrative and monitoring procedures. This will increase the likelihood of each sub-project's success and increase the technical capacity of project proponents. The National Project Teams, with input from their local government counterparts, will then select community-based projects to be funded using a fair and transparent process. The selection of community-based projects will also include an environmental and social assessment of each sub-project to ensure that the relevant AF social and environmental principles are upheld. The selected projects will be funded through a small grants modality in each of the Partner States.

Indicative activities to be implemented under Output 4.1 are outlined below.

4.1.1 Host workshops with communities at intervention sites selected in Component 3 to identify specific climate change impacts and appropriate community-based adaptation interventions.

4.1.2 Provide training to local communities or relevant local-level government sectors or NGOs on how to develop a project proposal and the necessary financial, administrative and monitoring procedures for a small-scale project.

This training will cover the development of proposals for the sub-projects identified in the CBAPs. It will benefit the communities and members that develop the sub-projects by educating them on the various aspects of designing, implementing and sustaining a climate change adaptation project.

4.1.3 Review project proposals and select successful project proponents.

Project proposals will initially be reviewed by extension officers and local government (in particular those staff involved in the implementation of interventions under Component 3) at the

project intervention sites. The proposals will then be reviewed by the National Project Teams. The final sub-projects to be funded will then be selected based on the following criteria: i) degree to which the sub-project addresses the adaptation needs identified in the CBAP; ii) cost-effectiveness; iii) ease of implementation; and iv) potential for negative environmental or social impacts.

4.1.4 Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Burundi.

The small grants will be provided to community groups or local NGOs to implement climate change adaptation interventions identified in the relevant CBAP.

4.1.5 Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Kenya.

The small grants will be provided to community groups or local NGOs to implement climate change adaptation interventions identified in the relevant CBAP.

4.1.6 Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Rwanda.

The small grants will be provided to community groups or local NGOs to implement climate change adaptation interventions identified in the relevant CBAP.

4.1.7 Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Tanzania.

The small grants will be provided to community groups or local NGOs to implement climate change adaptation interventions identified in the relevant CBAP.

4.1.8 Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Uganda.

The small grants will be provided to community groups or local NGOs to implement climate change adaptation interventions identified in the relevant CBAP.

4.1.9 Undertake monitoring and evaluation of small-scale projects to provide information for Outcome 5.

Regular monitoring and evaluation should take place for the small-scale projects. This will be undertaken by extension officers and local government officials at each of the project intervention sites. In addition, members of the National Project Team will evaluate the small-scale projects at the mid-term and the end of the proposed project.

Component 5. Knowledge management and learning

Outcome 5. Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices.

Output 5.1. A forum established to promote the collaboration of research initiatives across the Lake Victoria Basin, with a focus on adaptation to climate change.

To promote the coordination between researchers, technical experts and policy- and decision-makers, a research forum with a focus on transboundary water management and climate change adaptation will be established. This research forum will be established in collaboration with regional institutions, including *inter alia* the CCTWG and the Inter-University Council for East Africa. By supporting collaborative research efforts, the proposed project's interventions can increase the evidence base to leverage funds to address climate change adaptation and transboundary water management. Research initiatives promoted through the regional research forum will be encouraged to include adaptation interventions in Component 3 as sources of data. This output is designed to promote research initiatives at the regional level instead of limiting it to country-specific. The proposed project will not form a funding role but rather a supporting role for collaboration between research initiatives and will therefore promote the development of collaborative research programmes that address regional – rather than national – climate change adaptation challenges.

Indicative activities to be implemented under Output 5.1 are outlined below.

5.1.1 Hold regional workshops with researchers and technical experts to plan interdisciplinary research projects on climate change adaptation and water catchment management.

These workshops will involve stakeholders from all five Partner States including *inter alia*: i) national research centres and universities; ii) climate change adaptation technology experts; iii) national water ministry representatives; and iv) water management experts.

5.1.2 Establish a forum of researchers and technical experts working on climate change adaptation to coordinate climate change research initiatives across the LVB.

The forum should include representatives from all five Partner States, including all those stakeholders involved in the regional workshops in Activity 5.1.1.

5.1.3 Promote knowledge-sharing through the Global Adaptation Network (GAN), Africa Adaptation Knowledge Network (AAKNet) and Africa Adaptation Initiative.

Output 5.2. Awareness-raising campaign to share lessons learned with stakeholders, ranging from policy- and decision-makers to vulnerable communities in the LVB.

The sharing of knowledge and proposed project results will be targeted towards vulnerable communities within the LVB as well as policy- and decision-makers in national ministries and regional organisations. The lessons learned and results from the on-the-ground adaptation activities under Component 3 will be included to ensure that local-level interventions are shared at the regional level.

Indicative activities to be implemented under Output 5.2 are outlined below.

5.2.1 Develop a detailed communications strategy – building on the communication and outreach strategy prepared by the CCTWG – to share lessons learned from the proposed project with relevant national and regional stakeholders through appropriate media.

5.2.2. Produce awareness-raising materials on water management and climate change adaptation.

5.2.3 Undertake awareness-raising campaigns for vulnerable communities to share lessons on water management and climate change adaptation.

5.2.4 Distribute awareness-raising materials – translated into local languages where proper – to policy- and decision-makers in national ministries and regional organisations to raise awareness on transboundary water management in the context of climate change and lessons learned from adaptation interventions demonstrated through Component 3 and 4.

5.2.5 Host exhibitions to showcase the successful regional and community-based approaches to climate change adaptation demonstrated through Component 3 and 4.

B. Promotion of new and innovative solutions to climate change adaptation

Describe how the project/programme would promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms.

Capacity building activities will be focused on strategic local- and institutional-specific needs for building resilience to climate change, including adaptation measures and best practices, management and innovative ways to communicate and address climate variability.

Specific components of the proposed project deal with innovative solutions, mechanisms and technologies in the following ways.

Under Component 3, project site selection will be undertaken based on past and current LVBC programmes, namely: i) LVWATSAN; ii) LVEMP II; and iii) the PREPARED VIA. The VIA outlines techniques for community engagement as well as identifies vulnerable hotspots for site selection. Four priority hotspots have been identified across the LVB that include various districts from each Partner State. Following on the work done by PREPARED in the VIA and the C3A2 assessment, proposed project sites will be selected to include communities that are vulnerable to the effects of climate change, particularly reduced water availability. These target communities will have limited adaptive capacity as a result of limited access to technology and limited knowledge of climate-resilient practices. Therefore, the implementation of adaptation interventions – including water conservation practices⁹², climate-smart agricultural techniques⁹³ and EbA activities⁹⁴ – will be innovative within the local context. By promoting alternative livelihoods based on sustainable natural resource use, EbA in particular will represent an innovative livelihood strategy for local communities.

Under Component 4, community-based adaptation will be promoted by a small grants modality through the implementation of innovative adaptation interventions. Specifically, one of the criteria used to select project proponents will be the innovativeness of the proposed small-scale projects. In addition, the small-scale projects programme is well-suited to foster innovative approaches for three reasons. Firstly, the small-scale projects will be designed to address specific climate change threats in targeted communities, drawing on local/indigenous

⁹² Examples of water conservation practices include *inter alia*: i) micro-scale water harvesting infrastructure; ii) diversion ditches and cut-off drains; and iii) mulching.

⁹³ Examples of climate-smart agricultural techniques include *inter alia*: i) including climate forecasts in medium-term planning; and ii) adopting drought-tolerant and early maturing plant varieties and animal breeds.

⁹⁴ Examples of EbA activities include *inter alia*: i) homegardens; and ii) agroforestry.

knowledge, thereby promoting innovative local level ideas. Secondly, the local scale and moderate budget (<US\$50,000) of small-scale projects under the small grants modality provides a relatively low-risk opportunity to trial new and innovative approaches to adaptation. Thirdly, innovative projects that are successful can be upscaled, which promotes an innovative approach to adaptation at a regional level.

Under Component 5, a research forum will be established by the LVBC in partnership with research institutions active in the LVB. The objective of this research forum is to promote LVB-wide collaboration between research initiatives with a specific focus on adaptation to climate change and water catchment management. Academic institutions as well as technical experts in climate change adaptation will be included as participants. This forum will provide opportunities for researchers to plan interdisciplinary research projects, co-author scientific publications and establish links with policy- and decision-makers. Within the LVB, a research forum focused on climate change adaptation will be innovative. An encouraging proof-of-concept was demonstrated in South Africa⁹⁵. Specifically, a period of intense collaborative research – which illustrated the economic benefit of ecosystem services – resulted in publications⁹⁶ that motivated for the leveraging of finance to restoration programmes at a national scale. A similar approach will be followed under Component 5, with the goal of using research outputs to leverage financing for climate change adaptation and the management of transboundary water catchments.

C. Economic, social and environmental benefits

Describe how the project/programme would provide economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme would avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund.

Climate variability is already reducing agricultural productivity as well as the flow of food supplies. This situation is likely to be exacerbated by predicted climate change-induced increases in droughts and floods. The proposed project aims to provide adaptation measures for vulnerable communities to be more resilient to climatic variability.

The proposed project approach has been designed to address *inter alia*: i) the limited capacity of communities and authorities to integrate climate-resilient techniques into water catchment management; ii) the lack of accurate and timely climate information at and between local, national and regional levels; and iii) that communities have a limited understanding of the benefits of climate information and technologies.

Direct benefits of the proposed project will include: i) improved knowledge management and capacity for dealing with climatic variability at the community level; ii) demonstrated project intervention sites within targeted communities with new climate change adaptation technologies; iii) funded small-scale projects with innovative approaches to climate change adaptation;

⁹⁵ For example, the Working for Water Programme. For further information, see: <https://www.environment.gov.za/projectsprogrammes/wfw> [accessed 28.11.2016].

⁹⁶ The publication of several high-profile scientific articles provided a platform from which ecosystem management initiatives could be implemented. Examples of these scientific articles include *inter alia*: i) van Wilgen B, Cowling RM & Burgers CJ. 1996. Valuation of ecosystem services. *BioScience* 46:184–189; and van Wilgen B, Le Maitre DC & Cowling RM. 1998. Ecosystem services, efficiency, sustainability and equity: South Africa's Working for Water Programme. *Trends in Ecology and Evolution* 13:378.

iv) increased awareness and understanding of climate-resilient technologies; v) training on how to maintain the climate-resilient technologies and how to adapt them to be community-specific; vi) training on climate-smart agriculture techniques to extension officers and within communities; vii) an established forum focussing on promoting collaborative research on climate change adaptation across the LVB; and viii) tailored climate information packages for both policy- and decision-makers and local communities.

Indirect benefits of the proposed project will include *inter alia*: i) awareness raising and training within communities will create a strengthened and unified community better adapted to climate resilience; ii) long-term strategic planning through the provision of tailored climate information packages; and iii) innovative solutions to adapting new climate change adaptation technologies to changing environments and in a community-specific nature.

The specific benefits of the proposed project are detailed below and summarised in Table 4.

Economic benefits

Agricultural activities – and the consequent clearing of vegetation – within the LVB are negatively affecting the livelihoods of subsistence fisherfolk. Specifically, runoff from soil erosion increases the concentration of nutrients – for example, nitrogen and phosphorous – in Lake Victoria and its tributaries⁹⁷. This increased nutrient load increases the intensity of eutrophication, which has favoured the Nile perch (*Lates niloticus*) to the detriment of many tilapia species. Rural communities preferentially eat tilapia, as it provides a relatively inexpensive source of protein. Therefore, vegetation clearing for agriculture and the resultant soil erosion is indirectly impacting the livelihoods of rural communities in the LVB. By reducing soil erosion through EbA activities⁹⁸ that promote soil stabilisation and ecosystem recovery, the recovery of tilapia populations will be promoted and the livelihoods of rural communities will be strengthened.

Of the total land area of the LVB, ~45% is already under cultivation⁹⁹, with subsistence agriculture underpinning the livelihoods of ~80% of the region's population¹⁰⁰. Climate change, specifically increasing mean annual temperatures and the increased frequency and intensity of floods and droughts, is expected to impact negatively on the agricultural sector. These negative impacts of climate change on agriculture include *inter alia*: i) reduced crop yields; ii) reduced reproductive rates in livestock; and iii) reduced wool and milk yields¹⁰¹. By training local communities and extension officers – Component 3 – in climate-smart agricultural techniques¹⁰² and providing the required equipment, the economic benefits of agriculture under the conditions of climate change will increase in the short term. In addition, as compared to the baseline scenario, the economic benefits of agriculture will be sustainable in the medium to long term.

Water in the LVB underpins a number of economic activities, including *inter alia* transport¹⁰³, hydropower¹⁰⁴ and fisheries¹⁰⁵. Climate change in the LVB – for example, increased variability in

⁹⁷ Machiwa 2002. Water quality management and sustainability paper presented.

⁹⁸ Examples of EbA activities include *inter alia*: i) homegardens; and ii) agroforestry.

⁹⁹ Machiwa 2002. Water quality management and sustainability paper presented.

¹⁰⁰ The Global International Waters Assessment. 2006. East African Rift Valley lakes. GIWA Regional Assessment

¹⁰¹ East African Sustainability Watch Network 2014. Lake Victoria climate change readiness brief, No. 3.

¹⁰² Examples of climate-smart agricultural techniques include *inter alia*: i) including climate forecasts in medium-term planning; and ii) adopting drought-tolerant and early maturing plant varieties and animal breeds.

¹⁰³ Lake Victoria facilitates regional transportation with major transport routes connecting the towns of Musoma, Mwanza, Bukoba (Tanzania), Port Bell, Jinja (Uganda) and Kisumu (Kenya).

¹⁰⁴ The World Bank. Energy and mining data. Available at: <http://data.worldbank.org/topic/energy-and-mining>

rainfall patterns and an increased frequency in floods and droughts – will impact negatively on these economic activities. These negative impacts of climate change will be exacerbated without accurate and complete climate forecasts. By improving the delivery of climate information – Component 2 – and promoting regional coordination – Component 1 – the proposed project activities will allow economic sectors to undertake medium- and long-term planning, therefore limiting the negative impacts of climate change on water resources, as compared to the baseline scenario.

Social benefits

Under Component 1, capacity-building activities undertaken in regional and national organisations will include a module on gender sensitivity¹⁰⁶. This training will promote the inclusion of gender-sensitive considerations in regional and national policies and strategies.

Women and vulnerable groups will be prioritised in the selection of project sites (Output 3.1) to ensure that benefits accruing from on-the-ground activities are directly accessible. Training activities provided – Output 3.2 – to local communities on the implementation of on-the-ground adaptation interventions will target both women and vulnerable groups, to both promote skills development and diversify livelihood opportunities.

Under Component 4, a small-scale project programme based on the small grants modality will be applied to award to small projects that are designed and implemented in local communities. By providing access to both resources and technical expertise, the proposed project activities will up-skill members of local communities. In addition, under Component 5, Output 5.2 – awareness campaign to promote upscaling of successful practices using lessons learned – will provide an opportunity for local communities to expand their projects and generate benefits at a larger scale.

Participation will be an integral factor during the planning and implementing phases of the proposed project. A participatory and livelihoods approach involving the community will create awareness and knowledge sharing. Effective participation in the proposed project will form the basis of long-term consensus building.

Gender equality will be a focal point of training and skills development in the proposed project. Women will gain the skills and exposure needed to increase their representation in community structures such as in community meetings and local user groups. At a national level, the socio-economic benefits to be delivered by the proposed project will include increased awareness and technical capacity of policy-makers and government institutions with specific regard to climate-resilient approaches to adaptation, transboundary water catchment management techniques and alternative climate change adaptation approaches.

Environmental benefits

Activities included under Component 1 will: i) strengthen the institutional coordination mechanism guiding transboundary water catchment management; and ii) increase regional and national capacity to manage transboundary water catchments, with a particular focus on climate change. Through improved institutional coordination, the proposed project's activities will

¹⁰⁵ Njiru M, Sitoki L, Nyamweya C, Jembe T, Aura C, Waithaka E & Masese F. 2012. Habitat degradation in Lake Victoria fisheries. *Advances in Environmental Research* 27:1–34.

¹⁰⁶ If relevant, considerations of indigenous peoples and vulnerable groups will be included in this training module.

improve the regional planning and management of transboundary water catchments, resulting in regional environmental benefits, including *inter alia* increased water quality and availability.

Current agricultural practices in the LVB are resulting in a number of negative side-effects. For example, the runoff resulting from soil erosion increases the concentration of nutrients such as nitrogen and phosphorous in Lake Victoria and its tributaries¹⁰⁷. This increased nutrient load has both reduced water quality and resulted in eutrophication. Under the future conditions of climate change, specifically an increase in the frequency of intense rainfall events, soil erosion will be exacerbated. Through the introduction of climate-smart agriculture techniques and EbA activities, such as agroforestry¹⁰⁸ and homegardens¹⁰⁹ – Component 3 – topsoil will be stabilised and conserved. Improved conservation of topsoil will ensure that nutrient runoff is reduced and water quality in Lake Victoria and its tributaries will increase as compared to the baseline scenario.

Future climate change trends are predicted to include: i) an increase in the frequency and intensity of drought events; and ii) an increase in mean annual temperature. Both increased drought and increased temperature will reduce water availability for local communities. Currently, local communities in the LVB do not have adequate equipment and expertise to conserve water. Therefore, under the future conditions of climate change, local communities are likely to draw increasing amounts of water from Lake Victoria and its tributaries to compensate for reduced water availability. Reduced water volume in Lake Victoria and its tributaries will have a number of negative environmental consequences, including reduced habitat availability for aquatic flora and fauna. By providing equipment and training for water conservation practices – Outputs 3.2 and 3.3 – the proposed project activities will reduce the need for local communities to draw water from Lake Victoria and its tributaries. Therefore, under the future conditions of climate change, the negative environmental effects associated from drawing water from Lake Victoria and its tributaries will be reduced as compared to baseline scenario.

For details on how the project will adhere to the Environmental and Social Policy of the Adaptation Fund, please see Section L.

Table 4. Specific expected benefits of the proposed project outlined for Component 1–5.

| Component | Economic benefits | Social benefits | Environmental benefits |
|---|---|---|--|
| 1. Improving regional management of a transboundary water catchment | <ul style="list-style-type: none"> Increased profit margins will be realised in the long-term as a result of training provided on climate change adaptation technologies and water management – where water will be available during periods previously unavailable for agriculture etc. | <ul style="list-style-type: none"> Increased awareness and technical capacity of policy-makers and government institutions regarding climate-resilient adaptation technologies. Increased capacity of professionals to present climate change adaptation information. Increase gender equality at a national level – 50% of participants involved will be women. | <ul style="list-style-type: none"> Enhanced catchment integrity through better protection |

¹⁰⁷ Machiwa 2002. Water quality management and sustainability paper presented.

¹⁰⁸ Agroforestry is an approach to land-use, in which trees are grown around or among crops. By including a diversity of species, agroforestry can result in increased productivity, increased economic benefits and enhanced ecosystem goods and services, as compared to conventional agriculture.

¹⁰⁹ Homegardens are household-level plantations in which a variety of endemic and agricultural species are maintained to provide economic, cultural and medicinal benefits. Each homegarden is unique and is adapted according to its owners' knowledge and requirements.

| Component | Economic benefits | Social benefits | Environmental benefits |
|---|--|---|--|
| 2. Climate information dissemination | | <ul style="list-style-type: none"> Increased awareness on the importance of improving resistance and resilience to climate change within vulnerable communities. | |
| 3. Regional approach to climate change adaptation in vulnerable communities | <ul style="list-style-type: none"> Reduced loss of harvest through improved water catchment management techniques. | | <ul style="list-style-type: none"> Reduced water loss across the Lake Victoria catchment, specifically during long dry periods and droughts. Reduced erosion through implementing climate-smart agricultural techniques. |
| 4. Community-based approaches to climate change adaptation | <ul style="list-style-type: none"> Facilitation of micro-finance to successful community-led small-scale projects focusing on community-based adaptation. | <ul style="list-style-type: none"> Improved livelihoods through adoption of climate-resilient adaptation technologies and innovative climate information technologies within and surrounding vulnerable communities. Increased knowledge through training provided to relevant local-level government and NGO officials. Increased community-uplift in response to developing their own project proposals for on-the-ground implementation within their communities. | <ul style="list-style-type: none"> Involving communities in developing the approaches allows more flexible adaptation efforts, i.e. catering specifically for reduced soil nutrients through soil erosion etc. |
| 5. Knowledge management and learning | <ul style="list-style-type: none"> Sustainable agriculture yields for medium- and long-term income generation. | <ul style="list-style-type: none"> Increased awareness and social upliftment within communities. Forum of researchers and stakeholders for knowledge sharing. Increased awareness on the importance of improving resistance and resilience to climate change within vulnerable communities. | <ul style="list-style-type: none"> Improved knowledge management networks for climate-resilient technologies. |

D. Cost-effectiveness analysis

Describe or provide an analysis of the cost-effectiveness of the proposed project/programme and explain how the regional approach would support cost-effectiveness.

