

Overview of Proposed Lake Victoria Pilot Project

WMO Global Hydrological Status and Outlook System (HydroSOS)

INITIAL PLANNING MEETING

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Presentation Outline

- Background
- Issues in the basin
- Current Activities
- Gaps
- Requirements for HydroSOS Information
- Potential Contributors

Background

Basin countries

Burundi
Rwanda
Uganda
Kenya
Tanzania

Lake Area

Uganda (45%)
Kenya (6%)
Tanzania (49%)

Basin area	130,000 km²
Lake area	68,800 km²
Maximum Depth	80m
Average depth	40m
Lake's shoreline	3,500 km
Residence time	23 years



Lake Victoria Basin Issues

- Conflicts in Water use
 - ✓ In sub-catchments – Industries and domestic water supply
 - ✓ Regional level – Competition between HEP generation and uses (fisheries, transport) that depend on maintaining water level in the Lake
- Water quality deterioration – Eutrophication in the bays
- Water hyacinth
- Recession of the lake to historical levels
- Equitable use – countries want equitable share of the benefits
- Over-exploitation of lake fisheries
- Floods in the major cities around the lake

Current Activities

- Developing an abstraction and release policy under LVBC
- Managing waste water releases into the system
- Designing drainage systems to evacuate the floods
- Kagera Water Allocation Model
- An ongoing study – HyCRISTAL Transport Pilot project supported by World Bank & CEH. To quantify impacts of climate changes on L.Victoria water levels in order to inform dredging strategy & port design

Gaps

- Accuracy of Lake Water balance is suspect, rainfall contribution into the system is relatively unknown
- Hydrodynamics of the lake to manage the eutrophication
- Need for knowing the optimal economic benefits out of the lake – need for scheduling of HEP dams, lake transport, fisheries
- Need for flood frequency information, maps, warning systems and resilience plans

Requirements for HydroSOS Information

- Provision of distributed satellite/radar rainfall time series
- Ground monitoring stations for rainfall, temperature, wind for the rivers and the lake catchments
- Development of hydrological forecasting systems for the rivers and the lake and the associated infrastructure
- Hydro-economic analysis system to convert hydrology into economic decisions
- IT infrastructure (modeling tools) & Human resource capacity building
- Institutional roles and involvement in HydroSOS
- Existing data sharing protocols under regional bodies like NBI – an entry point for HydroSOS
- Regional institutions (eg. RCMRD) – Application of GIS and RS in water resources management - another entry point for collaboration in data access & training

Potential Contributors

- National – NHMs, research/academic institutions
- Regional – Partner states, NBI, LVBC, Kagera River Basin Management Project, ICPAC
- International – WMO HydroSOS

Thank You