Statement of Need (problems in the region – rationale, multi-sectors, lives lost and economic losses, etc)

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A. Institutional Background
B. Potentials and Challenges
C. Programmatic Interventions
D. LVEMP Phase II
E. Initiatives on Maritime Safety, Security, Transport and Communications in the Lake Victoria
F. MNLVMCT Project & Needs Assessment
Institutional Background
Total Catchment – 194,000 Sq Km
Total Population – 44.9 Million
Pop Density – 300 pp Sq Km

LAKE VICTORIA BASIN

- **P-7.5 Million** (16%)
- **P-16 Million** (22%)
- **P-7 Million** (44%)
- **P-9 Million** (11%)
- **P-5 Million** (7%)
- **Total Catchment – 194,000 Sq Km**
- **Total Population – 44.9 Million**
- **Pop Density – 300 pp Sq Km**

Legend:
- Country Boundaries
- River
- Lake Victoria Basin
- Ramsar Site
- Dams
### MORE FACTS ABOUT LAKE VICTORIA

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Area</td>
<td>68,870 Km²</td>
</tr>
<tr>
<td>Average Depth</td>
<td>40m</td>
</tr>
<tr>
<td>Maximum Depth</td>
<td>84 Meters</td>
</tr>
<tr>
<td>Shore line length</td>
<td>4828 Km</td>
</tr>
<tr>
<td>Volume</td>
<td>2750 cubic Kilometers</td>
</tr>
<tr>
<td>Source of water</td>
<td>Precipitation- 82%</td>
</tr>
<tr>
<td></td>
<td>Rivers – 18%</td>
</tr>
<tr>
<td>Loss of water</td>
<td>Evaporation – 76%</td>
</tr>
<tr>
<td></td>
<td>River Nile Outflow – 24%</td>
</tr>
<tr>
<td>Water Residence Time</td>
<td>23 Years</td>
</tr>
<tr>
<td>Flushing Time</td>
<td>123 Years</td>
</tr>
</tbody>
</table>
LVBC is resource endowed (1st EAC DS designation as REGZ) but constrained by some challenges (sea of challenges – ocean of opportunities)

**Potentials:**

- Water resources
- Fisheries resources - 800,000 to 1,000,000 metric tons of fish annually, worth $ 900m
- Wildlife
- Biodiversity
- Climate
- Population (over 44.9 million)

**Challenges**

- In the lake (pollution, sedimentation, water levels, fisheries)
- In the littoral zone (wetland destruction)
- In the basin (land degradation, deforestations, pollutions)
- Outside the basin (atmospheric deposition, climate change)
POPULATION DYNAMICS IN LVB

Population Density (people / km²)
- High (>100)
- Medium (25-100)
- Low (<25)

Lake Victoria

Africa Average


Lake Victoria

Africa Average

2015

12000
10000
8000
6000
4000
2000
0

Kения
Уганда
Танзания
Руанда
Бурунди

Livestock pop (1000 heads)

Cattle
Sheep
Chicken
Lake Victoria Basin in Perspective...
LVBC is a specialized institution of the EAC

Establishment of the Commission is provided for under Article 114 of EAC Treaty (1999).

Operations of the Commission is governed by the Protocol for Sustainable Development of LVB (2003)

Other guiding documents include:

- Shared Vision & Strategy Framework
- EAC Development Strategy
- Strategic Plan
- Sectoral Council & Council's Decisions & Directives
- Regional policies and strategies
LVBC’s Vision & Mission

Vision
“A prosperous population living in a healthy and sustainably managed environment providing equitable opportunities & benefits”

Anchored on 5 key policy areas:
1. Environment, Ecosystems, NR
2. Production and Income Generation
3. Living Conditions and Quality of Life
4. Population and Demography
5. Policy, Institutions and Governance

Mission
to promote, facilitate and coordinate activities of different actors in the LVB.