The proposed project's activities under Component 1 will promote improved coordination between regional institutions responsible for transboundary water management and climate change adaptation in the LVB, for example: i) LVBC; ii) CCTWG; iii) EAC Climate Change Unit; iv) Lake Victoria Region Local Authority Cooperation; and v) the Joint Technical Committee of the Mara River Basin. Specifically, the proposed project's investment will be used to increase the effectiveness of already-existing institutions in the LVB, for example by: i) undertaking capacity-building exercises in water catchment management and climate change adaptation; and ii) developing a strategic coordination mechanism for transboundary water catchment management. Therefore, the benefit of the interventions under Component 1 will be disproportionately large, relative to the proposed project's investment.

The cost-effectiveness of the proposed project’s on-the-ground adaptation interventions – Component 3 – will be greatly enhanced by the EbA approach. A growing scientific literature suggests that EbA measures result in a greater ratio of benefit:cost compared to the implementation of hard infrastructure. For example, an economic analysis of the restoration and rehabilitation of grasslands and woodlands – from a number of studies occurring across different sites – estimates internal rates of return of 20–60% and benefit:cost ratios of up to 35:1¹¹⁰ for grasslands. An example of the cost-effectiveness of the EbA approach also emerged from an economic analysis undertaken in Lami, Fiji¹¹¹. This analysis included assessments of the costs and benefits of three approaches to watershed management, namely: i) EbA measures only; ii) hard infrastructure interventions only; and iii) a hybrid approach applying both EbA measures and hard infrastructure interventions. The analysis demonstrated that EbA watershed management options are at least twice as cost-effective as hard infrastructure engineering options – i.e. a benefit:cost ratio of US\$19.50:1 for EbA compared to US\$9:1 for hard infrastructure. The cost-effectiveness of the EbA approach is expected to benefit the project through the implementation of EbA activities in project sites.

Under Component 5, a forum will be established which will include researchers, academics and technical experts specialising in climate change adaptation and water catchment management. This forum will promote collaborative research and opportunities for knowledge-sharing. In addition, emphasis will be placed on communicating research findings to: i) policy- and decision-makers in the LVB; and ii) stakeholders from economic sectors affected by climate change. By coordinating the efforts of experts already engaged in research and facilitating communication with policy- and decision-makers, the proposed project’s investment will accrue a disproportionately large benefit for water catchment management in the LVB under the conditions of climate change.

E. Consistency with other strategies

Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist. If applicable, please refer to relevant regional plans and strategies where they exist.

Selected regional and national plans, strategies and development goals with which the proposed project is aligned are presented in Table 5. Alignment is indicated at component level.

Table 5. The consistency of the proposed project with regional and national policies, plans, strategies and development goals.

| NATIONAL | |
|---|-------------|
| National Adaptation Programmes of Action (NAPA) | |
| Burundi | NAPA (2007) |

¹¹⁰ De Groot RS, Blignaut J, van der Ploeg S, Aronson J, Elmqvist T & Farley J. 2013. Benefits of investing in ecosystem restoration. *Conservation Biology* 27:1286–1293.

¹¹¹ Rao NS, Carruthers TJB, Anderson P, Sivo L, Saxby TA, Durbin T, Jungblut V, Hills T & Chape S. 2013. An economic analysis of ecosystem-based adaptation and engineering options for climate change adaptation in Lami Town, Republic of the Fiji Islands. A technical report by the Secretariat of the Pacific Regional Environment Programme. Apia, Samoa.

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| | <p>Component 2 of the proposed project is aligned with:</p> <ul style="list-style-type: none"> • NAPA Priority 1, namely the “improvement of seasonal early warning climate forecasts”; and • NAPA Priority 11, which focuses on climate change education. |
| Kenya | N/A |
| Rwanda | <p>NAPA (2006)</p> <p>Component 2 of the proposed project is aligned with:</p> <ul style="list-style-type: none"> • NAPA Priority 2, namely “Mastering hydro “meteorological information and early warning systems to control extreme phenomena due to climate change”. |
| Tanzania | <p>NAPA (2006)</p> <p>Component 3 and 4 of the proposed project are aligned with:</p> <ul style="list-style-type: none"> • NAPA Priority 4, which focuses on climate change adaptation through participatory reforestation and includes awareness on climate change adaptation through community participatory efforts. |
| Uganda | <p>NAPA (2007)</p> <p>Component 1 and 5 of the proposed project are aligned with:</p> <ul style="list-style-type: none"> • NAPA priority 9, namely “climate change and development planning”, under which proposed activities include <i>inter alia</i> reviewing existing governing policies to include climate change considerations and awareness-raising on the impacts of climate change with the relevant decision-makers and planners. <p>Component 2 of the proposed project is aligned with:</p> <ul style="list-style-type: none"> • NAPA priority 3, which focuses on strengthening meteorological services. |
| National Adaptation Plans (NAP) | |
| Kenya | <p>National Climate Change Action Plan 2013–2017 (NCCAP)</p> <p>Component 1, 3 and 4 of the proposed project aligns with:</p> <ul style="list-style-type: none"> • Priority Action Point 3, which forms one of the six “big wins” of the NCCAP, namely “improved water resource management”. Proposed activities for the project align with the priority interventions to improve enforcement capacity for efficient water resource management, water monitoring and management, protecting and conserving water catchment areas and campaigns on water harvesting. • the main objective of the NCCAP, which is developing a low-carbon climate resilient pathway as Kenya adapts to climate impacts. The proposed project does this through the development and implementation of transboundary water catchment management practices as detailed in Component 1, 3 and 4. <p>Component 2 and 5 of the proposed project aligns with:</p> <ul style="list-style-type: none"> • a subsidiary objective of the NCCAP, namely encouraging a people-centred development approach, ensuring that climate change actions support Kenya’s achievement of development goals. |
| Intended Nationally Determined Contributions (INDC) | |
| Burundi | <p>Burundi INDC (September 2015)</p> <p>Component 1–5 of the proposed project are in alignment with:</p> <ul style="list-style-type: none"> • identified adaptation needs in the INDC, namely to: i) inform, educate and communicate on climate change, climate risks and adaptation technologies; and ii) strengthen the aptitudes of actors in new technical processes. Components of the proposed project will provide training, learning programmes and will provide access to information on the project and adaptation technologies to the communities. <p>Component 1 and 3 of the proposed project are aligned with:</p> |

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| | <ul style="list-style-type: none"> • a crucial measure of the INDC, namely the development of access to water while enhancing the efficiency of its use. The proposed project aims to improve regional management of the transboundary water catchment and in doing so will result in more efficient governing practices of water management. Specifically, under Component 3, the proposed project aims to implement climate change adaptation technologies including water conservation practices and climate-smart techniques. <p>Component 2 and 5 of the proposed project align with:</p> <ul style="list-style-type: none"> • another main measure of the INDC, which focuses on developing and disseminating communications on climate risks and adaptation scenarios. The proposed project aligns with this measure through both providing training and specifically developing a communications strategy. |
| Kenya | <p>Kenya INDC (July 2015)</p> <p>Component 3 of the proposed project aligns with:</p> <ul style="list-style-type: none"> • the Medium-term Plan (MTP) priority adaptation action for the science, technology and innovations sector, under which innovation and development of appropriate technologies is supported to promote climate resilient development. The proposed project aims to develop and implement climate change adaptation technologies as well as provide demonstrations and training for their sustainable management. <p>Component 1–5 of the proposed project align with:</p> <ul style="list-style-type: none"> • the MTP priority adaptation action for the: i) environment sector, under which enhancing climate information services and the resilience of ecosystems to climate variability and change are the main objectives; and ii) the education and training sector which aims to enhance education, training, public awareness and participation and public access to information on climate change adaptation. Through the proposed project components, reviews of existing climate information services will be done, with further development and training being provided. Knowledge management and learning is integrated into each component, involving training with communities, extension officers, public and other sectors. <p>Component 1, 3 and 4 of the proposed project aligns with:</p> <ul style="list-style-type: none"> • the MTP priority adaptation action for the water and irrigation sector, under which the focus is to mainstream climate change adaptation in the water sector. An activity in Component 3 outlines the development and implementation of a strengthening and sustainable strategy for the flow of information between sectors for more efficient management of water catchment areas. Component 3 and 4 address the practical implementation of the climate-smart technologies as well as further training for sustainability. |
| Rwanda | <p>Rwanda INDC (November 2015)</p> <p>Component 3 of the proposed project aligns with:</p> <ul style="list-style-type: none"> • Programme of Action 1, which involves the conservation of water to maximise sustainable food production. The activities of the proposed project involve implementing climate change adaptation technologies in water catchment areas, of which include conservation practices and climate-smart agricultural techniques. <p>Component 1, 3, 4 and 5 of the proposed project is aligned with:</p> <ul style="list-style-type: none"> • Programme of Action 5 of the INDC, under which integrated water resources management and planning is the focus. Through the activities of the proposed project, catchment-wide responsibilities will be established and respective individuals trained to ensure the sustainability of the measures. Component 5 of the project specifically addresses the INDC's aim for important national water datasets to be collected and made available for further development and learning. |
| Tanzania | <p>Tanzania INDC (2015)</p> <p>Component 1, 3 and 4 of the proposed project are aligned with:</p> <ul style="list-style-type: none"> • the intended contributions for the water resources sector as per the INDC, under which promoting integrated water resources development and management practices, and |

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| | investment in protection and conservation of water catchments are priorities, among others. The proposed project is aligned with these priorities through the development of management strategies and climate change adaptation and conservation technologies specific to water catchment management. |
| Uganda | <p>Uganda INDC (October 2015)</p> <p>Component 3 of the proposed project aligns with:</p> <ul style="list-style-type: none"> • the Priority Adaptation Action for the agriculture sector, under which water conservation practices and climate smart-agriculture techniques are prioritised. <p>Component 1, 3 and 4 of the proposed project are aligned with:</p> <ul style="list-style-type: none"> • the Priority Adaptation Action for the water sector, which prioritises improving water efficiency and water supply, and managing water resource systems to better conserve existing resources. The proposed project activities are aligned with these priorities through developing and implementing climate change adaptation water management and water conservation practices, as well as climate-smart agriculture techniques to better conserve water. |
| National development goals | |
| Burundi | N/A |
| Kenya | <p>Vision 2030</p> <p>The Vision focuses on the development of an all-inclusive and cross-sectoral plan to create a globally competitive and prosperous nation with a high quality of life for all citizens by 2030. The vision is implemented in successive five-year plans. In the Vision, the need to improve the national capacity to address climate change is recognised. Therefore, specifically through Component 1 and 2, the proposed project will be strongly aligned with the Vision.</p> |
| Rwanda | <p>Vision 2020</p> <p>The Vision provides a framework for Rwanda's socio-economic development. The objective of the Vision is to transform Rwanda into a middle-income country by 2020. Barriers identified in the vision include <i>inter alia</i>: i) diminishing agricultural productivity; and ii) limited institutional capacity. Therefore, the proposed project will be strongly aligned with the Vision under Component 1 and 3.</p> |
| Tanzania | <p>Vision 2025</p> <p>The objective of the Vision is to build a globally-competitive and resilient economy and to increase the quality of life for all citizens. The Vision proposes transforming Tanzania from a LDC to a middle-income country by 2025. Realising the vision will create the enabling environment for socio-economic development in Tanzania. The barriers identified to achieving the Vision's objective include limitation in good governance. Therefore, through Component 1, the interventions of the proposed project are strongly aligned with the Vision.</p> |
| Uganda | <p>Vision 2040</p> <p>The Vision proposes a transition from a predominantly low-income to a competitive upper middle-income country within 30 years. To achieve the Vision, Uganda has to increase its GDP 30 times by 2040. One of the challenges that needs to be overcome before the Vision can be successful is the inadequate management of the environment and the adverse effects of climate change, which has resulted in limited implementation of adaptation and mitigation interventions. As part of the Vision, sectoral and cross-sectoral interventions will be developed and implemented to address the negative effects of climate change. Through Component 1, 2, 3 and 4, the proposed project will be strongly aligned with the Vision.</p> |
| Poverty reduction strategies | |
| Burundi | <p>Poverty Reduction Strategy (2009)</p> <p>The Poverty Reduction Strategy was developed to promote macro-economic restructuring and</p> |

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| | <p>growth. Under Component 1, the proposed project will strengthen the capacity of the government institutions to address the effects of climate, in particular those adversely affecting water resources within the LVB. Under Component 3, interventions will be implemented to decrease the vulnerability of local communities to the effects of climate change and in particular, will strengthen local livelihoods under the future conditions of climate change.</p> |
| Kenya | <p>Poverty Reduction Strategy (2004)</p> <p>Under this strategy, economic growth and job creation were prioritised as a means of reducing poverty. The strategy focuses on several thematic areas including economic, social and political. Several means of achieving the goals of the Poverty Reduction Strategy have been proposed, including: i) fight poverty and income inequality; ii) set goals of structural transformation of Kenya's economy towards higher productivity; and iii) improve public infrastructure, in particular the transport network and electricity supply. In particular, through Component 1, 2 and 3, the proposed project is aligned with the Poverty Reduction Strategy.</p> |
| Rwanda | <p>Poverty Reduction Strategy (2013)</p> <p>The Poverty Reduction Strategy aims to accelerate Rwanda's economic growth and decrease the incidence of poverty within the country. The Poverty Reduction Strategy includes a strong focus including climate change considerations at a national level and across all sectors to build a green economy and, in particular, recognises that climate change adaptation and mitigation measures are to be included in the urbanisation process. The pillars identified to support the effective implementation of the strategy are: i) economic transformation; ii) rural development; iii) productivity and youth employment; iv) accountable governance. Therefore, through Component 1, 3 and 4, the proposed project is aligned with the Poverty Reduction Strategy.</p> |
| Tanzania | <p>National Strategy for Growth and Reduction of Poverty (2011)</p> <p>The objective of the National Strategy for Growth and Reduction of Poverty is to increase the economic growth and productivity to reduce poverty through the: i) efficient use and development of factors of production – including human capital; and ii) strengthening and establishing well-functioning institutions and markets. The National Strategy for Growth and Reduction of Poverty also recognises that to promote food and nutrition security in Tanzania, crops and livestock need to be made resilient to the future effects of climate change. The proposed project is therefore aligned with the National Strategy for Growth and Reduction of Poverty through the interventions of Component 3.</p> |
| Uganda | <p>Poverty Reduction Strategy (2010)</p> <p>The Poverty Reduction Strategy recognises the need to build the capacity of government authorities to identify the vulnerabilities to climate change and thereafter develop appropriate adaptation and mitigation measures. The barriers to reducing poverty include <i>inter alia</i>: i) weak public sector management and administration; ii) inadequate financing and financial services; iii) poor human resources; and iv) poor physical infrastructure. Through Component 1 and 5, the proposed project is aligned with the Poverty Reduction Strategy.</p> |
| Country Strategy Papers | |
| Burundi | <p>Country Strategy Paper (2012–2016)</p> <p>The objectives outlined in the Country Strategy Paper are to increase economic growth and decrease the prevalence of poverty. The country's strategic framework comprises the strengthening of state institutions and infrastructure improvement. Through Component 1, 2 and 5, the proposed project will improve institutional coordination and decision-making and is therefore aligned with the Country Strategy Paper.</p> |
| Kenya | <p>Country Strategy Paper (2014–2018)</p> <p>The objective of the Country Strategy Paper is to address Kenya's overarching strategic challenge in achieving economic growth. One of the main weaknesses identified in the Country Strategy Paper is its vulnerability to climate change. Therefore, through Component 1, 3 and 4, the proposed project will be aligned with the Country Strategy Paper.</p> |

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| Rwanda | <p>Country Strategy Paper (2012–2016)</p> <p>The Country Strategy Paper aims to enable Rwanda to its development vision for 2020. The pillars of the strategy include infrastructure development, enterprise and institutional development. National weaknesses identified in the Country Strategy Paper include: i) slow structural transformation; ii) limited infrastructure; iii) limited private sector development; and iv) high incidence of poverty and unemployment. In addition, the Country Strategy Paper notes an urgent need for environmental protection including climate-proofing existing infrastructure and sustainable natural resource management. Therefore, through Component 3 and 4, the proposed project is aligned with the Country Strategy Paper.</p> |
| Tanzania | <p>Country Strategy Paper (2011–2015)</p> <p>The Country Strategy Paper promotes the creation of an enabling environment to realise the 2025 national development vision. In collaboration with the Norwegian Government, the Tanzanian Government is developing a climate change adaptation and mitigation plan to address the effects of rising temperatures, recurrent droughts, desertification and reduced water volume in lakes. Therefore, through Component 2, 3 and 4, the proposed project is aligned with Country Strategy Paper.</p> |
| Uganda | <p>Country Strategy Paper (2010–2015)</p> <p>By promoting the achievement of sustainable development goals through economic growth, the Country Strategy Paper outlines an approach to alleviate poverty. The approach outlined in the Country Strategy Paper includes the protection and sustainable use of water resources to avoid any potential conflicts and to reduce vulnerability to climate change. The sustainable use of water resources is to be achieved through the decentralisation of capacities within the government and adequate financing. Therefore, through Component 1, 3 and 4, the proposed project is aligned with the Country Strategy Paper.</p> |
| Other relevant laws and policies | |
| Burundi | <p>The proposed project is also consistent and its implementation is guided by the following Burundi policies and laws:</p> <ul style="list-style-type: none"> • Environment Act 1/010 of June 2000; • Forestry Act No. 1/02 of March 25, 1985; • Land Act No. 1/008 of September 1986; • Public Health Act No. 1/16 of May 1982; • Act 1/06 of May 25, 1983 indicating the protection of national heritage properties; • Decree 1/6 of March 3, 1980 emphasized on protected areas; • Decree 100/47 of March 3, 2007 creating the National Institute for Conservation of Nature (INCN), which became later on the National Institute for Environment and Conservation of Nature (INECN); • Decree 1/41 of November 26 on description of hydraulic property of the state; • Decree 100/242 of December 31, 1992 on the regulation of evacuation of sewage in the urban areas; • Decree 1/003 of June 30, 1993 on protection of flora; • Decree of June 30, 2000 stresses on the environment act of Burundi; and • Decree on the creation of National Commission of Environment. |
| Kenya | <p>The proposed project is also consistent and its implementation is guided by the following Kenyan policies and laws:</p> <ul style="list-style-type: none"> • The Forests Act 2005; • The Water Act 2002 • Land Control Act CAP 406; • Irrigation Act (CAP 347); • Fisheries Act Cap, 378 of 1989 ; • Agriculture Act Cap 318 ; • Public Health Act Cap 242; |

| NATIONAL | |
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| | <ul style="list-style-type: none"> • Physical Planning Act • Local Government Act, CAP 265/ devolution Act; • The Lakes and Rivers Act Cap 409 |
| Rwanda | <p>The proposed project is also consistent and its implementation is guided by the following Rwandan policies and laws:</p> <ul style="list-style-type: none"> • The Organic Law related to the Land policy in Rwanda N°08/2005 of 14/07/2005; • The Act n°18/2007 dated 19/04/2007 related to expropriation due to a cause of public necessity; • Health Sector Policy; • Agricultural Policy; • Land Policy; • National Wetlands Conservation Program; • Environmental Policy; • Water and Sanitation Policy; • National Water Resources Management Policy; • Fisheries Law; • Forest Policy; and • National Biodiversity Strategy and Action Plan. |
| Tanzania | <p>The proposed project is also consistent and its implementation is guided by the following Tanzanian policies and laws:</p> <ul style="list-style-type: none"> • Water Laws (Miscellaneous Amendments) Act, (No. 17), 1989; • Water Utilization (miscellaneous amendment) Act, (No. 8), 1997; • The Forest Act, (No. 14), 2002; • Land Act, (No. 4), 1999; • Village Land Act (No. 5), 1999; • National Parks Act (1992) • Wildlife Conservation Act (1974) • Public Lands (Preserved Areas) Act(Ordinance 12 of 1954) • Local Government District Authorities Act(1982) • Marine Parks and Reserves Act (1994) • Forest Act (2002) • Fisheries Act (2003) • Fisheries Regulations (2005) • Beekeeping Act (2002) • Plant Protection Act (1997) • Mining Act (1998) • Town and Country Planning Ordinance, Cap. 378; • National land Use Planning Commission Act (No. 3), 1984; • Tanzania Investment Act (No. 26), 1997; and • The Occupational Health and Safety Act, (No. 5), 2003. |
| Uganda | <p>The proposed project is also consistent and its implementation is guided by the following Ugandan policies and laws:</p> <ul style="list-style-type: none"> • The National Forestry and Tree Planting Act, 2003 • The Water Act, Cap 152 • The Land Act, Cap 227 • Uganda Wildlife Act Cap 200; and • Public Health Act Cap 281. |

| REGIONAL | |
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| Sustainable Development Goals (Kenya, Tanzania and Uganda) | <p>The Sustainable Development Goals (SDG) take a broad approach on environmental sustainability and have been adopted by Kenya, Uganda and Tanzania. The proposed project will contribute to the following SDGs:</p> |

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| | <ul style="list-style-type: none"> • SDG 5 – Achieve gender equality and empower all women and girls, by promoting gender equity throughout the project and targeting women in specific project activities. • SDG 6 – Ensure availability and sustainable management of water and sanitation for all, by implementing EbA interventions in project sites within the LVB. • SDG 13 – Take urgent action to combat climate change and its impacts, specifically: <ul style="list-style-type: none"> ○ 13.1. Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters through Components 1 and 2; and ○ 13.2. Integrate climate change measures into national policies, strategies and planning through Component 1 and 2. • SDG 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss through the implementation of EbA and other adaptation practices. |
| 4th East African Community Development Strategy (Burundi, Kenya, Rwanda, Tanzania and Uganda) | The 4 th East African Community Development Strategy (EACDS) outlines broad strategic goals of the EAC as well as specific targets to promote infrastructure development and economic growth. Some of the major challenges to achieving the goals of the 4 th EACDS include <i>inter alia</i> : i) inadequate infrastructure; ii) institutional limitations; iii) inadequate national level capacities to implement regional policies. In addition, the 4 th EACDS includes an emphasis on reducing or mitigating the negative effects of climate change on agriculture and food security. Through Output 1.1, 2.1, and 3.2 in particular, the proposed project is aligned with the EACDS. That is, the objectives of the 4 th EACDS listed above are supported by the following activities: i) a strengthened institutional coordination mechanism between regional policy- and decision-makers; ii) the tailoring and delivery of climate information packages for long-term planning to policy and decision-makers in regional organisations, as well as technical staff in national ministries within the LVB; and iii) the building of capacity and training for relevant organisations ensuring a proper understanding and dissemination of the climate information delivered through the information platform. |
| Nile Basin Cooperative Framework (Burundi, DRC, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Tanzania, The Sudan and Uganda) | This framework was established under the Nile Basin Initiative (NBI) and is a partnership between ten riparian states including Burundi, DRC, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Tanzania, The Sudan and Uganda. The framework promotes the sustainable use of natural resources within the Nile River Basin, including under the conditions of future climate change. Therefore, by strengthening the regional coordination of transboundary water management under Component 1, the proposed project is aligned with the NBI. |
| Strategic Action Plan for the Lake Victoria Basin (Burundi, Kenya, Rwanda, Tanzania and Uganda) | The objective of the Strategic Actions Plan (SAP) for the LVB is to promote integrated management and sustainable development within the LVB. The SAP was funded through contributions by GEF and the World Bank and is commissioned through the EAC and LVBC. It provides a regional framework with a set of national and regional actions to achieve the objective by the partner states. Several principles underpin the plan, including <i>inter alia</i> : i) sustainable development whereby all activities implemented and decisions made must support the rational utilisation of resources, and preserve the rights of future generations to a viable environment; and an ii) integrated approach to development and environmental planning. 18 Key Transboundary Issues (KTIs) were identified in the SAP, including <i>inter alia</i> : i) climate change and water balance; ii) fisheries; iii) conflicting and inadequate policies, laws, law enforcement and institutional frameworks on natural resource management and utilisation; iv) inefficient and poor land use, exploitation of natural resources and spatial planning; v) inadequate environmental governance and community involvement; and vi) institutional management structures. A strategy has been developed to address each of the KTIs identified in the SAP. Through activities |

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| | <p>under Component 1, 2, 3 and 4, the proposed project is aligned with the SAP. These activities include: i) strengthening the institutional coordination mechanism and supporting the CCTWG to plan and implement climate-resilient approaches to transboundary water catchment management; ii) providing training on climate change, climate change adaptation and water management at national workshops; iii) delivering climate information for long-term planning to policy- and decision-makers in regional organisations as well as technical staff in national ministries within the LVB; and iv) planning and implementing water conservation practices, climate-smart agricultural techniques and EbA activities with local communities. Further, the proposed project will support the implementation of the SAP across the five LVB countries.</p> |

F. Project alignment with technical standards

Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The proposed project is aligned with the requirements of the March 2016 Revision of the Environmental and Social Policy (ESP) of the Adaptation Fund (see Part II: L). In addition to complementing the efforts of the LVBC to improve regional transboundary water catchment management, the proposed project will increase regional resilience to climate change in the LVB. The Adaptation Fund-accredited Implementing Agency, UNEP, together with the LVBC and relevant national partners, will ensure that the project follows procedures outlined in the ESP. This includes the requirement that project activities funded by the Adaptation Fund reflect local circumstances and needs and draw upon national actors and capabilities.

In addition, the proposed project's activities have been validated by national project partners to ensure that they are in line with the relevant technical standards within each country. These project partners include *inter alia*:

- Ministry of Water, Environment, Lands and Urban Planning (Burundi);
- Ministry of Environment and Natural Resources (Kenya);
- Ministry of Natural Resources (Rwanda);
- the Vice-President Office (Tanzania); and
- Ministry of Water and Environment (Uganda).

Given the small scale of the project's pilot interventions as well as their focus on environmental protection, Environmental Impact Assessments (EIAs) are not expected to be necessary for any of the planned interventions. In addition, the proposed projects activities are in line with national social norms, including gender equality and equal access.

G. Project duplication

Describe if there is duplication of project/programme with other funding sources, if any.

The proposed project will complement current projects within the LVB. In particular, there are three on-going projects involving the LVBC that this proposed project will complement. These on-going projects include: i) Lake Victoria Region Water and Sanitation Initiative II; ii) Lake Victoria Environmental Management Programme II; and iii) Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development. Brief outlines of these

projects are provided below. Furthermore, initiatives and projects that are currently in development and/or implementation phase in LVB countries that will be complementary to the proposed project have been outlined. In addition to a brief overview of each project, justification is provided for why the proposed project will not be a duplication of the respective projects' efforts. During implementation of the proposed project, a team will work closely with the projects listed below – as well as other relevant initiatives – to identify the best possible opportunities for enhancing complementarity.

The **Lake Victoria Region Water and Sanitation Initiative II** (LVWATSAN, 2009–present; budget: US\$29 million) is being implemented by five national agencies under the LVBC and aims to “make a substantial and rapid contribution to the achievement of internationally agreed water and sanitation goals in secondary towns in the Lake Victoria region in East Africa”. Specific objectives of LVWATSAN include: i) promote pro-poor water and sanitation investments in the secondary urban centres in the Lake Victoria Region; ii) facilitate realisation of upstream water sector reforms at the local level in the participating urban centres; and iii) reduce the environmental impact of urbanisation in the LVB. The proposed project will avoid duplication of LVWATSAN's efforts as it will focus specifically on the regional management of water resources under Component 1, and by implementing activities to promote improved water quality and accessibility in rural areas under Component 3 and 4. This is in contrast to the LVWATSAN's focus on urban areas. In addition, the proposed project will improve transboundary water management with a specific focus on the current and future effects of climate change – a consideration that is not central to the objectives of LVWATSAN II. In addition to avoiding duplication of efforts, the proposed project will share lessons on climate change adaptation with the project team of LVWATSAN II through frequent consultations.

Lake Victoria Environmental Management Programme II (LVEMP II, 2009–2017; budget: US\$254 million) is being implemented by the five EAC Partner States under APL 1 (i.e. Kenya, Tanzania and Uganda) and APL 2 (Burundi and Rwanda). The objectives of LVEMP II are to: i) improve the collaborative management of transboundary natural resources of the LVB among the Partner States; and ii) improve environmental management of targeted pollution hot-spots and selected degraded sub-catchments for the benefit of communities who depend on the natural resources of LVB. While the focus of both the proposed project and LVEMP II is on natural resources, the proposed project has a much clearer focus on water specifically. In addition, LVEMP II includes a focus on point source pollution control and prevention, while the proposed project does not address pollution specifically. Despite noting the importance of managing transboundary resources, LVEMP II does not include an integral focus on current and future climate change. Therefore, the proposed project – through its primary focus on climate change adaptation – will not only avoid duplication of efforts with LVEMP II, but will generate knowledge on how projects such as LVEMP II can include a climate change rationale in their planning.

The **Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development** (PREPARED, 2012–2016; budget: US\$40 million) aims to “strengthen the resilience and sustainability of East Africa economies, transboundary and freshwater ecosystems and communities.” The five-year initiative is through the United States Agency for International Development (USAID) and collaborates with EAC Partner States, various LVB NGOs, communities, regional academic and research institutions, and business and local governments to effectively manage LVB resources. The PREPARED programme is composed of five components, namely three technical and two that focus on cross-cutting programme coordination and management. The three technical components include integrated objectives to achieve the project aim, namely: i) improving climate change adaptation technical capacity,

policy leadership and action readiness of regional institutions; ii) strengthen resilient and sustainable management of biologically-significant transboundary freshwater ecosystems in the EAC; and iii) develop a resilient and sustainable water supply for enhanced sanitation and wastewater treatment services in the LVB.

There are six independently-funded PREPARED partners that work together to successfully implement the programme:

- EAC Secretariat;
- LVBC Secretariat – an institution of the EAC;
- Intergovernmental Authority on Development (IGAD) Climate Prediction and Application Centre (ICPAC);
- Famine Early Warning System Network (FEWSNET);
- SERVIR-East Africa/Regional Centre of Monitoring for Regional Development (RCMRD); and
- Tetra Tech ARD.

The PREPARED programme partners completed a Vulnerability, Impacts and Adaptation Assessment (VIA) for the LVB. The aim of the VIA was to determine the following:

- assist the EAC countries to improve their understanding and assessment of impacts, vulnerability and adaptation, so they can support decision-makers to make informed decisions on practical adaptation actions, policies and programmes that take into account current and future climate change and variability;
- develop tools and approaches that can be integrated into decision-making within key regional and national institutions and which can be used by stakeholders to determine baseline conditions, future scenarios and the main impacts and vulnerabilities;
- build institutional and human capacity to use these tools and approaches in identifying and addressing current and future problems arising from climate change;
- identify the most important existing climatic and non-climatic factors and future scenarios affecting the five key IPCC sectors, namely: i) Agriculture and Food Security; ii) Aquatic Ecosystems and Water; iii) Terrestrial Ecosystems including wildlife, tourism and forestry; iv) Health and Human Settlements; and v) Energy and Infrastructure; and
- develop stakeholder-identified adaptation responses and programmes toward implementing a LVB Climate Change Adaptation Strategy and Action Plan (CCASAP).

The improved action readiness of regional institutions through the PREPARED programme is underpinned by access to reliable and timely climate information. Through Component 2 of the proposed project, activities will both complement PREPARED and support increased effectiveness in regional policy and decision-making. PREPARED is developing a Climate Information Network (CIN) which serves as an interactive forum for users and service providers. The proposed project will align and support the development of the CIN through Component 2 and 5. One output for Component 2 is to strengthen the delivery of climate information dissemination mechanisms to stakeholders, users and service providers. This will directly build on the work that PREPARED has done to bringing regional actors together through the CIN and will extend this to relevant national institutions within each of the five LVB countries. Through Component 5, the proposed project will establish a research initiative forum focusing on climate change adaptation across the LVB. This forum will support PREPARED and the CIN through promoting knowledge sharing with *inter alia*, the Global Adaptation Network (GAN), Africa Adaptation Knowledge Network (AAKNet) and Africa Adaptation Initiative. To avoid duplication of efforts and enhance complementarity, the proposed project will build on the work done in the PREPARED VIA. Making use of the hotspots identified by the VIA, potential project districts

have been selected for activities under both Components 3 and 4. Under Component 1 of the proposed project, capacity building activities will avoid duplication with PREPARED by strengthening the institutional coordination mechanisms to specifically sustain climate-resilient approaches to transboundary water catchment management.

The PREPARED **Community Climate Change Adaptation Assessment (C3A2)** is a toolkit developed through the VIA. It can be used to assess community and household perceptions to climate variability, hazards and risks, and use the information acquired from field surveys to determine local adaptation practices that households develop to deal with seasonal and long-term variability. PREPARED hired and trained field researchers from three NGOs – namely Sustainability Watch Kenya (SusWatch), Eco-Finder and E-Link – on the process for completing C3A2 in 17 climate-vulnerable communities within the five LVB Partner States. The results of the C3A2 were used to inform the design and implementation of community-based adaptation plans (CBAPs). PREPARED provided small grants through SusWatch, to pilot one adaptation strategy in eight communities. SusWatch analysed the results of ten C3A2s in order to select eight pilot adaptation projects to be funded. Each pilot adaptation project has a budget of US\$6,000. To conduct the C3A2 in the LVB, PREPARED, the RCMRD and its SERVIR programme developed an approach that used the VIA mapping to identify hotspots within the basin. This was done with stakeholders from the five Partner States in an interactive mapping exercise. Seven indicators for vulnerability were defined by the group and a community hotspot map was created by the RCMRD. These seven indicators included: i) climate information from GeoCLIM database; ii) land use/land cover; iii) poverty index; iv) population density; v) malaria stability index; vi) market access; and vii) access to improved drinking water. The C3A2 assessment surveyed communities across all five LVB countries¹¹². The proposed project will align its selection of intervention sites with that of the C3A2 assessment. It will build on the C3A2 assessment and will avoid duplication through the selection of different priority sites using the toolkit.

Once the communities for proposed project interventions are selected, training will be done for the identified trainees to conduct the C3A2 surveys and community adaptation plans. PREPARED will apply the C3A2 assessment in four new communities across the Mara River Basin – two each in Tanzania and Kenya. A PREPARED consultant will be training C3A2 teams which could include trainees from the proposed project. The trainees from the proposed project will – under LVBC Secretariat supervision – conduct C3A2 assessments in the selected communities and facilitate the development of CBAPs. Funding available under the proposed project – Component 4 – could then be disbursed according to each respective CBAP.

The **Nile Basin Initiative** is a Canadian International Development Agency (CIDA) initiative that supports the development of an Action Plan for the Nile River Basin. UNDP and the World Bank joined CIDA in 1997 to form the “Nile Team”. Together, they play a leading role in coordinating inputs from external agencies to finance and implement the Action Plan. The Nile Basin Initiative was then formally established in 1999 covering the ten riparian states, namely: i) Burundi; ii) Democratic Republic of Congo; iii) Egypt; iv) Eritrea; v) Ethiopia; vi) Kenya; vii) Rwanda; viii) Sudan; ix) Tanzania; and x) Uganda. The Basin-wide programme covers objectives of collaborative action and capacity building specifically in the following *inter alia*: i) Nile transboundary environmental action; ii) efficient water use for agricultural production; iii) water resources planning and management; and iv) applied training. The proposed project aligns with

¹¹² Mwimbu and Ngugo in Burundi; Onjiko, Mfangano South Island, Hawinga, Nyandorera and Barolengo (Yala Wetlands) in Kenya; Ngeryka and Kabare in Rwanda; Kinaga, Lugubu, Nyabange, Kirumi, Bukabwa and Kyankoma (Butiama District) in Tanzania; and Nsono and Kigezi in Uganda.

these objectives by concentrating on LVB-specific countries and avoids duplication through targeting vulnerable communities at specific project intervention sites.

Enhancing Climate Risk Management and Adaptation in Burundi (budget: US\$18,865,610) is a LDCF/AfDB initiative that was endorsed in 2013. The objective of the project is to integrate climate change information into national and sub-national decision-making processes to increase the awareness, preparedness and adaptation processes to climate change in Burundi. The proposed project aligns with this objective and expands on it through integrating climate information and processes at the regional level across the greater LVB.

The **Rural Livelihoods' Adaptation to Climate Change in the Horn of Africa (RLACC) Programme** (RLACC; budget: US\$61,245,778) is a Special Climate Change Fund (SCCF) and AfDB joint programme to be implemented in Kenya. RLACC was endorsed in February 2016 with the objective to increase resilience to climate change risks. Further, the RLACC programme aims to decrease disaster risk using an ecosystem management approach with specific focus on protected areas and fragile ecosystems. The proposed project will be aligned with RLACC through increasing resilience to climate change risks and will build on it through broadening targeting community resilience specifically.

Increasing the Capacity of Vulnerable Rwandan Communities to Adapt to Adverse Effects of Climate Change: Livelihood Diversification and Investment in Rural Infrastructures (budget: US\$54,410,749) is a LDCF/AfDB project endorsed in May 2016. The objective of the project focuses on increasing the adaptive capacity of vulnerable communities to the impacts of climate change in Rwanda. Specifically, through diversification of livelihoods and investments in rural infrastructure. The proposed project aligns with this objective through implementing innovative technologies in communities and targeting communities at the regional level in the LVB.

The **Tanzania National Capacity Needs Self-Assessment for Global Environmental Management** (NCSA; budget: US\$732,905) is a GEF/UNDP initiative currently under implementation. The overall objective of the NCSA is to consolidate capacity building through identifying opportunities and priority areas for action. Specific goals involve strengthening partnerships and information flow between government institutions. The NCSA has begun establishing an inter-sectoral management and implementation mechanism involving a National Steering Committee and a National Technical Working Group. The proposed project will align with the objectives of the NCSA specifically in building capacity at the institutional level, however it will avoid duplication by building on the flow of information between countries only within the LVB.

Developing Core Capacity to Address Adaptation to Climate Change in Productive Coastal Zones (budget: US\$10,850,000) is a LDCF/UNEP project being implemented in Tanzania. The project was endorsed in 2011 and is currently under implementation to develop institutional capacity to better manage climate change impacts. Capacity building is being done through: i) improved climate information; ii) technical capacity; iii) establishment of demonstration projects to reduce vulnerability; and iv) learning. The proposed project will align with this initiative within Tanzania and avoids duplication by expanding capacity building within the greater LVB.

Strengthening Climate Information and Early Warning Systems in Africa to Support Climate Resilient Development and Adaptation to Climate Change (budget :US\$2,764,000) is a LDCF/UNDP project in Uganda that was endorsed in 2013. The project's objective is to

strengthen the climate monitoring capabilities, early warning systems and available information for responding to extreme events. Further, the project aims to strengthen planning for adaptation to climate change in Uganda. The proposed project aligns with the objectives in strengthening climate information systems in Uganda and broadens them through establishing new and innovative technologies for climate information across the LVB.

H. Learning and knowledge management component of the project

If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

Knowledge management for the proposed project will consist of two outputs.

Under Output 5.1, a research forum will be established to promote LVB-wide collaboration between research initiatives, with a specific focus on adaptation to climate change and water catchment management. Academic institutions, including the Inter-University Council for East Africa, as well as technical experts in climate change adaptation, will be included as participants. This forum will provide opportunities for researchers to plan interdisciplinary research projects, co-author scientific publications and establish links with policy- and decision-makers to share the results of their research. Knowledge sharing is also promoted through the GAN, AAKNet and Africa Adaptation Initiative. This output will support PREPARED and the CIN in developing an interactive forum for climate information users and service providers. Specifically, the forum will provide a platform to share and adapt climate change adaptation tools tailored to the needs of decision-makers and end users in the LVB.

Under Output 5.2, awareness-raising campaigns will be held to share knowledge on climate change adaptation and transboundary water management with regional and national policy- and decision-makers, as well as local communities within the LVB.

I. Consultative process

Describe the consultative process, including the list of stakeholders consulted, undertaken during project/programme preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund.

A wide range of stakeholders have been consulted during the preparation of the Concept Note and full Project Proposal for this project.

Importantly, the proposed project's Executing Entity, the LVBC, was consulted through the iterative process of refining the project design. As a regional organisation, the LVBC is comprised of national representatives of the five LVB countries. Therefore, the LVBC is well-positioned to ensure that the proposed project design is tailored to local requirements, benefits vulnerable groups and includes gender considerations.

In addition to the LVBC, representatives from national ministries in each of the five Partner States were consulted on numerous occasions and at various stages of project preparation to ensure that the proposed project design meets the specific national circumstances of each country. These consultations included the National Designated Authority (NDA) in each Partner State, and the National Implementing Entity (NIE) in Kenya and Rwanda. The details of these consultations are further described below.

A regional stakeholder engagement workshop was held in Nairobi on 7–8 June 2016. Representatives from each Partner State, LVBC, UNEP, relevant regional organisations – e.g. IGAD ICPAC – NGOs and other relevant on-going projects – e.g. PREPARED – attended the meeting. During the meeting, the overall design of the proposed project was discussed as well as complementarities with on-going initiatives. In addition, arrangements for the regional implementation of the proposed project were agreed. The results of these consultations were used to revise and update the logical framework of the proposed project. See Annex 1 for a full list of participants and a summary of the discussions.

Following the regional workshop, national consultations were held in each Partner State. For these national consultations, a day-long workshop was convened with representatives from relevant national ministries and NGOs. Representatives from the LVBC and UNEP were also in attendance. These workshops were held on:

- 8 July 2016 – Tanzania;
- 11 July 2016 – Rwanda;
- 12 July 2016 – Burundi;
- 14 July 2016 – Kenya; and
- 15 July 2016 – Uganda.

The results of these consultations were used to further revise and update the logical framework for the proposed project. In addition, national arrangements for the implementation of the project were agreed. See Annex 1 for a full list of participants and a summary of the discussions.

A final regional validation workshop was held in Nairobi on 26 July 2016. This workshop was attended by representatives from each Partner State, LVBC and UNEP. During the workshop, the overall design of the proposed project was validated¹¹³.

During the inception phase of implementation for the proposed project, consultations and discussions will be entered in with community stakeholders. This will take place once the specific communities have been selected for project intervention sites. The consultation process will be an integrated one, in particular, in preparation for the small-scale project grants programme under Component 4. Community stakeholders will be able to provide valuable inputs during the inception stage and in this way, will become exposed to the proposed project and the potential benefits for the community as a whole.