Objective
Equitable economic growth, poverty eradication, Env. Cons., NRM, Safety of Nav.
LVBC GOVERNANCE STRUCTURE

- LVBC Secretariat
  - National Focal Point Office/MEACA
  - Donor Consultative Group
- Civil Society/Private Sector
- LVB Sectoral Council of Ministers
  - Coordination Committee
  - Sectoral Committees
- EAC Council of Ministers
- EAC Summit
SCOPE OF COOPERATION

1. Sustainable development, management and equitable utilization of water resources;
2. Sustainable development and management of fisheries resources;
3. Promotion of sustainable agricultural and land use practices including irrigation;
4. Promotion of sustainable development and management of forestry resources;
5. Promotion of development and management of wetlands;
6. Promotion of trade, commerce and industrial development;
7. Promotion of development of infrastructure and energy;
8. Maintenance of navigational safety and maritime security;

9. Improvement in public health with specific reference to sanitation;

10. Promotion of research, capacity building and information exchange;

11. Environmental protection and management of the Basin;

12. Promotion of Public participation in planning and decision-making;

13. Integration of gender concerns in all activities in the Basin; and

14. Promotion of wildlife conservation and sustainable tourism development.
PROGRAMMATIC INTERVENTIONS
In line with the Protocol, SVSF, EAC DS, LVBC Strategic Plan, Councils Decisions and Directives

Achieved through: On going projects

- Lake Victoria Environmental Management Project - LVEMP
- Lake Victoria Water and Sanitation - LWATSAN
- PREPARED (WASH, Climate Change and Biodiversity)
- Population, Health and Environment - PHE

Pipeline:

- Integrated Water Resource Management (IWRM) Project
- Multinational Lake Victoria Maritime Communications and Transport Project – MNLVMCTP
- EAC Intermodal corridor development - LVTP
- LVB Climate Change Adaptation Project
Lake Victoria Environmental Management Project

- LVEMP Phase II: 2009 – 2017; Kenya, Uganda, Tanzania, Burundi and Rwanda
- Total Project cost for LVEMP II is US $160 million

- Objectives of the LVEMP II

  ✓ Improvement of the **collaborative management** of the trans-boundary natural resources of the Lake Victoria Basin (LVB) among the Partner States; and
  ✓ Improvement of **environmental management** of targeted pollution hotspots and selected degraded sub-catchments for the benefit of communities.
Components of LVEMP II

- It has four project components;
  - strengthening coordination capacity for managing shared water and fisheries resources;
  - Point source pollution control and prevention.
  - Watershed Management – natural resources conservation and livelihood improvement.
  - Project coordination and Management.

LAKE VICTORIA ENVIRONMENTAL MANAGEMENT PROGRAM
IMPACT IN NUMBERS

- $90,000,000 has been invested and leveraged in cleaner production
- 630 watershed management projects underway
- 200,000 people have benefited from community-driven development activities
- 350,000 people to benefit from improved sanitation
- 30 community-based shore line operations to control water hyacinth
- 10,000 km of land in the basin under sustainable management
- 1,500 km of riverbanks and shoreline areas reforested
- 37 locations have navigation markers helping ships avoid shallow waters
LVEMP II achievements

- **Harmonization** of various policies, strategies, legislations and regulatory frameworks eg. EAC Fisheries and Aquaculture Policy, Water Management Policy, Basin-wide Sustainable Land Management strategy, Water Hyacinth Surveillance and Control Strategy, etc.

- **Construction and Rehabilitation** of wastewater treatment facilities in Bomet, Homa Bay, Kisumu, Bukoba and Kirinya hence reducing levels of pollution into the LV.

- **Construction of 93 public and ecological sanitation toilets** in Kenya, Uganda, Tanzania and Burundi serving over 171,558 people.

- **Installation of Aids to Navigation** around the LV eg. 89 AoN

- **It restored 1,950 hectares** of degraded wetlands.