J. Funding justification

Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

Component. Improving regional management of a transboundary water catchment

Baseline scenario (without AF resources)

The LVBC is mandated to support partnerships between local communities in the LVB with the EAC and development partners. The focal areas of the LVBC relevant to the proposed project include *inter alia*: i) coordination of the policies and laws applicable to Lake Victoria and its catchment area; ii) environmental management of Lake Victoria; iii) management and

¹¹³ See Annex 1 for a full list of participants and a summary of the discussions.

conservation of aquatic resources; and iv) economic activities, including the development of fishing, industry, agriculture and tourism. To achieve its mandate, the LVBC coordinates activities and shares information with several EAC ministries and development organisations. Therefore, the LVBC has established a number of partnerships with governments and development agencies within the EAC¹¹⁴, as well as undertaken activities including *inter alia*: i) building capacity within the Lake Victoria Development Programme (LVDP)¹¹⁵; and ii) supporting the development of a Memorandum of Understanding (MoU) between the Republics of Burundi and Rwanda and the EAC in 2007. Despite the noteworthy work of the LVBC, climate change considerations have not been thoroughly incorporated into coordinating mechanisms, particularly regarding transboundary water catchment management. Therefore, the mainstreaming of climate change adaptation in plans, strategies and policies in the LVB has been limited. Without incorporating climate change considerations into regional frameworks, water resources within the LVB will be increasingly affected by future climate change, including increased mean annual temperatures and increased frequency and intensity of droughts.

Additionality (with AF resources)

AF resources will be used to both: i) strengthen the institutional coordination mechanism guiding transboundary water management; and ii) to increase regional and national capacity to manage transboundary water catchments, with a particular focus on climate change. At a regional level, organisations to be targeted by the proposed project interventions will include the: i) LVBC; ii) CCTWG; iii) EAC Climate Change Unit; iv) Lake Victoria Regional Local Authority Cooperation; and the v) Joint Technical Committee of the Mara River Basin. At a national level, organisations to be addressed by the proposed project will include the: i) Ministry of Water, Environment, Lands and Urban Planning (Burundi); ii) Ministry of Environment, Water and Natural Resources (Kenya); iii) Ministry of Lands, Environment, Forestry, Water and Mines (Rwanda); iv) Office of the Vice President (Tanzania); and v) Aid Liaison Department (Uganda). Through the improved institutional coordination mechanism, AF resources will improve the regional planning and management of transboundary water catchments under the future conditions of climate change.

Component 2. Climate information dissemination

Baseline scenario (without AF resources)

Owing to the influence of rainfall on water volume within the LVB, accessing accurate and timely climate information has been identified¹¹⁶ as a critical service to: i) improve the safety of the local fishing community¹¹⁷; and ii) allow for long-term planning to improve resilience to climate change in sectors such as agriculture, hydropower and water management. Therefore, there are a number of current EWS and climate-monitoring projects and initiatives in the LVB, including

¹¹⁴ For example, the World Bank, WWF, International Union for the Conservation of Nature and the International Centre for Research in Agroforestry.

¹¹⁵ Lake Victoria Development Programme (LVDP). 2001. For further information on the LVDP, see: http://www.eac.int/index.php?option=com_content&id=43&Itemid=120&limitstart=1

¹¹⁶ Climate Modeling Laboratory. 2011. Enhancing safety of navigation and efficient exploitation of natural resources over Lake Victoria and its basin by strengthening meteorological services on the lake. Department of Marine, Earth, and Atmospheric Sciences. Raleigh, USA.

¹¹⁷ Between 3,000 and 5,000 deaths occur annually on Lake Victoria as a result of navigation incidents caused by strong winds and waves.

inter alia: i) Adaptation to Climate Change-induced Water Stress in the Nile Basin¹¹⁸; ii) Developing a Methodology, Using Tools and Decision Support Systems, to Incorporate Floods and Droughts into IWRM in Transboundary Basins¹¹⁹; and iii) the International Strategy for Disaster Reduction: Platform for the Promotion of Early Warning¹²⁰.

While it is encouraging that several different climate monitoring initiatives are active in the LVB, limited coordination between these initiatives limits the opportunities for knowledge sharing. In particular, the assimilation of climate information from different initiatives and the inclusion of this information into regional strategies and policies is currently inadequate. This limited coordination prevents the effective use of climate information to support the local fishing community¹²¹ and important economic sectors – such as agriculture, hydropower and water management – to adapt to climate change.

Additionality (with AF resources)

AF resources will be used to improve the collection and delivery of climate information in the LVB. Specifically, the proposed project's activities will develop a platform for the collection of climate data across the LVB, guided by the CCTWG. This regional climate information will be analysed and tailored to the requirements of end-users in the LVB, including regional and national policy- and decision-makers, technical staff in national ministries and local communities. By improving the accuracy and delivery of climate information, AF resources will be used to improve seasonal and long-term planning for transboundary water catchment management and climate change adaptation in the LVB. Thereby increasing the adaptive capacity of fishing communities and the resilience of important economic sectors such as agriculture, hydropower and water management.

Component 3. Regional approach to climate change adaptation in vulnerable communities

Baseline scenario (without AF resources)

Local communities in the Lake Victoria Basin are vulnerable to climate change, including increased frequency and intensity of droughts and an increased variability in rainfall patterns¹²². In particular, vulnerable communities¹²³ are exposed to several negative effects of climate change, including *inter alia*: i) reduced farming productivity; ii) reduced livestock productivity; and iii) decreased availability of fish. The productivity of livelihoods of local communities within the LVB – particularly those underpinned by fishing and agriculture – will be reduced by these

¹¹⁸ Adaptation to Climate Change-induced Water Stress in the Nile Basin. 2010. For further information on the project Adapting to climate change induced water stress in the Nile River Basin, see:

<http://www.unep.org/climatechange/adaptation/EbA/NileRiverBasin/tabid/29584/Default.aspx>

¹¹⁹ Developing a Methodology, Using Tools and Decision Support Systems, to Incorporate Floods and Droughts into IWRM in Transboundary Basins. 2014. For further information on the project Developing a Methodology, Using Tools and Decision Support Systems, to Incorporate Floods and Droughts into IWRM in Transboundary Basins, see:

<http://www.iwa-network.org/project/floods-and-droughts-management-tools>

¹²⁰ International Strategy for Disaster Reduction: Platform for the Promotion of Early Warning. 2006. For further information on the International Strategy for Disaster Reduction: Platform for the Promotion of Early Warning, see:

<http://www.unisdr.org/2006/ppew/>

¹²¹ Between 3,000 and 5,000 deaths occur annually on Lake Victoria as a result of navigation incidents caused by strong winds and waves.

¹²² See Part I: Project/Programme Background and Context for further details.

¹²³ In areas including *inter alia* Rwegura River (Burundi), Chohoha Lake (Burundi and Rwanda), Yala Swamp (Kenya), Mara River Basin (Kenya and Tanzania), Nyabugogo Swamp (Rwanda), Mwanza Gulf (Tanzania), Sango Bay (Tanzania and Uganda) and Lake Nabugabo (Uganda).

negative effects of climate change. In addition, non-climate-related challenges facing vulnerable communities within the LVB include: i) limited water availability; and ii) poor water quality. Both non-climate-related challenges and the negative effects of climate change are expected to worsen under the future conditions of climate change.

Additionality (with AF resources)

AF resources will be used to implement on-the-ground activities to promote adaptation to climate change. Specifically, appropriate climate change adaptation technologies, including water conservation practices, climate-smart agriculture and EbA activities, will be implemented in target communities within the climate change vulnerability hotspots identified through the PREPARED VIA. These technologies will address climate change threats experienced throughout the LVB and will therefore contribute to the development of a regional approach to climate change adaptation.

Water conservation practices – for example, micro-scale water harvesting infrastructure – will increase water availability to local communities and reduce their vulnerability to future droughts. Climate-smart agriculture – for example, adopting drought-tolerant and early maturing plant varieties – will maintain agricultural productivity under the conditions of increased mean annual temperatures and increased frequency and intensity of droughts. EbA activities, for example agroforestry and home gardens, will promote: i) soil stabilisation and ecosystem recovery; and ii) diversified livelihood opportunities. Therefore, through on-the-ground adaptation activities, the AF resources will increase the adaptive capacity of local communities within the LVB, and in particular will strengthen and diversify livelihood options.

Component 4. Community-based approaches to climate change adaptation

Baseline scenario (without AF resources)

Local communities in the LVB are vulnerable to the negative effects of climate change, in particular, reduced water availability. In addition, there is limited funding, equipment and technical expertise for local communities to implement water harvesting and conservation practices. Under the future conditions of climate change – specifically increased mean annual temperatures and increased frequency and intensity of droughts – water availability for local communities will be further reduced, thus compromising the livelihoods¹²⁴ and well-being of community members.

Additionality (with AF resources)

AF resources will be used to implement a small-scale community-based adaptation sub-project programme through a small grants modality. The AF resources will also support the provision of technical guidance and oversight. In addition to being a cost-effective approach to innovation – see Part II: B and D – the small-scale projects programme will provide benefits that accrue from community-based initiatives, including *inter alia*: i) local ownership of proposed project design and implementation; ii) inclusion of traditional knowledge and techniques; and iii) site-specific knowledge of the environmental and socio-political environment. To promote climate change adaptation at a regional level, successful sub-projects will be upscaled through community organisations and district-level agencies. Therefore, AF resources will promote innovative

¹²⁴ For example, agriculture.

approaches to climate change adaptation and reduce the vulnerability of local communities within the LVB to the effects of climate change.

Component 5. Knowledge management and learning

Baseline scenario (without AF resources)

Within the LVB, there are currently several projects and initiatives that address climate change adaptation and the management of transboundary water catchments. These projects and initiatives generate knowledge, both in the form of quantitative data and qualitative information. Collectively, the knowledge generated from these projects and initiatives represent a valuable resource for: i) technical staff in national government agencies; and ii) regional and national policy- and decision-makers. However, there is currently limited sharing and storage of this knowledge as a result of limited institutional coordination. Therefore, interventions focused on climate change adaptation and transboundary water catchment management are planned using a limited evidence-base. Consequently, the effectiveness of these interventions is compromised.

Additionality (with AF resources)

The AF resources will be used to strengthen knowledge management frameworks at a regional level within the LVB. To ensure that knowledge on climate change adaptation and transboundary water catchment management is shared effectively, the proposed project interventions will promote the coordination of knowledge-generating initiatives across the LVB. By improving knowledge-sharing and access, the AF resources will increase the evidence-base available for future initiatives that aim to promote climate change adaptation and improve transboundary water catchment management. By having access to an improved evidence-base, these future initiatives will increase adaptive capacity across the LVB. Furthermore, the AF resources will assist with promoting knowledge-sharing through the GAN, AAKNet and Africa Adaptation Network.

K. Project sustainability

Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

The proposed project's sustainability will be supported through: i) emphasising the active participation of relevant regional¹²⁵, national¹²⁶ and community¹²⁷ stakeholders in decision-making and implementation of project activities; ii) strengthening institutional and technical capacity at regional, national and community levels to ensure that stakeholders have adequate knowledge and skills to maintain the benefits of the project's restoration interventions; and iii) raising the awareness of water conservation practices, climate-smart agricultural techniques and EbA activities at a local level.

¹²⁵ Regional stakeholders will include *inter alia*: i) CCTWG; ii) EAC Climate Change Unit; and iii) Lake Victoria Region Local Authority Cooperation.

¹²⁶ National stakeholders will include *inter alia*: i) the Ministry of Water, Environment, Lands and Urban Planning (Burundi); and ii) the Ministry of Environment, Water and Natural Resources (Kenya).

¹²⁷ Community-level stakeholders will include community leaders and participants in the project activities to be implemented under Component 3.

Under Component 1, a strategy will be developed and implemented together with the LVBC and the CCTWG to strengthen and sustain the flow of information between climate information platforms, climate data-collecting projects and water catchment management experts. Furthermore, training will be provided to government ministries and agencies, the civil society and other private sector organisations on the management of climate-related challenges in transboundary water catchment management. Through promoting a collaborative approach to developing the strategic framework for transboundary water catchment management, and involving national ministries, the proposed project's activities will ensure that institutional capacity is strengthened according to regional requirements. Therefore, regional support for both the strategic framework will be promoted, thereby increasing the sustainability of the project's activities.

Under Component 4, successful small-scale project proponents will be selected through a fair and transparent process. This transparency will promote community acceptance of the selection process and increase local support for successful applicants. By following a community-based approach, the small-scale projects will be implemented at a local level and benefits will accrue directly to surrounding communities. In addition, the call for small-scale project proposals will include an emphasis on the sustainability of the project – i.e. what mechanisms will be used to ensure that the proposed project's activities can be undertaken once the small-scale grant funding has been expended. Mechanisms for this sustainability might include the provision of a service to local communities, the revenue from which can be used for purchasing inputs or maintaining project infrastructure. Similarly, a plan might be included to upscale the proposed project activities as a service-provider to district authorities or private sector initiatives. Through the steps described above, project proponents will be incentivised to maintain small-scale project activities beyond the proposed project implementation period. In addition, by increasing the technical capacity of successful project proponents – through increased access to resources and technical expertise – the small-scale projects programme will enable project proponents to oversee future, related initiatives.

The research forum established under Component 5 will see regional collaboration between research initiatives focused on climate change adaptation and water management. In addition to promoting research outputs, the forum will partner with institutions such as the CCTWG and Inter-University Council for East Africa. By supporting the development of long-term research partnerships and aligning research priorities with established regional institutions, the sustainability of proposed project activities under Component 4 will be promoted.

L. Environmental and social impacts and risks

Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

The proposed project's activities were evaluated against AF environmental and social principles to identify potential negative impacts. Despite the positive impacts that can enhance the project results, some environmental and social principles of the AF could be triggered by the project in terms of environmental and social impact and risks. An evaluation of the project against each of the AF Environmental and social principles is described below and summarised in Table 6 and Table 7.

Principle 1: Compliance with the Law.

During the development of the full project proposal, both regional and national stakeholders were consulted to ensure that all relevant legal requirements were met. The proposed project is therefore well aligned and complies with regional, national and sub-national policies, laws, plans and priorities for sustainable development and adapting to climate change. See Section II E and F for a full description of this alignment and compliance.

However, as certain sub-projects under Component 3 and 4 are not fully defined, there is the risk that these will not comply with the relevant national laws in each Partner state.

Principle 2: Access and Equity.

Article 7 of the Treaty for establishing the EAC specifies the equitable distribution of benefits accruing or to be derived from the operations of the Community and measures to address economic imbalances that may arise from operations. To ensure full implementation and adherence to this principle, the proposed project's activities are designed to provide equal and accessible benefits to communities in highly vulnerable areas. The selection of vulnerable areas was done through a fair and transparent process using the EAC-approved PREPARED VIA.

During the implementation of small-scale community-based adaptation projects under Component 4, local government authorities at each of the selected sites will ensure that sub-project activities will not reduce or prevent communities at project sites from accessing basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions and land rights. Inter-community institutions and individuals will be sensitised towards the approach of prioritising the support from the proposed project to most vulnerable communities while ensuring benefits reach further communities through one or more of the proposed project or sub-project activities. This will mitigate any inter-community conflicts that might arise as a result of focusing on the most vulnerable areas.

However, given that the beneficiaries are poor people who are not often integrated in the decision-making process, there could be risk of insufficient access of the project resources by these persons.

Principle 3: Marginalized and Vulnerable Groups.

The LVBC through PREPARED has identified climate change hotspots; and marginalized and vulnerable groups. The proposed project recognises their existence and will use climate change vulnerability maps developed by PREPARED project and stakeholders mapping to understand spatial distribution of marginalised and vulnerable groups. The PREPARED VIA and C3A2 assessment toolkit will also help to identify marginal and vulnerable groups such as *inter alia* indigenous groups, youth, women and people living with HIV/AIDS at intervention sites. The VIA profiling and C3A2 toolkit will also assist in assessing the skill sets and capacities of the marginalised groups to help the project team plan and implement household-specific interventions.

To avoid social exclusion of marginalised communities, orientation/sensitisation will be conducted at the village level to ensure equal participation and that social impacts do not unjustly impact on marginalised and vulnerable groups.

However, a small risk remains that vulnerable and marginalised groups will have insufficient access to project activities, particularly the water conservation practices, climate-smart agricultural techniques and EbA interventions under Component 2.

Principle 4: Human Rights.

No activities are included in the design of the proposed project that are not in line with established international human rights. Moreover, the proposed project will promote the basic human rights of access to food, water and information. There is a Human Rights Commission in each Partner State that will ensure that human rights at grassroots level is adhered to and promoted.

Principle 5: Gender Equality and Women's Empowerment.

The project recognizes the importance of gender equality particularly equal rights, responsibilities, opportunities and access of women and youth in the climate change adaptation. During the development of the proposed project, gender experts and NGOs were consulted to ensure that the project follows best practice guidelines for gender equality and women's empowerment. The proposed project has included a 50% proportionate gender consideration in all project interventions, with a specific focus on the ground activities (Component 3 and 4). Therefore, the proposed project is designed to promote gender equity.

The project Coordination Unity (PCU) and local government authorities at the proposed project intervention sites will be trained to ensure gender issues are considered and addressed during project implementation. Gender focus activities will also include creating awareness in the community at large to acknowledge women for their contribution as an income generating individual in the household to create their value in the community and promote equitable participation of women and get equal opportunity in the planning, implementation, monitoring and evaluation of project. Furthermore, fair and equitable selection of beneficiaries will be done for capacity building and training sessions. A list of all the participants will be maintained and gender ratio will be monitored by the PCU on a quarterly basis.

Despite the inclusion of gender considerations in the design of the project, there remains the low risk that project interventions will not benefit men and women equally.

Principle 6: Core Labour Rights.

All EAC Partner States have ratified the eight core International Labour Organisation (ILO) Conventions. National and regional stakeholders were involved during the design stage of the proposed project activities to ensure core labour rights have been respected and considered during the project design stage. Compliance to labour rights will be ensured in all the proposed project activities. Components 2 and 3 will involve labour for the implementation of the climate change adaptation, where community members will provide the labour. All of the labour involved will be on daily wages where the wages will be determined according to tasks. Wage rate will be calculated on the basis of prevailing minimum wage rate for the assigned task. The record of work done for labour engaged will have to be maintained and the wages paid accordingly. The hours of work and the timing of the hours will be determined in consultation with the labour and the prevailing practices in the area.

Under Component 3 and 4, local community members may be exposed to the risk of accidents while implementing the proposed project's climate change adaptation interventions.

Principle 7: Indigenous Peoples.

During the PREPARED project and the development of this proposed project, indigenous people were noted in Kenya. These are Ogiek living in Mau Forest, south-east of Kisumu. However, this area falls outside of the identified climate change vulnerability hotspot in Kenya, and therefore the project is unlikely to have any negative impacts on these people.

However, as the precise project locations have yet to be determined, there is the risk that not all indigenous peoples have been identified. Therefore, there is also the risk of inequitable access of indigenous peoples to the project's resources.

Principle 8: Involuntary Resettlement.

The proposed project does not include voluntary or involuntary resettlement. The review process for sub-projects will include criteria that stipulates no resettlement.

Principle 9: Protection of Natural Habitats.

By implementing water conservation practices, climate smart agriculture techniques and particularly EbA activities, the proposed project promotes the improved management of natural habitats. The proposed project is therefore likely to result in the improved protection of natural habitats rather than having any negative effect.

Despite this focus on improving ecosystem goods and services, there is a low risk that the construction of adaptation interventions (for example boreholes or gabions) identified in the community-based adaptation plans could result in the destruction of small areas of natural habitat.

Principle 10: Conservation of Biological Diversity.

LVBC conducted Ecosystem Profile Assessment (EPA) and identified 9 biologically significant areas with the LVB. These sites include: Lake Nabugabo; Maasai Mara and Serengeti National Park; ecosystem; Mara Swamp & Bay; Mwanza Gulf; Lake Rweru-Mugesera complex and Northern Aquatic protected landscape (Rwanda and Burundi); Nyungwe –Kibira Forest/National Parks; Yala/Nzoia wetlands; Sango Bay/Minziro; and Mt Elgon Ecosystem. LVBC through PREPARED project has also conducted an economic valuation of some of these sites and developed Conservation Investment Plans (CIP). Any project activity that will be implemented in these areas will comply with the relevant CIP. This will be recognised during inception of the project.

By implementing water conservation practices, climate smart agriculture techniques and particularly EbA activities, the proposed project promotes the improved management of natural habitats. The proposed project is therefore likely to result in the improved protection of natural habitats and biodiversity.

Despite this focus on improving ecosystem goods and services, there is a low risk that the construction of adaptation interventions (for example boreholes or gabions) identified in the community-based adaptation plans could result in negative impacts on biodiversity.

Principle 11: Climate Change.

The proposed project will contribute to climate change adaptation efforts in the LVB. Through Component 2, the proposed project is designed to improve the delivery of climate information to regional and national policy and decision makers. Through this improved delivery of information and the enhanced regional coordination included in Component 1, the proposed project addresses climate change adaptation planning at a regional level.

Through Component 3 and 4, the proposed project is designed to: i) transfer technology to promote climate change adaptation to local communities to reduce their vulnerability to climate change; and ii) promote the development of innovative, community based projects to increase resilience to climate change. Therefore, the proposed project will enhance the local level capacity of local communities to adapt to climate change.