- **Monitoring and control of water hyacinth**
LVEMP II achievements

- LVEMP II put over 21,248 Hectares under sustainable land management practices thereby reducing non-point sources of pollution and improving livelihoods of rural communities in Lake Victoria Basin.
- It facilitated the empowerment of communities by introducing for the concept and practice of Community Driven Development (CDD) eg. over 620 CDD sub-projects were successfully implemented.
- Capacity building of National implementing Agencies eg. provisions of training, water quality labs, vehicles, etc
- It promoted cleaner production technologies among industries in the basin
- The project promoted sustainable land management practices and technologies through CDDs and CMI sub-projects that contributed to reduction in land degradation
LVEMP II achievements

- LVEMP II also contributed to the improvement of livelihoods of communities that depend on the resources in the basin eg. honey production.
- CDD and CMI (co-Management Interventions) approaches were used to introduce new environmentally friendly technologies such as biogas, energy-saving Jikos among others.
- Project supported the development of the Lake Victoria Fisheries Management Plan III, the Water Resources Management Plan I.
LVEMP II challenges

• Effects of climate change; population explosion and high rate of urbanisation as well as invasive weeds and species.
• Operational challenges including bureaucracy in procurement of goods and services by Partner States.
• Politics in the Region eg electioneering periods.
• Poor infrastructure in the lake Victoria basin; road transport, telecommunication, etc.
Projects in Pics

LVBC

1

3

2
INITIATIVES IN MARITIME TRANSPORT AND SAFETY IN LAKE VICTORIA

- Bathymetric Survey for the access to Mwanza, Port bell and Kisumu ports;
- Development of **Oil spills and Toxic Chemical Contingency Plan** for Lake Victoria;
- Installations of Aids to Navigation Equipment – at least 89
- Installation of a ring of communication network around the lake (and 20 km into the lake)
- Gazettement by the Council of Ministers of the number 110 as an emergency number;
- Full fledged department of Maritime Safety at LVBC;
- Successful negotiations and approval by AfDB the Multi-National LV Maritime Communications and Transport project - MNLVMCT
Improving safety of navigation and security on Lake Victoria

Plate 1: Aids to navigation installed near Chamhanya
Installed Aids to Navigation equipment
Oil spill response equipment
The Multinational Lake Victoria Maritime Communication and Transport Project
Reinforcing navigation safety on the largest African Lake

On 25th October 2016, the African Development Bank approved a USD25M loan to a multinational project to establish a safety-of-life communications systems for Lake Victoria. The largest lake in Africa, which provides income and livelihood to around 4 million people, counts a fleet of 70,000 vessels mostly comprising of individual fishermen without any alerting or rescue systems. Consequently as many as 5000 people die in the lake each year. By combining modern communications systems with the broad provision of rescue centres, the project will save lives and stimulate business to the benefit of the economy of the entire Lake Victoria basin.

The project includes the extension of the area covered by GSM system network, an affordable alert tool for the 200,000 fishermen of the Lake. The project includes the creation of 3 safety centers and sub-centers, and 22 rescue units.

UGANDA
- Maritime Rescue Communication Sub-Centres
  - Entebbe
  - Ggaba (Wakiso)
  - Katosi (Bugiri)
  - Bwonda (Mayuge)
  - Mwena (Kaqansi)
  - Kasensero (Raka)
  - Bukoba Port
  - Mwanza Port (South)

KENYA
- Maritime Rescue Communication Sub-Centres
  - Majani (Busia)
  - Kisingi
  - Kigoma
  - Migori

TANZANIA
- Maritime Rescue Communication Sub-Centres
  - Mwanza Port (South)
  - Regional Maritime Rescue Communication Centres (MRCC)

Safety on Lake Victoria
What changes

<table>
<thead>
<tr>
<th>Year</th>
<th>Change Description</th>
<th>2015</th>
<th>2020 (Achievement)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5,000 losses of</td>
<td></td>
<td>-0% loss of</td>
</tr>
<tr>
<td></td>
<td>lives and vessels</td>
<td></td>
<td>10,000 licensed</td>
</tr>
<tr>
<td></td>
<td>and property from</td>
<td></td>
<td>cargo and passenger</td>
</tr>
<tr>
<td></td>
<td>accidents</td>
<td></td>
<td>vessels on the Lake</td>
</tr>
<tr>
<td></td>
<td>9,000 licensed</td>
<td></td>
<td>80% of lake</td>
</tr>
<tr>
<td></td>
<td>cargo and passenger</td>
<td></td>
<td>covered by GSM</td>
</tr>
<tr>
<td></td>
<td>vessels on the Lake</td>
<td></td>
<td>signal</td>
</tr>
<tr>
<td></td>
<td>40% of lake</td>
<td></td>
<td>11,000 licensed</td>
</tr>
<tr>
<td></td>
<td>covered by GSM</td>
<td></td>
<td>cargo and passenger</td>
</tr>
<tr>
<td></td>
<td>signal</td>
<td></td>
<td>vessels on the Lake</td>
</tr>
<tr>
<td></td>
<td>(3 national</td>
<td></td>
<td>Weather Alerts</td>
</tr>
<tr>
<td></td>
<td>meteorological</td>
<td></td>
<td>for the lake users)</td>
</tr>
<tr>
<td></td>
<td>agencies</td>
<td></td>
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</table>
The MNLVMCT project is a trans-border infrastructure initiative designed around the 4th EAC Development Strategy (2011-2016).

It addresses the maritime transportation and navigation safety and security intervention area.

It will contribute to the provision of safe, efficient, cheap and environmentally friendly transport links, and fishing activities that are essential to achieving the goals of poverty reduction and sustainable development.

The project is in line with the Protocol for Sustainable Development of Lake Victoria Basin; LVBC Strategic Plan 2011 – 2016; the participating countries Strategy Papers (CSP); and the Bank’s Regional Indicative Strategy Paper (CSP) for East Africa.
MNLVMCT Project Cost

- The estimated total MNLVMCT Project cost is UA 25.95 million (USD 36,583,822).
- The proposed financing from ADF window amounts to UA 17.75 million (USD 25,014,522).
  - ADF loan of UA 3.77 million (Tanzania)
  - ADF loan of UA 3.77 million (Kenya)
  - ADF loan of UA 10.21 million (Uganda)
- The European Union – Africa Infrastructure Fund (EU-AIF) is expected to contribute UA 3.38 million (USD 4,770,000)
- Participating countries’ contributions will amount to approximately UA 4.82 million (USD 6,799,300).

- The project is expected to be implemented over a period of four years.
Broad objective of the project is to facilitate transport and trade on the lake by improving maritime transport infrastructure including maritime communications, navigation aids, maritime emergency search and rescue services, maritime security and inland waterways for Lake Victoria.

Maritime communication network coverage and functionality.

To operationalize the Regional Maritime Rescue Coordination Centre in Mwanza, Tanzania; and two sub centres in Kisumu (Kenya) and Etebke (Uganda)

To establish, equip and strengthen the emergency Search and Rescue (SAR) organization.

To strengthen weather forecast services around and on the Lake and other value added services
Objectives/Importance…

• To support development of the East African Maritime Transport Strategy and Lake Victoria Development programme.
• To strengthen the implementation capacity of the designated agencies.
• To support efforts of women groups around SAR facilities within the beach management units to undertake self-sustaining economic activities that are complementary to the project. The activities include locally produced life jackets; improved environment of ‘mugongo wazi’ fish skin processing activities and health programmes.
• It will help in the implementation of Lake Victoria Transport Act 2007 and Oil Spill Contingency Plan for Lake Victoria.
Objectives/Importance...

- It will improve maritime security of the Lake. These include issues related to piracy, armed robberies, IUU (Illegal, Unreported and Unregulated) fishing, drug and human trafficking, etc.
- Many precious lives of fishermen will be saved hence contributing to economic growth of fishing industry in Lake Victoria.
- It will boost tourism in the lake since safety and security of the lake will be guaranteed.
Components of MNLVMCT Project

The MLVMCT project consists of three main components.