The proposed project’s climate change interventions focus on water conservation practices, climate smart agriculture techniques and EbA activities. None of these interventions are likely to result in an increase in greenhouse gas emissions.

Principle 12: Pollution prevention and Resource Efficiency

The proposed project will not require (during or after implementation) significant amounts of water, energy, materials or other natural resources. It is also highly unlikely that activities in the proposed project will result in the production of significant quantities of wastes, especially of hazardous or toxic wastes. The project will not produce significant volumes of effluents or air pollutants, including greenhouse gases. All applicable international standards will be met for maximising material resource use and minimising the production of wastes and the release of pollutants.

Principle 13: Public Health

None of the proposed project activities are envisioned to impact negatively on public health. Instead, the proposed project will have positive impacts on health. In particular, through Component 3, reduced nutrient runoff into Lake Victoria and its tributaries will increase water quality and improve public health.

Communities may identify the construction of water storage infrastructure as a sub-project in their community-based adaptation plan. There is then a low risk that water-related diseases (such as Malaria) may increase in frequency.

Principle 14: Physical and Cultural Heritage.

The climate change adaptation interventions to be implemented by the proposed project are relatively small scale and unlikely to result in the alteration, damage or removal of any physical or cultural heritage.

However, without specific site selection, it is possible that the interventions identified in sub-projects will negatively affect physical and cultural heritage.

Principle 15: Lands and Soil Conservation.

The proposed project will promote the conservation of soil and land resources. Specifically, through the implementation of EbA activities in Component 3 – including agroforestry – soil stability will be increased, the runoff of nutrients from topsoil will be reduced and the fertility of soil at the proposed project and sub project sites will be increased.

Table 6. Checklist for environmental and social principles.

| Checklist of environmental and social principles | No further assessment required for compliance | Potential impacts and risks – further assessment and management required for compliance |
|--|---|---|
| <i>Compliance with the Law</i> | | X |
| <i>Access and Equity</i> | | X |
| <i>Marginalized and Vulnerable Groups</i> | | X |
| <i>Human Rights</i> | X | |
| <i>Gender Equity and Women’s Empowerment</i> | | X |
| <i>Core Labour Rights</i> | | X |

| | | |
|---|---|---|
| <i>Indigenous Peoples</i> | | X |
| <i>Involuntary Resettlement</i> | X | |
| <i>Protection of Natural Habitats</i> | | X |
| <i>Conservation of Biological Diversity</i> | | X |
| <i>Climate Change</i> | X | |
| <i>Pollution Prevention and Resource Efficiency</i> | X | |
| <i>Public Health</i> | | X |
| <i>Physical and Cultural Heritage</i> | | X |
| <i>Lands and Soil Conservation</i> | X | |

Table 7. Checklist of environmental and social impacts and risks of the project.

| Checklist of environmental and social principles | Potential impacts and risks |
|---|---|
| <i>Compliance with the Law</i> | Unidentified sub-projects may require an EIA to comply with national environmental laws. |
| <i>Access and Equity</i> | Given that the beneficiaries are poor people who are not often integrated in the decision-making process, there could be risk of insufficient access of the project resources by these persons. |
| <i>Marginalized and Vulnerable Groups</i> | Vulnerable and marginalised groups at project intervention sites will have insufficient access to project activities, particularly the water conservation practices, climate-smart agricultural techniques and EbA interventions under Component 2. |
| <i>Human Rights</i> | Not applicable |
| <i>Gender Equity and Women's Empowerment</i> | Project interventions do not benefit men and women equally. |
| <i>Core Labour Rights</i> | Local community members may be exposed to the risk of accidents while implementing the proposed project's climate change adaptation interventions |
| <i>Indigenous Peoples</i> | Indigenous communities at project intervention sites are not identified and are therefore not included in the relevant stakeholder consultations and decision-making processes. Inequitable access of indigenous peoples to the project's resources. |
| <i>Involuntary Resettlement</i> | Not applicable |
| <i>Protection of Natural Habitats</i> | Construction of adaptation interventions (for example boreholes or gabions) identified in the community-based adaptation plans could result in the destruction of small areas of natural habitat. |
| <i>Conservation of Biological Diversity</i> | Construction of adaptation interventions (for example boreholes or gabions) identified in the community-based adaptation plans could result in negative impacts on biodiversity. |
| <i>Climate Change</i> | Not applicable |
| <i>Pollution Prevention and Resource Efficiency</i> | Not applicable |
| <i>Public Health</i> | Water-related diseases (such as Malaria) may increase in frequency with the construction of water storage infrastructure. |
| <i>Physical and Cultural Heritage</i> | Without specific site selection, it is possible that the interventions identified in sub-projects will negatively affect physical and cultural heritage. |
| <i>Lands and Soil Conservation</i> | Not applicable |

Mitigation measures for the environmental and social risks identified in Table 7 above are detailed Section III:C.

According to the AF's Environmental and Social Policy, a project can be categorised as either A, B or C. Category A refers to projects that "likely to have significant adverse environmental or social impacts that are for example diverse, widespread, and irreversible". Because any adverse social and environment impacts of the project are expected to be localised and minimal – on-the-ground interventions will largely be "green" and contain minimal construction of hard infrastructure – the Category A classification does not apply. In contrast, Category C refers to projects "with no adverse environmental or social impacts". Because the proposed project will be undertaking on-the-ground activities, some environmental and social impacts are expected, however negligible. Therefore, the proposed project is classified as a Category B project as its potential impacts are "less adverse than Category A projects, because for example they are fewer in number, smaller in scale, less widespread, reversible or easily mitigated."

PART III: IMPLEMENTATION ARRANGEMENTS

A. Project arrangements

Describe the arrangements for project/programme management at the regional and national level, including coordination arrangements within countries and among them. Describe how the potential to partner with national institutions, and when possible, national implementing entities (NIEs), has been considered, and included in the management arrangements.

Implementing Entity

As requested by the five Partner States of the LVB, **UNEP** will be the **Multilateral Implementing Entity (MIE)** for the proposed project. UNEP has significant experience in implementing projects of this nature, with dedicated groups in Climate Change Adaptation and Terrestrial Ecosystems. UNEP is headquartered in Nairobi, Kenya, which will facilitate regular contact with the Executing Agency – the LVBC – that has its headquarters in Kisumu, Kenya. The following implementation services under the MIE modality will be provided by UNEP for the proposed project:

- overall coordination and management of UNEP’s MIE functions and responsibilities, and the facilitation of interactions with the AF Board and related stakeholders;
- oversight of portfolio implementation and reporting on budget performance;
- quality assurance and accountability for outputs and deliverables at the project development phase, during implementation and on completion;
- receipt, management and disbursement of AF funds in accordance with the financial standards of the AF;
- information and communication management, including maintaining Information Management Systems and specific project databases to track and monitor progress – financial and substantive – of project implementation;
- oversight and quality assurance of evaluation processes for project performance and ensuring that lessons learned/best practice are incorporated to improve future projects; and
- general administration and support costs including legal services, procurement and supply management, IT and human resource management.

Executing Entity

The **LVBC** will be the **Executing Entity** of the proposed project. The LVBC has significant experience coordinating regional development projects, including the LVEMP I and II and LVWATSAN I and II. The LVBC will be responsible for:

- coordinating and managing the overall implementation of project outcomes and activities;
- monitoring and evaluating project outcomes and activities;
- regional knowledge management, communications and awareness raising;
- implementing the regional components of the project;
- disbursing funds to Partner States for the implementation of on-the-ground activities within those countries;
- providing technical oversight to all activities carried out within Partner States;
- managing centralised procurement of goods and services for the project; and

- ensuring the overall quality and timeous delivery of project outputs both regionally and within Partner States.

The LVBC will establish a Project Coordination Unit (PCU), which will be responsible for the day-to-day coordination of the proposed project and for promoting and facilitating stakeholder engagement.

Project Coordination Unit (PCU)

The PCU will be housed within the offices of the LVBC in Kisumu, Kenya. The PCU will be comprised of a full-time Project Manager and a full-time Financial Assistant.

The **Project Manager (PM)** will be responsible for the overall management of the proposed project. The PM will ensure that the project is run transparently and effectively in accordance with AF and UNEP guidelines and approved work plans and budgets. The PM will receive project support from a national financial manager as well as additional staff members within LVBC. The key functions of the PM will be:

- facilitating the day-to-day functioning of the project staff;
- managing human and financial resources in consultation with the Regional Policy Steering Committee (RPSC) to achieve results in line with the outputs and activities outlined in the project document;
- leading the preparation and implementation of annual results-based work plans and logical frameworks as endorsed by the management;
- coordinating project activities with related and parallel activities;
- monitoring project activities, including financial matters, and preparing monthly and quarterly progress reports, and organising monthly and quarterly progress reviews;
- supporting the RPSC and CCTWG in organising bi-annual meetings;
- coordinating the distribution of responsibilities amongst team members and organising the monitoring and tracking systems;
- reporting and providing feedback on project strategies, activities, progress and barriers to UNEP, PSC and project partners; and
- managing relationships with project stakeholders including donors, NGOs, government agencies and others as required.

See Annex 2 for abbreviated Terms of Reference (ToRs) for the PM.

Because many of the activities of the proposed project involve procurement and sub-contracting, the recruitment of a dedicated **Financial Assistant** will be necessary in order to ensure that the PMU has the required capacity to manage finances as per UNEP and AF requirements. The financial assistant will be responsible for ensuring that the projects financial and administrative procedures comply with AF and UNEP guidelines. See Annex 2 for abbreviated ToRs for the Financial Assistant.

Climate Change Technical Working Group

An LVB **Climate Change Technical Working Group (CCTWG)**, specific to this proposed project and with expertise in transboundary water catchment management, will be constituted. The LVB CCTWG will be constituted by members of the existing CCTWG with relevant experience and additional technical officers from other relevant ministries in Partner States. Technical officers from the LVBC and UNEP will also be included in the LVB CCTWG, as well

as project managers from ongoing projects in the LVB. The PCU will serve as secretariat to the LVB CCTWG. The LVB CCTWG will be responsible for: i) overseeing the implementation of project activities; ii) ensuring project activities meet the required technical standards and contribute to climate resilience; and iii) providing technical appraisals of project performance to the RPSC and Sectoral Council (SC).

Regional Policy Steering Committee

A **Regional Policy Steering Committee (RPSC)** will be established to oversee the management of the proposed project. In addition, the RPSC will: i) undertake project assurance – monitoring and evaluation; ii) ensure performance improvement; and iii) ensure accountability and learning. The RPSC will comprise designated senior representatives – permanent secretaries – from relevant ministries¹²⁸ in each of the Partner Countries, as well as representatives from the LVBC. UNEP representatives may also be invited to attend RPSC meetings. The RPSC will approve annual work plans and procurement plans, and review project periodical reports as well as any deviations from the approved plans. The RPSC will meet bi-annually.

Sectoral Council

Sectoral Council (SC) meetings will be convened with high-ranking government officials from each of the five Partner States (ministers) to provide strategic guidance to the proposed project. These meetings will also serve to promote political buy-in for the proposed project and a regional approach to adaptation. Wherever possible, SC meetings to discuss the proposed project will be coordinated with other SC meetings organized to discuss other matters within the LVB. The SC will meet bi-annually.

National project teams

National project teams will be established in focal ministries in each of the partner states. These focal ministries will be:

- Burundi – Ministry of Water, Environment, Lands and Urban Planning;
- Kenya – Ministry of Environment and Natural Resources;
- Rwanda – Ministry of Natural Resources;
- Tanzania – Vice-President’s Office; and
- Uganda – Ministry of Water and Environment.

While coordinated by the focal ministry, the national project teams will include representatives from other relevant ministries, including the Ministry of East African Affairs¹²⁹, NDA and NIE where applicable¹³⁰. The national project teams will be responsible for the implementation of on-the-ground interventions – Component 3 and 4 in particular – by local government authorities at project intervention sites within their respective countries. Each national focal team will nominate a national project coordinator. The national project coordinator will:

- coordinate the implementation of project outcomes and activities within her/his country;

¹²⁸ These could include the NDA and/or NIE.

¹²⁹ The Ministries of East African Affairs in particular will be important members of the national project teams as they are the designated ministry for all EAC communication.

¹³⁰ At the time of writing NIEs have been accredited in Kenya and Rwanda. In Kenya, the National Environment Management Authority (NEMA), within the Ministry of Environment and Natural Resources is the NIE. In Rwanda, the Ministry of Natural Resources is the NIE.

- prepare cash advance requests and requisitions for the procurement of goods and services at the national level;
- manage the procurement of goods and services required at the national level – using existing structures within her/his government;
- report on expenditure and progress to the LVBC; and
- monitor and evaluate project interventions at the national level.

A diagrammatic representation of the implementation modality is presented below.

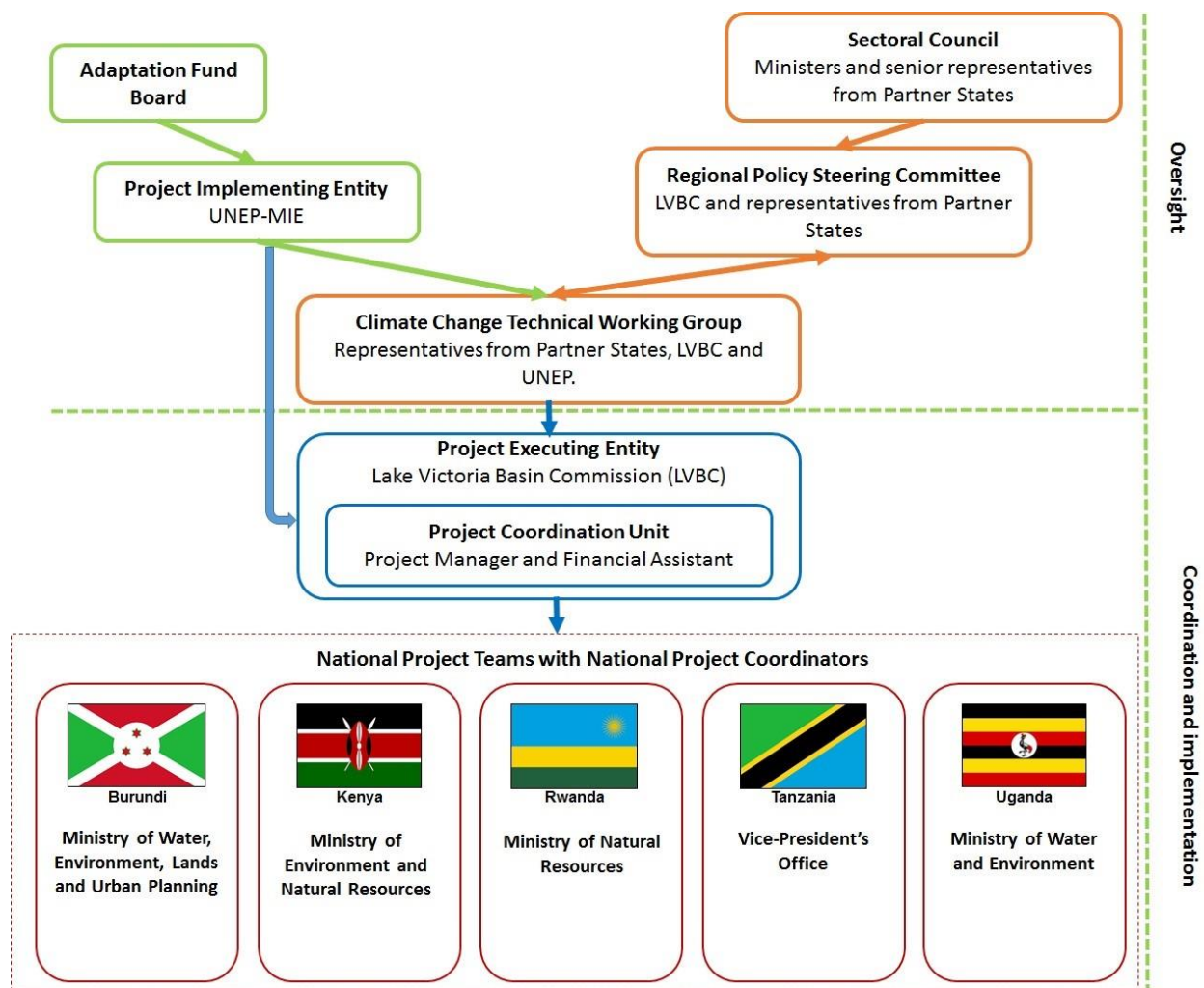


Figure 3. Proposed project implementation arrangements.

Implementation arrangements for small-scale, community-based projects under Component 4

Communities – or relevant organisations working in the target communities – will be encouraged to submit project proposals to implement the adaptation interventions identified in the community-based adaptation plan. Technical guidance and selection criteria will be provided to project proponents by the National Project Teams to develop a project proposal with the

necessary financial, administrative and monitoring procedures. The National Project Teams, with input from their local government counterparts, will then select community-based projects to be funded using a fair and transparent process. Project proposals will initially be reviewed by extension officers and local government (in particular those staff involved in the implementation of interventions under Component 3) at the project intervention sites. The proposals will then be reviewed by the National Project Teams. The final sub-projects to be funded will then be selected based on the following criteria: i) degree to which the sub-project addresses the adaptation needs identified in the CBAP; ii) cost-effectiveness; iii) ease of implementation; and v) potential for negative environmental or social impacts.. The selected projects will be funded through a small grants modality in each of the Partner States. Monitoring and evaluation for the small-scale projects will be undertaken by extension officers and local government officials at each of the project intervention sites. In addition, members of the National Project Team will evaluate the small- scale projects at the mid-term and the end of the proposed project.

Anticipated execution costs

The execution costs of the proposed project include standard project management planning and budgeting (Table 8). This involves the hiring of personnel whose responsibility will be to coordinate and oversee the daily tasks of project implementation.

Table 8. Proposed project execution costs.

| Execution activity | Role | US\$ |
|--|---|----------------|
| Project personnel | Project coordinator | 133,200 |
| | Financial assistant | 72,000 |
| Office supplies | | 14,246 |
| Communication costs | | 7,200 |
| Monitoring & Evaluation | Mid-term Evaluation | 35,000 |
| | Terminal Evaluation | 40,000 |
| | Audits | 12,000 |
| Inception and steering meetings | Regional Project Steering Committee meetings (initial meeting serves as Inception Workshop) | 86,160 |
| | Sectoral Council Meetings | 0 |
| TOTAL | | 399,806 |

B. Financial and project risk management

Describe the measures for financial and project/programme risk management.

Table 9. Financial and project risk management measures for the proposed project, including risk ratings.

| Identified risks | Risk rating | Mitigation measures |
|---|-------------|---|
| High turnover of staff members in implementing agencies and within different countries may negatively impact on project deliverables. | Low–medium | <ul style="list-style-type: none"> Proposed project will build partnerships between government and non-government agencies to ensure continuity. |
| Disagreement amongst stakeholders with regards to demonstration of site selection. | Low | <ul style="list-style-type: none"> Intervention sites will be selected using an agreed upon list of criteria to ensure the selection is transparent and equitable. There will be a participatory approach to the proposed project, particularly with regard to intervention site selection. |
| Loss of government support may result in lack of prioritisation of proposed project activities. | Low | <ul style="list-style-type: none"> Regular stakeholder consultation and involvement will be undertaken to ensure that government maintains its commitment and considers the proposed project as a support to its forestry and agriculture programmes. |
| Institutional capacities and relationships are not sufficient to provide effective solutions to climate problems that are complex and multi-sectoral. | Medium | <ul style="list-style-type: none"> Proposed project design includes the development of institutional capacity. This will ultimately lead to the development of an appropriate institutional framework for analysing climate change impacts on food supply, altering policy and implementing interventions. |
| Capacity constraints of local institutions may limit the ability to undertake the research and interventions. | Medium | <ul style="list-style-type: none"> Human resource capacity will be developed as required. Collaboration and exchange between local institutions and international research institutes will be initiated. A CTA will work closely with the AF PM to ensure timely delivery of project outputs. |
| Priority interventions implemented are not found to be cost-effective. | Low | <ul style="list-style-type: none"> Cost-effectiveness is a core principle in the implementation of adaptation measures. Detailed information will be recorded regarding cost-effectiveness. This will be widely disseminated and will be of use to future adaptation initiatives in the LVB. Interventions will be designed to ensure steady flow of water of good quality at reasonable cost, thus encouraging payment by consumers. |
| Lack of commitment/buy-in from local communities may result in failure of intervention sites. | Medium | <ul style="list-style-type: none"> A stakeholder engagement plan will be developed during the inception phase. Community stakeholders were consulted though a bottom-up approach integrating the community into the proposed project's implementation phases will be |

| | | |
|---|--------|--|
| | | followed. |
| Disagreement among stakeholders with regard to roles in the proposed project. | Low | <ul style="list-style-type: none"> Stakeholder roles are detailed clearly in the stakeholder involvement plan. This plan will be presented and confirmed during the Inception Workshop. |
| Current climate and seasonal variability and/or hazard events result in poor results for the EbA and conservation agriculture activities. | Medium | <ul style="list-style-type: none"> Current climatic variability will be taken into account in the planning of the EbA and conservation agriculture activities. Drought- and flood-resilient species will be used. Techniques to assist plant growth particularly in the seedling/sapling phases and to reduce risk of damage from climate change hazard impacts will be used. Species will be planted in appropriate seasons to reduce risk of hazard impact. Diversity in planted crops will reduce this risk. |
| Trees planted by the project are cut down by the communities. | Medium | <ul style="list-style-type: none"> Community involvement – i.e. ‘bottom up’ approach – and awareness raising will be undertaken to avoid this risk. |
| Some infrastructure put in place by the project, for instance communal dams as water harvest strategy, could lead to conflicts associated with different user access. | Medium | <ul style="list-style-type: none"> Community management structures such as village water committees established and trained in integrated water resources management and conflict resolutions. |

C. Environmental and social risk management measures

Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.

Environmental and social impacts and risks have been identified for the proposed project (see Section II:L). The table below describes risks and impacts management in the proposed project in accordance with the Environmental and Social Principles of the AF.

Table 10. Environmental and social risk management

| Checklist of environmental and social principles | Potential impacts and risks | Mitigation measures |
|--|---|--|
| <i>Compliance with the Law</i> | Unidentified sub-projects may require an EIA to comply with national environmental laws. | The requirement for an EIA will be verified by each National Project Team before the implementation of on-the-ground activities at the targeted intervention sites. |
| <i>Access and Equity</i> | Given that the beneficiaries are poor people who are not often integrated in the decision-making process, there could be risk of insufficient access of the project resources by these persons. | Clear and transparent criteria will be used by the National Project Teams to select sub-projects and project beneficiaries. This will include the selection of participants in the training sessions. |
| <i>Marginalized and Vulnerable Groups</i> | Vulnerable and marginalised groups at project intervention sites will have insufficient access to project activities, particularly the water conservation practices, climate-smart agricultural techniques and EbA interventions under Component 2. | Project activities have been specifically designed to take vulnerable and marginalised groups into account, particularly women. An ESMP will be followed throughout project intervention to ensure vulnerable and marginalised groups have adequate access to and benefit from project interventions. |

| | | |
|---|--|--|
| <i>Human Rights</i> | No appreciable risk | |
| <i>Gender Equity and Women's Empowerment</i> | Project interventions do not benefit men and women equally. | <p>The proposed project has included a 50% proportionate gender consideration in all project interventions, with a specific focus on on-the-ground activities (Component 3 and 4). Therefore, the proposed project is designed to promote gender equity. The PCU and local government authorities at the proposed project intervention sites will need to ensure that these gender considerations are adhered to during project implementation.</p> <p>Fair and equitable selection of beneficiaries will be done for capacity building and training sessions. A list of all the participants will be maintained and gender ratio will be monitored by the PCU on a quarterly basis.</p> |
| <i>Core Labour Rights</i> | Local community members may be exposed to the risk of accidents while implementing the proposed project's climate change adaptation interventions | During implementation, the PMU and National Project Teams will ensure compliance with national and international labour laws and will provide adequate protection equipment for workers. |
| <i>Indigenous Peoples</i> | <p>Indigenous communities at project intervention sites are not identified and are therefore not included in the relevant stakeholder consultations and decision-making processes.</p> <p>Inequitable access of indigenous peoples to the project's resources.</p> | <p>Comprehensive stakeholder mapping will take place through Output 3.1 as project intervention sites are identified. This will allow for the identification of indigenous peoples.</p> <p>The proposed project will not contravene the rights of indigenous people. Indigenous peoples will be included in the participatory planning of project interventions and the design of CBAPs to ensure equitable access to project resources.</p> |
| <i>Involuntary Resettlement</i> | No appreciable risk | |
| <i>Protection of Natural Habitats</i> | Construction of adaptation interventions (for example boreholes or gabions) identified in the community-based adaptation plans could result in the destruction of small areas of natural habitat. | <p>Technical feasibility studies will be conducted for physical infrastructure identified as sub-projects in the community-based adaptation plans to ensure that they will not result in significant adverse impacts on natural habitat.</p> <p>All activities will adhere to the EIA regulations of the relevant Partner State.</p> |
| <i>Conservation of Biological Diversity</i> | Construction of adaptation interventions (for example boreholes or gabions) identified in the community-based adaptation plans could result in negative impacts on biodiversity. | Technical feasibility studies will be conducted for physical infrastructure identified as sub-projects in the community-based adaptation plans to ensure that they will not result in significant adverse impacts on biodiversity. |
| <i>Climate Change</i> | No appreciable risk | |
| <i>Pollution Prevention and Resource Efficiency</i> | No appreciable risk | |
| <i>Public Health</i> | Water-related diseases (such as | The construction of water storage |

| | | |
|---------------------------------------|--|--|
| | Malaria) may increase in frequency with the construction of water storage infrastructure. | infrastructure will be accompanied with training and technical support to communities on how to mitigate the risks of water-related diseases. |
| <i>Physical and Cultural Heritage</i> | Without specific site selection, it is possible that the interventions identified in sub-projects will negatively affect physical and cultural heritage. | Participatory mapping – which will include local communities and district level authorities – will be undertaken during the development of CBAPs to identify areas of physical and cultural significance and ensure that sub-projects will not negatively impact upon those. |
| <i>Lands and Soil Conservation</i> | No appreciable risk | |

It will be the responsibility of the PCU and National Project Teams (overseen by LVBC and UNEP) to ensure that the appropriate risk mitigation measures are implemented during project implementation.

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENTS FOR UNIDENTIFIED SUB-PROJECTS

Given that certain subprojects – under Component 4 in particular – have yet to be identified, an additional environmental and social impact assessment for each subproject will be required. This screening system will ensure that each sub-project adheres to the environmental and social principles of the AF.

This environmental and social impact assessment will be carried out by National Project Teams – with the assistance of local government – during the selection process for community-based projects (Output 4.1, Activity 4.1.3 – see Section II:A). In addition, the appropriate environmental and social safeguard principles will be incorporated into the CBAPs developed using the C3A2 toolkit (Activity 4.1.1), which will reduce the likelihood of identified sub-projects posing significant environmental and social risks. No project identified within a CBAP will be carried out without an environmental and social impact assessment. In addition, projects that are assessed to pose significant environmental and social risks will not be implemented unless a comprehensive risk management plan has been developed.

The PCU will have the ultimate responsibility of ensuring that the necessary environmental and social impact assessments are carried out for each of the subprojects.

Environmental and Social Impact Assessment

An Environmental and Social Impact Assessment (ESIA) will be carried out to identify and predict impacts of proposed sub-project activities. National and regional environment risks and impact assessment operational procedures as stipulated by relevant laws will be followed. The process will include: i) impact screening; ii) scoping; iii) prediction and mitigation; iv) management and monitoring; and v) evaluation). The ESIA will also define the degree to which the benefits of the potential future project activities will be distributed in an equitable manner across the affected population and examine opportunities to enhance social inclusion, social accountability, strengthen social cohesion increase social capital, and build ownership as per AF principles.

ESIA procedure

ESIA will be carried out by National Project Teams – with the assistance of local government – during the selection process for community-based projects (Output 4.1, Activity 4.1.3 – see Section II:A). All subprojects will be evaluated and screened against the 15 environmental and social principles of the AF.

| List of environmental and social principles |
|---|
| 1. <i>Compliance with the Law</i> |
| 2. <i>Access and Equity</i> |
| 3. <i>Marginalized and Vulnerable Groups</i> |
| 4. <i>Human Rights</i> |
| 5. <i>Gender Equity and Women's Empowerment</i> |
| 6. <i>Core Labour Rights</i> |
| 7. <i>Indigenous Peoples</i> |
| 8. <i>Involuntary Resettlement</i> |
| 9. <i>Protection of Natural Habitats</i> |
| 10. <i>Conservation of Biological Diversity</i> |
| 11. <i>Climate Change</i> |
| 12. <i>Pollution Prevention and Resource Efficiency</i> |
| 13. <i>Public Health</i> |
| 14. <i>Physical and Cultural Heritage</i> |
| 15. <i>Lands and Soil Conservation</i> |

The purpose of the screening process is:

- to determine whether project activities are likely to have potential negative environmental and social impacts;
- to determine appropriate mitigation measures for activities with adverse impacts;
- to incorporate mitigation measures into the project design;
- to review and approve projects proposals and
- to monitor environmental parameters during implementation.

In determining whether a proposal requires further assessment, should be rejected, or exempted, screening will consider the alignment of the proposal with existing policies and plans, scale of the proposed development, intensity and the significance of potential impacts. Other aspects include presence of natural habitats, cultural and other AF principles.

Environmental and Social Management Plan

After conducting the ESIA, a detailed ESMP will be developed in each site. The ESMP will be the backbone for the implementation of safeguards during project implementation and operation. Each ESMP shall include the following components: i) mitigation plans; ii) monitoring plans; iii) institutional arrangements; iv) capacity building; and v) associated costs.

Indigenous Peoples Plan

After the ESIA, at each site, an Indigenous Peoples Plan will be prepared consistent with a relevant AF principle description for those project areas where Indigenous Peoples are present. Currently, the only sub-project areas where there is the potential of indigenous groups is in Kenya.

Environmental and Social Impact monitoring

The Project Coordination Unit with key stakeholders will develop a monitoring and evaluation system and plans that will be used in all sites. Appropriate environmental and social indicators will be developed within the framework of the ESMP.

Regular monitoring and evaluation will take place for the community-based adaptation projects identified in the CBAPs. This will be undertaken by extension officers and local government officials at each of the project intervention sites. In addition, members of the National Project Teams will evaluate the sub-projects at the mid-term and the end of the proposed project. Project will develop and build capacity of project implementers on a simple system for the monitoring and evaluation of environmental and social impacts.

Evaluation of monitoring and evaluation results

The evaluation of results of environmental and social mitigation will be carried out by the PCU comparing baseline data collected in the planning phases with targets and post-project situations.

Institutional arrangements for ESIA

Project Coordination Unit (PCU)

PCU will play the leading oversight role of monitoring the activities of this project. The PCU will carry out this role by ensuring that the National Project Teams undertake the necessary ESIA, and subsequently develop and implement ESMPs at each project site. PCU will monitor the reports from the National Project Teams on a quarterly basis. They will rely on a bottom up feedback system; from the ground by going through the monitoring reports and making regular site visits to inspect and verify for themselves the nature and extent of the impacts and the success or lack thereof, of the mitigation measures. The PCU will prepare brief consolidated periodic monitoring reports for submission to the LVBC and UNEP.

National Project Team (NPT)

The NPT will be responsible for completing the ESIA of all sub-projects proposed in the CBAPs. The NPT will then work with local authorities to develop the relevant ESMPs for each of the project intervention sites. The NPT will provide overall coordination in monitoring environmental and social indicators including coordinating of training in collection and analysis of monitoring data for data collectors. The critical role of the NPT will include data analysis, as well as maintenance of management information systems and all baseline data. Lastly other than preparation of periodic reports the NPT will implement all the necessary modifications in the monitoring framework.

Local Communities

Local communities will be useful agents in collection of data that will be vital in monitoring and as such they will play a role in the monitoring framework. Local communities in the project intervention areas will receive training and capacity building skills in data collection to be done by the implementing agencies so as to equip them with the ability to collect data.

Grievance mechanism

The proposed project will utilize the existing UNEP grievance mechanism to allow affected to raise concerns that the proposed project is not complying with its social or environmental policies or commitments. It will be the responsibility of the Project Manager, PCU and National Project Teams to ensure that all relevant stakeholders are adequately informed of the grievance mechanism.

UNEP has established grievance mechanism that it applies to all its projects. Such a Stakeholder Response Mechanism is within the Environmental, Social and Economic Sustainability Framework to address compliance and grievance cases that arise from UNEP projects. This Mechanism is coordinated and managed by the Independent Office for Stakeholder Safeguard-related Response. The operating procedures in the Stakeholder Response Mechanism inform and guide UNEP staff, UNEP implementing/executing partners, and people affected by UNEP projects on bringing forward and responding to stakeholder concerns.

The Project Manager or the implementing/executing partners (in this project the PCU within the LVBC) are usually the first point of contact for any project-related complaints from stakeholders. The Project Manager and project team should respond promptly and appropriately to a complaint with the goal of avoiding escalation to the Independent Office for Stakeholder Safeguard-related Response.

The Project Manager can direct the complainants to fill out the “UNEP Project Concern Feedback Form” form and submit it to the Independent Office for Stakeholder Safeguard-related Response if the issues cannot be resolved at the project level. The Project Manager should advise complainants to provide complete information, so UNEP can properly assess and address the complaint. The form and instructions on how to submit the complaint form are available on www.unep.org (under “Project Concern” in the “A-Z of UNEP”) or at www.unep.org/about/eses. The form is available in all UN official languages on the different language versions of the same sites.

If the Independent Office for Stakeholder Safeguard-related Response finds that the complaint is eligible, s/he forms a team composed of internal or external experts to investigate the case and propose options for the complainant to consider.

For additional details of the grievance mechanism please refer to Annex 4.

D. Monitoring and evaluation

Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

The proposed project will comply with formal guidelines, protocols and toolkits issued by the AF and UNEP. UNEP will develop a **Supervision Plan** during the project’s inception phase which will be distributed and presented to all stakeholders during the Inception Workshop. The emphasis of the Supervision Plan will be on outcome monitoring, learning and sustainability and financial management. Proposed project risks and assumptions will be regularly monitored by UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of the project’s M&E will also be reviewed and rated as part of the

PIR. Appropriate financial parameters will be monitored annually to ensure the cost-effective use of financial resources.

The proposed project will undergo an independent **Mid-Term Evaluation** at the mid-point of project implementation. The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify corrective actions if needed. It will: i) focus on the effectiveness, efficiency and timeliness of project implementation; ii) highlight issues requiring decisions and actions; and iii) document initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for improved implementation during the final half of the project's term.

An independent **Final Evaluation** will take place three months prior to the proposed project's end date in accordance with UNEP guidance. The Final Evaluation will focus on the delivery of the project's results as initially planned – and as corrected after the Mid-Term Evaluation, if any such correction took place. The Final Evaluation will assess the impact and sustainability of results, including their contribution to capacity development and the achievement of adaptation benefits.

An **Annual Project Progress Review** (PPR) will be prepared to monitor progress made since the project's start and in particular for the previous reporting period. The PPR includes, but is not limited to, reporting on the following:

- progress on the project's objective and outcomes – each with indicators, baseline data and end-of-project targets (cumulative);
- project outputs delivered per project outcome (annual);
- lessons learned/good practice;
- annual Work Plan and expenditure reports; and
- project risk and adaptive management.

Periodic monitoring will be conducted through visits to the intervention sites undertaken by relevant staff from UNEP. Visits will be jointly conducted based on the agreed schedule to assess project progress first hand. A summary of the M&E costs is provided in Table 11.

Table 11. Monitoring and evaluation costs of the proposed project. *Note: The costs indicated here do not include the costs associated with UNEP staff. Such costs will be covered by the MIE fee.*

| Type of M&E activity | Responsible parties | Budget US\$ (excluding project team time) | Time frame |
|---|--|--|--|
| Direct Project Monitoring and Quality Assurance including progress and financial reporting, project revisions, technical assistance and risk management | <ul style="list-style-type: none"> • Project Manager • Project team • UNEP • External consultants – i.e. evaluation team | (supported from staff costs included in Project execution, and from MIE fee) | Quarterly, half-yearly and annually and as needed |
| Evaluations (Mid-term review and Independent terminal evaluations) | <ul style="list-style-type: none"> • Project Manager • Project team • UNEP | 75,000 | At midpoint and at end of project implementation |
| Audit | <ul style="list-style-type: none"> • Project Manager • Project team • UNEP | 12,000 | Annually at year end |
| Inception meeting, field visits and steering committee meetings | <ul style="list-style-type: none"> • Project Manager • Project team • UNEP | 86,160 | Inception meeting within first 2 months and bi-annual PB meetings (and sub-committee meetings) |

| Type of M&E activity | Responsible parties | Budget US\$ (excluding project team time) | Time frame |
|------------------------------|---------------------|--|------------|
| TOTAL indicative cost | | US\$ 173,160 | |

E. Results framework

Include a results framework for the project/programme proposal, including milestones, targets and indicators.

Table 12. Results framework with indicators to output level, including baseline, project targets, sources of verification and assumptions.

| Expected outcome/outputs | Outcome/output indicator | Baseline | Target | Sources of verification | Assumptions |
|--|--|---|---|---|---|
| Outcome 1. Strengthened institutional and technical capacity to integrate climate resilience into transboundary water catchment management. | No. of staff trained to respond to, and mitigate impacts of, climate-related events (gender disaggregated). | Staff involved in regional institutions have been trained through the PREPARED project on climate change adaptation. | By the end of the project, at least 20 staff (of which at least 50% are women) trained on climate change adaptation and water catchment management during regional workshops. By the end of the project, at least 100 staff (of which at least 50% are women) trained on climate change adaptation and water catchment management during national workshops. | Attendance registers from training workshops. Workshop reports. Interviews with selected staff members of relevant ministries. | Training workshops provide staff with the capacity to integrate climate resilience into transboundary water catchment management. |
| 1.1 Strengthened institutional coordination mechanism to sustain a climate-resilient approach to water catchment management. | Number of meetings of the CCTWG. | 2 meetings per year. | 2 meetings of the CCTWG are held per year. | Meeting reports, monitoring and evaluation reports; annual workplans, meeting minutes and reports. | Institutions, government ministries and agencies are committed to participating in and addressing the impacts of climate change, with water and water catchment management central to the adaptation pathway for the LVB. |

| Expected outcome/outputs | Outcome/output indicator | Baseline | Target | Sources of verification | Assumptions |
|---|---|--|---|--|---|
| 1.2 Training provided to government ministries and agencies, civil society and the private sector to address climate change-related challenges in transboundary water catchment management. | See Outcome 1 indicator. | | | | |
| Outcome 2. Improved delivery of accurate and timely climate information to regional and national policymakers, technical officers and local communities. | Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis. | Policy- and decision-makers in the five Partner States receive regional forecasts from ICPAD, FEWSNET and RCMRD). There is limited delivery of climate information to local communities. | By the end of the project, policy- and decision-makers in each pilot country receive down-scaled national climate information every quarter. By the end of the project, local communities in the project intervention sites receive tailored climate information packages. | Climate information packages, interviews with government and local communities. | Existing climate information producers are committed to participating in the development and implementation of regional climate information systems specifically relating to transboundary water catchment management. |
| 2.1 Climate information dissemination mechanism strengthened to deliver climate information to be used in seasonal and long-term planning. | Delivery of climate information to local communities at selected project intervention sites. | National hydro meteorological agencies in each of the Partner States receive regional climate information from institutions such as ICPAC and FEWSNet through regional forums such as the CIN. However, this information is not transmitted to local communities to allow them to plan seasonally. | All communities at the selected project intervention sites receive relevant climate information at least twice a year. | Interviews with local community members at selected project intervention sites. | Training provided to national technical officers allows them to produce locally appropriate climate information. |
| 2.2 Climate information and forecasts delivered to | Number of staff members trained on | Staff from national meteorological | At least 25 (5 per Partner State) staff | Attendance registers from training | Trainees leave training with improved capacity. |

| Expected outcome/outputs | Outcome/output indicator | Baseline | Target | Sources of verification | Assumptions |
|---|--|---|--|--|--|
| national policymakers, LVBC technical officers and local communities in tailored media/information products to guide both operational and long term strategic planning. | downscaling regional climate information to the national level. | agencies have been trained to produce regional climate information with GEOCLIMA software. | members trained on downscaling regional climate information to the national level. | workshops. Workshop reports. Interviews with selected staff members of relevant ministries. | Representatives of the national meteorological agencies are committed to a minimum of a two-year contract following training and to train new members. |
| Outcome 3. Climate change adaptation technologies transferred to communities to reduce their vulnerability to climate change. | Natural assets protected or rehabilitated | Areas of forest and agricultural land and being degraded through overexploitation for fuelwood and unsustainable agricultural practices. | At least 1000 hectares of agricultural land rehabilitated through climate-smart agriculture (200 ha at project intervention sites in each of the five Partner States) and at least 500 hectares of hectares of woodland rehabilitated using an EbA approach (100 ha at project intervention sites in each of the five Partner States). | Monitoring and evaluation reports per intervention site; reports on community consultations/trainings and field visits, GIS. | All communities surrounding project intervention sites are committed to participating in project activities and taking up/adopting climate resilient techniques and practices. |
| | Number of people practicing climate change adaptation technologies. | 0 | At least 500 people (100 per intervention site) are practicing climate change adaptation technologies. | Registers of project beneficiaries at each site, site visits, community surveys. | Community members continue to practice adaptation technologies once they have been trained and provided with the necessary equipment. |
| 3.1 Project intervention sites and appropriate adaptation technologies identified. | Number of project intervention sites identified. | The VIA being finalised by PREPARED has identified vulnerability hotspots. Specific sites will be chosen within these hotspots. | At least 1 intervention site identified in each Partner State. | Project reports; reports on community consultations/trainings and field visits. | All communities surrounding project intervention sites are committed to participating in project activities and taking up/adopting climate resilient techniques and practices. |