**Component 1: Establishment of a Maritime communications system for safety on Lake Victoria.**

- **Maritime Communication Network (MCN):** extending the range of the current GSM system to its technical maximum, using the Extended Range feature.
- **Establishment of Regional Maritime Rescue Communication Centre (MRCC) in Mwanza, Tanzania; and two sub centres in Kisumu (Kenya) and Entebbe (Uganda) capable of receiving and responding to distress calls, locating the victims, mobilizing, controlling and coordinating rescue missions by rescue boats.**
- **Twenty two (22) Emergency Search and Rescue (SAR) stations distributed around the lake, equipped with fast rescue boats and trained crews.**
Components of MNLVMCT Project

- Weather forecast and Value added services
  - installation of weather forecast systems for three MRCCs
  - Provision of briefing rooms for weather alerts in the three MRCC
  - Strengthening the meteorological offices linked to the centres
  - Dissemination of weather alerts products (radio, sms, briefings)
  - Total weather forecast component – 2,475,983 USD
Components of MNLVMCT Project

Component 2: Maritime Transport for Lake Victoria Study.

• Development of East African Maritime Transport Strategy that will guide the development of the maritime transport sector in the region.

• Preparation of Lake Victoria Transport Development Programme. This component will comprise: assessment of current status; demand forecast; identification of projects required for achievement of transport network; detailed feasibility study for the short-term projects to be financed by the Bank; and needs assessment of capacity building.
Component 3: Project Management and Capacity Building

- Establishment and support for the operation of the Project Implementation Unit (PIU);
- Strengthening of implementation capacity of the Implementing Agency and other Stakeholders including technical support to prepare technical specifications of various components of the project and develop tender documents for the project; support integration and capacity building of women maritime professionals and skills development of project staff.
- Awareness and Monitoring and Evaluation: development of communication and knowledge management strategy which will include visibility programmes of financiers (European Union; African Development Bank); undertake awareness activities.
- Project audit: Support periodic and final auditing of project.
Maritime communications system for safety on Lake Victoria

Lake Victoria Communication Coverage (2000)
Locations of SAR units

Lake Victoria 1 hr SAR range

Legend:
- USENGE: Kenya site
- Dolwe: Uganda site
- Chifunfu: Tanzania site
- LVFO port: LVBC port

20 km range
Some challenges

- Increased no of marine accidents due to hazardous weather conditions, unseaworthiness of vessels, lack of updated navigational charts, lack of safety awareness, poor seamanship eg estimated 5000 deaths/year affecting 30,000 people.


- Other maritime security threats in the Lake Victoria include illicit drugs, IUU fishing, illegal immigrants, pirates, etc.
Feasibility Study on Meteorological by LVBC

Enhancing Safety of Navigation and Efficient Exploitation of Natural Resources over Lake Victoria and Its Basin by Strengthening Meteorological Services on the Lake

Final Report
26 October 2011
Needs and Solutions

• Lack of timely weather forecast in the LV - MNLVMCT & HIGHWAY
• Lack of reporting and recording systems for marine accidents – MNLVMCT
• Lack of Regional maritime rescue coordination centres in the Lake – MNLVMCT
• Lack of Regional Maritime Search and Rescue Plan, SOP, - LTVP, MNLVMCT
• Lack of proper Lake Ports infrastructure in the LVB - LVTP
Needs and Solutions

- Lack of Regional Lake Victoria Maritime Security Policy – Lake Victoria Transport Program (LVTP)
- Lack of Lake Victoria Maritime security Strategy and Action Plan – 5yrs Plan; - LVTP
- Lack of Regional Maritime Security Information Sharing/Fusion Centres - MNLVMCT
- Lack of coordinated maritime surveillance and reconnaissance – MNLVMCT
- Lake Ports compliance with ISPS code – LVTP
- Maritime Domain Awareness to strengthening maritime security – IPSTC