| Expected outcome/outputs | Outcome/output indicator | Baseline | Target | Sources of verification | Assumptions |
|---|---|----------|--|--|--|
| 3.2. Extension officers and local communities trained on climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA activities. | Number of community members at project intervention sites in each Partner State trained on climate change adaptation technologies (gender disaggregated). | 0 | At least 100 community members in each Partner State (of which 50% are women) trained on climate change adaptation technologies (500 people in total). | Project reports; monitoring and evaluation reports per intervention site; reports on community consultations, trainings and surveys; reports on site/field visits. | All communities surrounding project intervention sites are committed to participating in project activities, taking up/adopting climate resilient techniques and practices and providing training to other officers/community members. |
| 3.3 Climate change adaptation technologies demonstrated at selected project intervention sites. | Number of households at project intervention sites in each Partner State benefitting from water conservation practices. | 0 | At least 100 households in each Partner State benefitting from water conservation practices (500 households in total). | Monitoring and evaluation reports per intervention site; reports on community consultations/trainings and field visits. | All communities surrounding project intervention sites are committed to participating in project activities and taking up/adopting climate resilient techniques and practices. |
| | Number of hectares of climate-smart agriculture at project intervention sites in each Partner State. | 0 | At least 200 hectares of climate-smart agriculture at project intervention sites in each Partner State (1000 hectares in total). | Monitoring and evaluation reports per intervention site; reports on community consultations/trainings and field visits, GIS. | All communities surrounding project intervention sites are committed to participating in project activities and taking up/adopting climate resilient techniques and practices. |
| | Number of hectares of land restored using an EbA approach at project intervention sites in each Partner State. | 0 | At least 100 hectares of hectares of land restored using an EbA approach at project intervention sites in each Partner State (500 hectares in total). | Monitoring and evaluation reports per intervention site; reports on community consultations/trainings and field visits, GIS. | All communities surrounding project intervention sites are committed to participating in project activities and taking up/adopting climate resilient techniques and practices. |
| Outcome 4. Regional resilience to climate change promoted through innovative, community-based projects. | Number of beneficiaries of small-scale community-based projects. | 0 | At least 1000 people (200 per intervention site) benefit from small-scale community-based projects. | Registers of project beneficiaries at each site, site visits, community surveys. | Community members continue to practice adaptation technologies once they have been trained and provided with the necessary equipment. |

| Expected outcome/outputs | Outcome/output indicator | Baseline | Target | Sources of verification | Assumptions |
|--|--|----------|---|---|--|
| 4.1 Small-scale projects funded to promote innovative approaches to climate change adaptation. | Number of small-scale projects that promote innovative approaches to climate change sites funded at intervention in each Partner State. | 0 | At least 4 small-scale projects Number of small-scale projects that promote innovative approaches to climate change sites funded at intervention in each Partner State. | Annual workplans; workshop reports; presentations of selected project proposals to be implemented; monitoring and evaluation reports per small-scale project per country. | All communities surrounding project intervention sites and those with small-scale projects are committed to participating in project activities, taking up/adopting climate resilient techniques and practices and providing training to other community members. |
| Outcome 5. Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices. | No. of news outlets in the local press and media that have covered climate change adaptation in relation to transboundary water catchment management in the LVB. | 0 | At least 15 news outlets in the local press and media that have covered climate change adaptation in relation to transboundary water catchment management in the LVB. | Reports and training materials; campaign and exhibition reports; monitoring and evaluation reports; newspaper articles, news stories, television reports, radio interviews. | Awareness raising campaigns will recruit more community members for training. Both community members and relevant national and regional stakeholders will be committed to adopting climate-resilient transboundary water catchment management mechanisms. Involvement in the implementation of the project interventions and ongoing communication on the expected benefits of climate-resilient transboundary water catchment management for local communities will result in long-term support of the project and adoption of new knowledge, skills and practices in water management systems. |

| Expected outcome/outputs | Outcome/output indicator | Baseline | Target | Sources of verification | Assumptions |
|--|---|--|--|--|---|
| 5.1. A forum established to promote the collaboration of research initiatives across the Lake Victoria Basin, with a focus on adaptation to climate change. | Establishment of a research forum for the LVB. | Climate change research is not coordinated across the LVB and takes place in isolation. | One research forum for the LVB established. | Meeting/workshop reports; minutes from forum meetings. | All representatives in the forum (public institutions, NGOs and resource users etc.) are dedicated to developing, adopting and implementing interdisciplinary approaches to climate resilient techniques and practices. Representatives will be willing to adopt a partnership approach and work collaboratively to plan and implement climate-resilient interdisciplinary approaches and interventions in the LVB. |
| 5.2. Awareness-raising campaign to share lessons learned with stakeholders, ranging from policy- and decision-makers to vulnerable communities in the Lake Victoria Basin. | Number of exhibitions to showcase the successful regional and community-based approaches to climate change adaptation demonstrated through the project. | Several projects, including PREPARED, have undertaken awareness-raising activities within the LVB. However, none of these awareness-raising activities have included exhibitions to showcase regional and community-based climate change adaptation interventions. | At least 2 exhibitions to showcase the successful regional and community-based approaches to climate change adaptation demonstrated through the project. | Exhibition materials, photographs, reports. | International climate change events will be organised during the lifespan of the project. |

F. Project alignment with AF results framework

Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund.

Table 13. Proposed project alignment with the AF Results Framework.

| Project Objective(s)¹³¹ | Fund Outcome | Fund Outcome Indicator | Grant Amount (US\$) |
|--|--|---|----------------------------|
| Reduce vulnerability to the negative effects of climate change in the five Lake Victoria Basin countries, namely Burundi, Kenya, Rwanda, Tanzania and Uganda, by building climate resilience | Outcome 5. Increased ecosystem resilience in response to climate change and variability-induced stress | 5. Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress | \$5,000,000 |
| Project Outcome(s) | Fund Output | Fund Output Indicator | Grant Amount (US\$) |
| 1. Strengthened institutional and technical capacity to integrate climate resilience into transboundary water catchment management. | Output 2.1. Strengthened capacity of national and regional centres and networks to respond rapidly to extreme weather events | 2.1.1. Number of staff trained to respond to, and mitigate impacts of, climate-related events | 490,000 |
| 2. Improved delivery of accurate and timely climate information to regional and national policymakers, technical officers and local communities. | Outcome 1. Reduced exposure at national level to climate-related hazards and threats | 1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis | 450,000 |
| 3. Climate change adaptation technologies transferred to communities to reduce their vulnerability to climate change. | Output 5. Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability | 5.1. Number and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change | 1,700,000 |
| 4. Regional resilience to climate change promoted through innovative, community-based projects. | Output 5. Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability | 5.1. Number and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change | 1,250,000 |
| 5. Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices. | Output 3. Targeted population groups participating in adaptation and risk reduction awareness activities | 3.1.2 Number of news outlets in the local press and media that have covered the topic | 318,489 |

¹³¹ The AF utilised OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply.

G. Budget

Include a detailed budget with budget notes, broken down by country as applicable, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

Table 14. Detailed budget for the proposed project.

| Expected Outputs | Output budget (US\$) | Activities | Inputs | Budget notes | Y1 (US\$) | Y2 (US\$) | Y3 (US\$) | Total amount (US\$) |
|--|----------------------|--|---|--------------|-----------|-----------|-----------|---------------------|
| Component 1. Improving regional management of a transboundary water catchment | | | | | | | | |
| Outcome 1. Strengthened institutional and technical capacity to integrate climate resilience into transboundary water catchment management. | | | | | | | | 490,000 |
| 1.1. Strengthened institutional coordination mechanism to sustain a climate resilient approach to transboundary water catchment management. | 300,000 | 1.1.1. Strengthen – building on the stakeholder engagement strategy prepared by the CCTWG – and sustain the flow of information between the following: i) projects and organisations collecting climate data within the LVB; ii) regional climate information platforms; iii) experts and technical staff responsible for water catchment management and climate change adaptation; and iv) regional policy and decision makers. | Communication materials | 1 | 5,000 | 5,000 | 5,000 | 15,000 |
| | | | Communication costs | 2 | 5,000 | 5,000 | 5,000 | 15,000 |
| | | 1.1.2. Support meetings of the CCTWG to plan and implement climate-resilient approaches to transboundary water catchment management. | Regional meeting | 3 | 80,000 | 80,000 | 80,000 | 240,000 |
| | | 1.1.3. Undertake regional capacity building exercises in water catchment management in the context of climate change in organisations such as inter alia: i) LVBC; ii) CCTWG; iii) EAC Climate Change Unit; and iv) Lake Victoria Region Local Authority Cooperation. | International capacity-building experts | 4 | 4,000 | 4,000 | 4,000 | 12,000 |
| | | | Materials and goods | 5 | 6,000 | 6,000 | 6,000 | 18,000 |

| Expected Outputs | Output budget (US\$) | Activities | Inputs | Budget notes | Y1 (US\$) | Y2 (US\$) | Y3 (US\$) | Total amount (US\$) |
|--|----------------------|---|--|--------------|-----------|-----------|-----------|---------------------|
| 1.2. Training provided to government ministries and agencies, civil society and the private sector to address climate change related challenges in transboundary water catchment management. | 190,000 | 1.2.1. Develop/revise training material on climate change adaptation and transboundary water catchment management. | International adaptation experts | 6 | 5,000 | | | 5,000 |
| | | | International water catchment management experts | 7 | 5,000 | | | 5,000 |
| | | 1.2.2. Provide training on climate change adaptation and water catchment management at the regional level to national government representatives from the climate change, environment, and water and local government sectors in each of the five Partner States. | International adaptation experts | 6 | | 2,500 | 2,500 | 5,000 |
| | | | International water catchment management experts | 7 | | 2,500 | 2,500 | 5,000 |
| | | | Regional workshops | 8 | | 40,000 | 40,000 | 80,000 |
| | | 1.2.3. Provide training on climate change, climate change adaptation and water management at national workshops which will include civil society, NGOs and the private sector. | International adaptation experts | 6 | | 2,500 | 2,500 | 5,000 |
| | | | International water catchment management experts | 7 | | 2,500 | 2,500 | 5,000 |
| | | | National workshops | 9 | | 40,000 | 40,000 | 80,000 |

| Expected Outputs | Output budget (US\$) | Activities | Inputs | Budget notes | Y1 (US\$) | Y2 (US\$) | Y3 (US\$) | Total amount (US\$) |
|---|----------------------|--|-------------------------------|--------------|-----------|-----------|-----------|---------------------|
| Component 2. Climate information dissemination | | | | | | | | |
| Outcome 2. Improved delivery of accurate and timely climate information to regional and national policymakers, technical officers and local communities. | | | | | | | | 450,000 |
| 2.1. Tailored climate information packages to guide both operational and long term strategic planning. | 200,000 | 2.1.1. Train representatives from the national meteorological agencies in each of the five Partner States on downscaling regional climate information to the national level. | Climate modelling experts | 10 | 20,000 | 20,000 | 20,000 | 60,000 |
| | | | National training workshops | 11 | 40,000 | 40,000 | 40,000 | 120,000 |
| | | 2.1.2. Develop tailored climate information packages for: i) policy- and decision-makers; and ii) local communities. | Downscaling software | 12 | 20,000 | | | 20,000 |
| 2.2. Climate information dissemination mechanism strengthened to deliver climate information to national policymakers, LVBC technical officers and local communities. | 250,000 | 2.2.1. Identify cost-effective means of strengthening existing climate information dissemination mechanisms, including ICPAC, FEWSNET, RCMRD and DHI. | Regional workshop | 13 | 40,000 | | | 40,000 |
| | | 2.2.2. Strengthen existing climate information dissemination mechanisms – including the LVBC information hub – to develop an LVB specific platform for climate information. | Materials and goods | 14 | 10,000 | 10,000 | 10,000 | 30,000 |
| | | | Travel | 15 | 10,000 | 10,000 | 10,000 | 30,000 |
| | | 2.2.3. Deliver climate information for long term strategic planning to policy and decision makers in regional organisations as well as technical staff in national ministries within the LVB. | Communication costs | 16 | 10,000 | 10,000 | 10,000 | 30,000 |
| | | 2.2.4. Pilot innovative information-sharing mechanisms – such as the provision of climate information through mobile networks – to deliver climate information to communities in a locally relevant and accessible format. | Community information sharing | 17 | 40,000 | 40,000 | 40,000 | 120,000 |

| Expected Outputs | Output budget (US\$) | Activities | Inputs | Budget notes | Y1 (US\$) | Y2 (US\$) | Y3 (US\$) | Total amount (US\$) |
|---|----------------------|---|--|--------------|-----------|-----------|-----------|---------------------|
| Component 3. Regional approach to climate change adaptation in vulnerable communities | | | | | | | | |
| Outcome 3. Climate change adaptation technologies transferred to communities to reduce their vulnerability to climate change. | | | | | | | | 1,700,000 |
| 3.1. Project intervention sites and appropriate adaptation technologies identified. | 55,000 | 3.1.1. Apply findings/lessons learned from past and current LVBC programmes (LVWATSAN, LVEMP II, PREPARED Vulnerability Assessment) to identify potential project intervention sites. | National projects teams | 18 | 10,000 | | | 10,000 |
| | | 3.1.2. Conduct a stocktake of adaptation interventions detailed in existing national strategies and action plans, recommendations from other regional projects and findings of scientific research in the LVB to identify appropriate adaptation technologies to be implemented regionally. | Chief Technical Advisor | 19 | 15,000 | 15,000 | 15,000 | 45,000 |
| 3.2. Extension officers and local communities trained on climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA activities. | 145,000 | 3.2.1. Train extension officers and local community members at selected intervention sites on climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA activities. | Adaptation training experts | 20 | 20,000 | | | 20,000 |
| | | | National community training workshops | 21 | 50,000 | | | 50,000 |
| | | 3.2.2. Establish demonstration sites for climate change adaptation technologies at selected intervention sites. | Demonstration sites | 22 | | 50,000 | | 50,000 |
| | | 3.2.3. Organise information exchange visits where people from communities surrounding the project intervention sites are exposed to the climate change adaptation technologies. | Exchange visits | 23 | | 25,000 | | 25,000 |
| 3.3. Climate change adaptation technologies demonstrated at selected project intervention sites. | 1,500,000 | 3.3.1. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Burundi. | Climate change adaptation technologies – Burundi | 24 | 100,000 | 100,000 | 100,000 | 300,000 |

| Expected Outputs | Output budget (US\$) | Activities | Inputs | Budget notes | Y1 (US\$) | Y2 (US\$) | Y3 (US\$) | Total amount (US\$) |
|--|----------------------|---|---|--------------|-----------|-----------|-----------|---------------------|
| | | 3.3.2. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Kenya. | Climate change adaptation technologies – Kenya | 25 | 100,000 | 100,000 | 100,000 | 300,000 |
| | | 3.3.3. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Rwanda. | Climate change adaptation technologies – Rwanda | 26 | 100,000 | 100,000 | 100,000 | 300,000 |
| | | 3.3.4. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Tanzania. | Climate change adaptation technologies – Tanzania | 27 | 100,000 | 100,000 | 100,000 | 300,000 |
| | | 3.3.5. Implement climate change adaptation technologies including water conservation practices, climate-smart agricultural techniques and EbA at the selected intervention sites in Uganda. | Climate change adaptation technologies – Uganda | 28 | 100,000 | 100,000 | 100,000 | 300,000 |
| Component 4. Community-based approaches to climate change adaptation | | | | | | | | |
| Outcome 4. Regional resilience to climate change promoted through innovative, community based projects. | | | | | | | | 1 250 000 |
| 4.1. Small-scale projects funded to promote innovative approaches to climate change adaptation. | 1,250,000 | 4.1.1. Host workshops with communities at intervention sites selected in Component 3 to identify specific climate change impacts and appropriate community-based adaptation interventions. | Community workshops | 29 | 50,000 | | | 50,000 |

| Expected Outputs | Output budget (US\$) | Activities | Inputs | Budget notes | Y1 (US\$) | Y2 (US\$) | Y3 (US\$) | Total amount (US\$) |
|--|----------------------|---|-------------------------|--------------|-----------|-----------|-----------|---------------------|
| | | 4.1.2. Provide training to local communities or relevant local-level government or NGOs on how to develop a project proposal and the necessary financial, administrative and monitoring procedures for a small-scale project. | Community training | 30 | 50,000 | | | 50,000 |
| | | 4.1.3. Review project proposals and select successful project proponents. | Chief Technical Advisor | 31 | 15,000 | 15,000 | 15,000 | 45,000 |
| | | 4.1.4. Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Burundi. | Small grants Burundi | 32 | | 100,000 | 100,000 | 200,000 |
| | | 4.1.5. Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Kenya. | Small grants Kenya | 33 | | 100,000 | 100,000 | 200,000 |
| | | 4.1.6. Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Rwanda. | Small grants Rwanda | 34 | | 100,000 | 100,000 | 200,000 |
| | | 4.1.7. Provide small grants to project proponents to implement small-scale, community-based adaptation projects in Tanzania. | Small grants Tanzania | 35 | | 100,000 | 100,000 | 200,000 |
| | | 4.1.8. Provide small grants project proponents to implement small-scale, community-based adaptation projects in Uganda. | Small grants Uganda | 36 | | 100,000 | 100,000 | 200,000 |
| | | 4.1.9. Undertake monitoring and evaluation of small scale projects to provide information for Outcome 5. | Travel | 37 | 35,000 | 35,000 | 35,000 | 105,000 |
| Component 5. Knowledge management and learning | | | | | | | | |
| Outcome 5. Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices. | | | | | | | | 318 489 |

| Expected Outputs | Output budget (US\$) | Activities | Inputs | Budget notes | Y1 (US\$) | Y2 (US\$) | Y3 (US\$) | Total amount (US\$) |
|--|----------------------------|---|------------------------------|--------------|-----------|-----------|-----------|---------------------|
| 5.1. A forum established to promote the collaboration of research initiatives across the Lake Victoria Basin, with a focus on adaptation to climate change. | 105,000 | 5.1.1. Hold regional workshops with researchers and technical experts to plan interdisciplinary research projects on climate change adaptation and water catchment management. | Regional researcher workshop | 38 | 30,000 | | | 30,000 |
| | | 5.1.2. Establish a forum of researchers and technical experts working on climate change adaptation to coordinate climate change research initiatives across the LVB. | Communication costs | 39 | 10,000 | 10,000 | 10,000 | 30,000 |
| | | 5.1.3. Promote knowledge sharing through the Global Adaptation Network (GAN), Africa Adaptation Knowledge Network (AAKnet) and Africa Adaptation Initiative. | Materials and goods | 40 | 15,000 | 15,000 | 15,000 | 45,000 |
| 5.2. Awareness raising campaign to share lessons learned with stakeholders, ranging from policy- and decision-makers to vulnerable communities in the Lake Victoria Basin. | 213,489 | 5.2.1. Develop a detailed communications strategy – building on the communication and outreach strategy prepared by the CCTWG – to share lessons learned from the project with relevant national and regional stakeholders through appropriate media. | Communication expert | 41 | 15,000 | | | 15,000 |
| | | 5.2.2. Produce awareness raising materials on water management and climate change adaptation. | Communication expert | 41 | 10,000 | 10,000 | 10,000 | 30,000 |
| | | | Materials and goods | 42 | 10,000 | 10,000 | 10,000 | 30,000 |
| | | 5.2.3. Undertake awareness raising campaigns for vulnerable communities to share lessons on water management and climate change adaptation. | Awareness-raising campaign | 43 | 16,000 | 17,000 | 17,000 | 50,000 |
| 5.2.4. Distribute awareness raising materials – translated into local languages where appropriate – to policy and decision-makers in national ministries and regional organisations to raise awareness on transboundary water management in the context of climate change and lessons learned from adaptation interventions demonstrated through Component 3 and | Awareness-raising campaign | 43 | 16,000 | 16,000 | 16,489 | 48,489 | | |

| Expected Outputs | Output budget (US\$) | Activities | Inputs | Budget notes | Y1 (US\$) | Y2 (US\$) | Y3 (US\$) | Total amount (US\$) |
|------------------|----------------------|--|--------------|--------------|------------------|------------------|------------------|---------------------|
| | | 4. | | | | | | |
| | | 5.2.5 Host exhibitions to showcase the successful regional and community-based approaches to climate change adaptation demonstrated through Component 3 and 4. | Exhibitions | 44 | | 20,000 | 20,000 | 40,000 |
| | | | TOTAL | | 1,167,000 | 1,558,000 | 1,483,489 | 4,208,489 |

Table 15. Budget notes.

| # | Description | Budget notes |
|----|--|--|
| 1 | Communication materials | Cost of communication materials – such as brochures, pamphlets and policy briefs – to sustain the flow of information between the following: i) projects and organisations collecting climate data within the LVB; ii) regional climate information platforms; iii) experts and technical staff responsible for water catchment management and climate change adaptation; and iv) regional policy and decision makers. |
| 2 | Communication costs | Cost of communication and meetings. |
| 3 | Regional meeting | Cost of LVB CCTWG meetings: \$40,000 per meeting Flights: 20 x \$700 = \$14,000 DSA: 20 participants x \$350 x 3 days = \$21,000 Venue Hire: \$5,000 Total cost: \$40,000 x 2 per year x 3 years = \$240,000 |
| 4 | International capacity-building experts | International consultants to provide capacity-building services to regional institutions. |
| 5 | Materials and goods | Materials and goods, such as computer hardware and software, required to strengthen the capacity of regional organisations to integrate climate change into transboundary water management. |
| 6 | International adaptation experts | International consultants to i) develop training material on climate change adaptation; and ii) deliver this training at both regional and national training workshops. Costs include travel and DSA. |
| 7 | International water catchment management experts | International consultants to i) develop training material on transboundary water catchment management; and ii) deliver this training at both regional and national training workshops. Costs include travel and DSA. |
| 8 | Regional workshops | Cost of regional training workshop: \$40,000 per workshop (see budget note 3). Two training workshops, one in Year 2 and one in Year 3 will be organised. Total cost \$80,000. |
| 9 | National workshops | Cost of a national training workshop: \$8,000 per workshop. There will be one national workshop in each of the 5 Partner States during Year 2, and another workshop in each of the Partner States in Year 3. Total cost = \$8,000 x countries x 2 years = \$80,000. |
| 10 | Climate modelling experts | Regional climate modelling experts to provide training on downscaling regional climate information to the national level. Costs include professional fees, travel and DSA. |
| 11 | National training workshops | Cost of national training workshop: \$8,000. Cost includes venue hire, printing costs and facilitator fees. One national training workshop in each of the Partner States per year = \$40,000 per year. |
| 12 | Downscaling software | Cost of software to perform the downscaling of regional climate information. For example, Geoclima. |
| 13 | Regional workshop | Cost of regional workshop: \$40,000 per workshop Flights: 20 x \$700 = \$14,000 DSA: 20 participants x \$350 x 3 days = \$21,000 Venue Hire: \$5,000 Workshop to bring together regional producers of climate information to identify cost-effective means of strengthening existing climate information dissemination mechanisms. |
| 14 | Materials and goods | Materials and goods required to strengthen existing climate information dissemination mechanisms. |
| 15 | Travel | Travel costs for project staff to provide technical assistance to strengthen existing climate information dissemination mechanisms. See also budget note 37. |

| # | Description | Budget notes |
|----|---|--|
| 16 | Communication costs | Costs of printing and disseminating climate information to policy- and decision-makers. |
| 17 | Community information sharing | Cost to pilot innovative information-sharing mechanisms with local communities. For example, sending text notifications via mobile platforms. |
| 18 | National projects teams | \$2000 per national project team (\$10,000 total) to convene expert meetings and apply lessons learned to select project sites and interventions. |
| 19 | Chief Technical Advisor | Consultancy for an international consultant to perform the role of Chief Technical Advisor for the entire implementation of the project. In Component 3 the CTA will be responsible for undertaking a stocktake of regional and national assessment/strategies to identify the best-practice adaptation technologies to be applied throughout the LVB. See also budget note 31. |
| 20 | Adaptation training experts | Consultancy for adaptation experts to develop and deliver training on climate change adaptation technologies to local communities. |
| 21 | National community training workshops | Training workshops within targeted communities on adaptation interventions. \$10,000 per country to run these workshops. |
| 22 | Demonstration sites | Costs of establishing demonstration sites within targeted communities for selected adaptation interventions. \$10,000 per country. |
| 23 | Exchange visits | Cost of organising visits for neighbouring communities to the adaptation intervention demonstration sites. \$5,000 per country. |
| 24 | Climate change adaptation technologies – Burundi | Cost of implementing water conservation practices, climate smart agricultural techniques and EbA at selected intervention sites in Burundi. Costs in include equipment, labour and maintenance of interventions. Cost estimated at: \$500 per household-scale water conservation technology (e.g. rainwater harvesting tank); \$500 per hectare of climate-smart agriculture; and \$1,000 per hectare of EbA/restoration. |
| 25 | Climate change adaptation technologies – Kenya | Cost of implementing water conservation practices, climate smart agricultural techniques and EbA at selected intervention sites in Kenya. Costs in include equipment, labour and maintenance of interventions. Cost estimated at: \$500 per household-scale water conservation technology (e.g. rainwater harvesting tank); \$500 per hectare of climate-smart agriculture; and \$1,000 per hectare of EbA/restoration. |
| 26 | Climate change adaptation technologies – Rwanda | Cost of implementing water conservation practices, climate smart agricultural techniques and EbA at selected intervention sites in Rwanda. Costs in include equipment, labour and maintenance of interventions. Cost estimated at: \$500 per household-scale water conservation technology (e.g. rainwater harvesting tank); \$500 per hectare of climate-smart agriculture; and \$1,000 per hectare of EbA/restoration. |
| 27 | Climate change adaptation technologies – Tanzania | Cost of implementing water conservation practices, climate smart agricultural techniques and EbA at selected intervention sites in Tanzania. Costs in include equipment, labour and maintenance of interventions. Cost estimated at: \$500 per household-scale water conservation technology (e.g. rainwater harvesting tank); \$500 per hectare of climate-smart agriculture; and \$1,000 per hectare of EbA/restoration. |
| 28 | Climate change adaptation technologies – Uganda | Cost of implementing water conservation practices, climate smart agricultural techniques and EbA at selected intervention sites in Uganda. Costs in include equipment, labour and maintenance of interventions. Cost estimated at: \$500 per household-scale water conservation technology (e.g. rainwater harvesting tank); \$500 per hectare of climate-smart agriculture; and \$1,000 per hectare of EbA/restoration. |
| 29 | Community workshops | \$10,000 per country to host community consultations to identify specific climate change impacts and appropriate community-based adaptation interventions. |

| # | Description | Budget notes |
|----|------------------------------|---|
| 30 | Community training | \$10,000 per country to train local communities and NGOs to develop small grant project proposals and manage small grant resources. |
| 31 | Chief Technical Advisor | Consultancy for an international consultant to perform the role of Chief Technical Advisor for the entire implementation of the project. In Component 4 the CTA will be responsible for: i) providing technical reviews of small grant adaptation project proposals; and ii) monitoring and evaluation of small grant projects. See also budget note 19. |
| 32 | Small grants Burundi | Provision of small grants to successful community-based adaption project proponents in Burundi. Estimated cost at \$50,000 per small grant project. |
| 33 | Small grants Kenya | Provision of small grants to successful community-based adaption project proponents in Kenya. Estimated cost at \$50,000 per small grant project. |
| 34 | Small grants Rwanda | Provision of small grants to successful community-based adaption project proponents in Rwanda. Estimated cost at \$50,000 per small grant project. |
| 35 | Small grants Tanzania | Provision of small grants to successful community-based adaption project proponents in Tanzania. Estimated cost at \$50,000 per small grant project. |
| 36 | Small grants Uganda | Provision of small grants to successful community-based adaption project proponents in Uganda. Estimated cost at \$50,000 per small grant project. |
| 37 | Travel | Costs of travel for project staff to undertake monitoring and evaluation of small grant projects in each of the countries. See also budget note 15. |
| 38 | Regional researcher workshop | Cost of a regional workshop for climate change adaptation researchers. |
| 39 | Communication costs | Costs of communication for the research forum. |
| 40 | Materials and goods | Costs of producing knowledge products that will be distributed through regional networks. |
| 41 | Communication expert | Consultancy to: i) develop a communications strategy for the project; and ii) produce appropriate communication materials to be distributed through the awareness-raising campaign. |
| 42 | Materials and goods | Cost of communication materials for the awareness raising campaign, such as booklets, brochures, and posters. |
| 43 | Awareness-raising campaign | Cost of implementing the awareness-raising campaign, including translation of knowledge products into appropriate local languages. |
| 44 | Exhibitions | Cost of hosting exhibitions at international climate change events to showcase lessons learned through the project. |

Table 16. Executing fee breakdown.

| Execution activity | Role | US\$ | Note |
|--|---|---------|------|
| Project personnel | Project coordinator | 133,200 | a |
| | Financial assistant | 72,000 | b |
| Office supplies | | 14,246 | c |
| Communication costs | | 7,200 | d |
| Monitoring & Evaluation | Mid-term Evaluation | 35,000 | e |
| | Terminal Evaluation | 40,000 | f |
| | Audits | 12,000 | g |
| Inception and steering meetings | Regional Project Steering Committee meetings (initial meeting serves as Inception Workshop) | 86,160 | h |

| Execution activity | Role | US\$ | Note |
|--------------------|---------------------------|----------------|------|
| | Sectoral Council Meetings | 0 | i |
| TOTAL | | 399,806 | |

Table 17. Executing fee budget notes.

| # | Budget note for executing fee |
|---|---|
| a | Salary for Project Coordinator (P3): \$4,000 per month x 12 months = \$48,000 x 3 years = \$144,000 |
| b | Salary for Financial assistant: \$2,000 per month x 12 months = \$24,000 x 3 years = \$72,000 |
| c | General office supplies = \$396 per month x 12 months = \$4,752 x 3 years = \$14,246 |
| d | Communication costs, including telephone, printing and internet: \$200 per month x 12 months = \$2,400 x 3 years = \$7,200 |
| e | Mid-term evaluation: \$35,000 |
| f | Terminal evaluation: \$40,000 |
| g | Audits: \$4,000 per year x 3 years = \$12,000 |
| | Cost of Regional project steering committee meetings: Participant flights: 10 permanent secretaries (2 per Partner State) x \$600 per flight = \$6,000 DSA: 10 Permanent Secretaries x \$400 = \$4,000 LVBC/EAC flights: 4 participants x \$600 = \$2,400 LVBC/EAC DSA: 4 participants x \$350 = \$4,200 Conference facility: 14 participants x \$40 per day = \$560 |
| h | Total cost per meeting: \$14,360 x 6 = \$86,160 |
| i | Costs covered by Partner States. |

Table 18. Implementing Entity Fee.

| Description | Total (US\$) |
|---|----------------|
| Overall coordination and management | 79,562 |
| Oversight and management of project development and project implementation | 100,333 |
| Financial management, including accounting, treasury, grant and trust fund management | 60,542 |
| Information and communication management | 21,741 |
| Quality assurance including internal and external audits (Note 1) | 38,812 |
| Overall administration and support costs | 90,715 |
| Total | 391,705 |

H. Disbursement schedule

Include a disbursement schedule with time-bound milestones.

Table 19. Disbursement schedule including milestones.

| | Upon Agreement signature (US\$) | After Year 1 (US\$) | After Year 2 (US\$) |
|-----------------------------------|---------------------------------|---------------------|---------------------|
| Scheduled date (tentative) | January 2017 | January 2018 | January 2009 |
| Project funds | 1,167,000 | 1,588,000 | 1,483,489 |
| Implementing Entity fee | 108,618 | 145,011 | 138,076 |

PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government¹³²

Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project/programme. Add more lines as necessary. The endorsement letters should be attached as an annex to the project/programme proposal. Please attach the endorsement letters with this template; add as many participating governments if a regional project/programme:

See Annex 3 for all endorsement letters.

Table 20. List of endorsements provided for the proposed project.

| | |
|---|-----------------------------------|
| Burundi: Mr. Anicet Nkurikiye, Adviser to the Minister Ministry of Water, Environment, Lands & Urban Planning | Date: July, 22 nd 2016 |
| Kenya: Mr. Charles T. Sunkuli, Principal Secretary, Ministry of Environment, Natura Resources & Regional Development Authorities | Date: July, 28 th 2016 |
| Rwanda: Ms. Fatina Mukarubibi, Permanent Secretary, Ministry of Natural Resources | Date: July, 27 th 2016 |
| Tanzania: Eng. Ngosi C.X. Mwiava, Deputy Permanent Secretary, Vice President's Office | Date: July, 26 th 2016 |
| Uganda: Mr. Keith Muhakanizi, Permanent Secretary/Secretary to the Treasury, Ministry of Finance, Planning and Economic Development | Date: July, 26 th 2016 |

⁶. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

B. Implementing Entity certification

Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address.

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

Mette L. Wilkie
Director, Division of Environmental and Policy Implementation (DEPI)

Date: August 1 2016

Tel.: +254 20 7624782

Email: mette.wilkie@unep.org

Project Contact Person: Barney Dickson

Tel.: +254 20 762 3545

Email: barney.dickson@unep.org

Annexes

List of Annexes

| | |
|---------|--|
| Annex 1 | Stakeholder consultations |
| Annex 2 | Terms of References (ToRs) for key project members |
| Annex 3 | List of endorsements and endorsement letters |
| Annex 4 | Guidance for submitting a request to the Social and Environmental Compliance Unit and the Stakeholder Response Mechanism (SRM) |

Annex 1. Stakeholder consultations

Annex 2. Terms of References (ToRs) for key project members

Terms of Reference for Project Manager (PM)

Scope of Work

The PM will lead the project team and provide overall operational management for the successful execution and implementation of the project. The PM has the daily responsibility for management, coordination and supervision of the implementation of the project and delivery of the results in accordance with the full project proposal and agreed work plans. The PM will be responsible for financial management and disbursements, with accountability to the government, and UNEP. The PM will report to the Regional Policy Steering Committee (RPSC).

The responsibilities of the PM will include the following.

- Oversee and manage project implementation, monitor work progress, and ensure timely delivery of outputs.
- Report to the LVBC and RPSC regarding project progress.
- Develop and facilitate implementation of a comprehensive monitoring and reporting system.
- Ensure timely preparation of detailed annual work plans and budgets for approval by the RPSC.
- Assist in the identification, selection and recruitment of staff, consultants and other experts as required.
- Supervise, coordinate and facilitate the work of the administrative/technical team (consisting of the assistant coordinator, finance/administration staff and national and international consultants).
- Control expenditures and assure adequate management of resources.
- Establish linkages and networks with on-going activities by other government and nongovernment agencies.
- Provide input to management and technical reports, and other documents as described in the M&E plan for the overall project. Reports should contain assessments of progress in implementing activities, including reasons for delays, if any, and recommendations on necessary improvements.
- Inform the LVBC and RPSC, without delay, of any issue or risk which might jeopardise the success of the project.
- Liaise and coordinate with UNEP on a regular basis.

Qualifications

- Master's degree in environment, natural resources management, agriculture or a closely related field.
- A minimum of 10 years' relevant work experience.
- Demonstrated solid knowledge of environment and ecological restoration, with an emphasis on water resources management.
- Demonstrated solid knowledge of climate change adaptation management techniques, practices and technologies.
- Experience in the public participation development process associated with environmental and sustainable development an asset.
- Experience in working and collaborating within governments an asset.
- Excellent knowledge of English, including writing and communication skills.

Reporting

The PM will be a staff member of LVBC and will report to the LVBC Deputy Executive Secretary. The PM will work closely with the RPSC, CTA and UNEP to ensure the availability of information on progress and performance in the implementation of the project.

Terms of Reference for Chief Technical Advisor (CTA)

Scope of Work

The CTA will develop the restoration and conservation agriculture protocols, as well as provide the PM with technical guidance on the implementation of the AF project. The position of CTA is likely to be filled by an international consultant.

The responsibilities of the CTA will include the following.

- Develop the technical climate change adaptation protocols specific to water catchment management.
- Provide quality assurance and technical review of project outputs.
- Undertake technical review of project outputs (e.g. studies and assessments).
- Assist in the drafting of ToRs for technical consultants.
- Supervise the work of consultants.
- Assist in monitoring the technical quality of project M&E systems (including annual work plans, indicators and targets).
- Conduct the financial administrative reporting and the PIR.
- Provide advice on best suitable approaches and methodologies for achieving project targets and objectives.
- Provide a technical supervisory function to the work carried out by national technical advisors, and consultants hired by the project.
- Assist in knowledge management, communications and awareness-raising.
- Facilitate the development of strategic regional and international partnerships for the exchange of skills and information related to climate change adaptation.

Qualifications

- At least an advanced post-graduate at or above M.Sc. level, in a relevant discipline, including climate change adaptation, botany/forestry/soil science, environmental management, natural resources management, agriculture, water resources or a related discipline.
- A minimum of five years' experience in a senior technical lead position with planning and management of environmental and/or natural resources management programmes in developing countries.
- A minimum of five years in a senior technical position involved in institutional strengthening and capacity building.
- Previous similar experiences in provision of technical support to complex projects.
- Experience working in the East African region would be an advantage.
- Good communication and computer skills.
- Fluent in spoken and written English.

Reporting

The CTA will report to the RPSC. The CTA will cooperate with the PM, Financial Assistant, other LVBC staff and UNEP task manager to ensure the availability of information on progress and performance in the implementation of the project. In the implementation of his/her duties, the CTA will work in close collaboration with the UNEP task manager, specifically in consultation for implementation and decision-making of the project.

Terms of Reference for Financial Assistant

Scope of Work

The responsibilities of the Financial Assistant will include the following.

- Standardise the finance and accounting systems of the project while maintaining compatibility with the government and UNEP financial accounting procedures.
- Prepare budget revisions of the project budgets and assist in the preparation of the annual work plans.
- Comply and verify budget and accounting data by researching files, calculating costs and estimating anticipated expenditures from readily available information sources, in particular partner agencies.
- Prepare status reports, progress reports and other financial reports.
- Process all types of payment requests for settlement purposes, including quarterly advances to the partners upon joint review.
- Prepare periodic accounting records by recording receipts, disbursements – ledgers, cash books, vouchers, etc. – and reconciling data for recurring or financial special reports, and assist in preparation of annual procurement plans.
- Undertake project financial closure formalities, including submission of terminal reports, transfer and disposal of equipment, processing of semi-final revisions and support professional staff in preparing the terminal assessment reports.
- Assist in the timely issuance of contracts and assurance of other eligible entitlements of the project personnel, experts and consultants, by preparing annual recruitment plans.

Reporting

The Financial Assistant will report to PM.

Annex 3. List of endorsements and endorsement letters

Annex 4. Grievance mechanism

Grievance Mechanism for Lake Victoria Basin Project

UNEP has established grievance mechanism that it applies to all its projects. Such a Stakeholder Response Mechanism is within the Environmental, Social and Economic Sustainability Framework to address compliance and grievance cases that arise from UNEP projects. This Mechanism is coordinated and managed by the Independent Office for Stakeholder Safeguard-related Response. The operating procedures in the Stakeholder Response Mechanism inform and guide UNEP staff, UNEP implementing/executing partners, and people affected by UNEP projects on bringing forward and responding to stakeholder concerns.

The Project Manager or the implementing/executing partners are usually the first point of contact for any project-related complaints from stakeholders. The Project Manager and project team should respond promptly and appropriately to a complaint with the goal of avoiding escalation to the Independent Office for Stakeholder Safeguard-related Response.

The Project Manager can direct the complainants to fill out the “UNEP Project Concern Feedback Form” form and submit it to the Independent Office for Stakeholder Safeguard-related Response if the issues cannot be resolved at the project level. The Project Manager should advise complainants to provide complete information, so UNEP can properly assess and address the complaint. The form and instructions on how to submit the complaint form are available on www.unep.org (under “Project Concern” in the “A-Z of UNEP”) or at www.unep.org/about/eses. The form is available in all UN official languages on the different language versions of the same sites.

If the Independent Office for Stakeholder Safeguard-related Response finds that the complaint is eligible, s/he forms a team composed of internal or external experts to investigate the case and propose options for the complainant to consider.

Compliance review vs. grievance redress

The Independent Office for Stakeholder Safeguard-related Response is responsible for both compliance review and grievance redress (dispute resolution) processes:

- **compliance review** is the process used, as appropriate, to review and respond to stakeholders’ concerns that UNEP may not be in compliance with its Environmental, Social and Economic Sustainability Framework
- **grievance redress** is a process providing people affected by UNEP projects with access to appropriate and flexible dispute resolution procedures

The Stakeholder Response Mechanism is summarized in Table 1 below.

Table 1: Stakeholder Response Mechanism

| | Compliance review | Grievance response |
|--|---|--|
| Complainant | Any person or group of persons who may be affected by UNEP-supported activities. While anonymous complaints will not be accepted, requests for confidentiality will be respected. | |
| Channel | Complainants can contact the Independent Office for Stakeholder Safeguard-related Response via mail, phone or email. Complainants should provide full details through the “UNEP Project Concern” form to enable UNEP to assess eligibility. | |
| Eligibility requirements | <ul style="list-style-type: none"> • The complaint is directly related to Environmental, Social and Economic Sustainability issues. • The issue concerns a proposed or on-going UNEP project. | |
| Responsibility within UNEP | Independent Office for Stakeholder Safeguard-related Response with support of relevant Regional Office and/or Divisions and/or thematic experts. | |
| Response | Independent Office for Stakeholder Safeguard-related Response investigates the complaint and reports findings and recommendations to the UNEP Executive Director. UNEP communicates the decisions and steps that UNEP will take in response to the concerns. | Independent Office for Stakeholder Safeguard-related Response explores mediation, negotiation, conflict resolution, and/or referral to another dispute resolution mechanism. |
| Possible results and follow up action | <ul style="list-style-type: none"> • Measures to minimize or mitigate negative impacts from project activities. • Revision and disclosure of the project. • Permanent suspension of the project. | <ul style="list-style-type: none"> • Proposed measures to address or compensate for negative impacts from project activities. • Resolution of issue. • Public disclosure of the case. |

Internal process for handling stakeholder response cases

UNEP has devised an internal process of how to handle stakeholder response case and this is articulated in Figure 1. Figure 1 below shows the detailed work-flow for the Independent Office for Stakeholder Safeguard-related Response under the Stakeholder Response Mechanism following a complaint.

Figure 1: Stakeholder response work flow

