Lake Victoria Through the Eyes of Science: Current Issues, Threats, and Opportunities in the Lake Basin (20th October, 2021)

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Presentation Outline

• Introduction
• Current issues
• Threats to bio-diversity
• Intervention
• Opportunities
• wayforward
Introduction
Introduction

- Surface area coverage of LVB
- Total surface area = 180,950km (minus water surface)
  - Uganda = 28,857km²
  - Kenya = 38,913km²
  - Tanzania = 79,570km²
  - Burundi = 13,060km²
  - Rwanda = 20,550km²
## Current issues in Lake Victoria Basin

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<th>Issues</th>
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<td>Environmental</td>
<td>Pollution, Land degradation, Turbidity, High sediment and Nutrient loading, Alkalinity, etc</td>
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<td>Ecological</td>
<td>Bio-diversity Loss, Habitat degradation, Land coverage change, Algal blooms, Species introductions, cage Aquaculture production, Aquatic weeds</td>
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<td>Ecosystems and services</td>
<td>Decline fish catches, biomass, Difficulty in Navigation and transport, water extraction, HPE &amp; aesthetics</td>
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<td>Economic</td>
<td>Decline in tourism income, fish revenue, livelihoods</td>
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<td>Social</td>
<td>Tourism income and fish revenue declines, livelihoods affected, land water related conflicts, increase disease &amp; prostitution</td>
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<td>No ILBM plan in place</td>
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Threats

- Pollution, Land degradation, Turbidity, High sediment and Nutrient loading, Alkalinity, etc.
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Threats

- Bio-diversity Loss, Habitat degradation, Land coverage change, Algal blooms, Species introductions, cage Aquaculture production, Aquatic weeds
  - Weed flourish and fish decline in lake Victoria
Threats

- Bio-diversity Loss, Habitat degradation, Land coverage change, Algal blooms, Species introductions, cage Aquaculture production, Aquatic weeds
- Loss to habitat — destroying exotics
Threats

- Species introductions and fish decline in lake Victoria – Invasive species (the Nile perch invasion cause or consequence of the decline of the haplochromines)
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Threats

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Threats

- Species introductions and fish decline in Lake Victoria
  - Invasive species (the nile perch invasion cause or consequence of the decline of the over 500 haplochromines species
Threats

- Species introductions a threat to entire aquatic biodiversity
Threats

- Decline fish catches, biomass, Difficulty in Navigation and transport, water extraction, HPE & aesthetics

Decline fish catches between 1990 to 2014
Threats

- Decline fish catches, biomass, Difficulty in Navigation and transport, water extraction, HPE & aesthetics

Fish export volumes although currently reported to be recovering
Threats

- Decline fish catches, biomass,
- Difficulty in Navigation and transport,
- water extraction,
- HPE & aesthetics

Effects of Overfishing and illegal fish gears
Threats

- Decline fish catches, biomass, Difficulty in Navigation and transport, water extraction, HPE & aesthetics

Decline fish catches from 1990 to current situation
Threats

- Decline in tourism income, fish revenue, livelihoods

Decline fish catches from 1990 to current situation
Threats

- Tourism income and fish revenue declines, livelihoods affected, land water related conflicts, increase disease & prostitution

Decline fish catches from 1990 to current situation
Threats

- Climate change – responsible for increasing lake water volume & mass fish kills???
Intervention
Opportunities

- Integrated Lake Basin management allows for a number of opportunities
  - Cage aquaculture production
  - Water extraction (Industrial & Domestic Use), Hydro-Power generation
  - Water transport and navigations
  - Species bio-diversity conservation
  - Tourism & water sports hot spots
  - Fish stocks recovery / capture fisheries
Opportunities

• Some on going research works

• Identifying and Mapping High Potential Aquaculture Zones (HPAZs) in the six (06) Agro-Ecological Zones (AEZ) of Uganda; Designing Novel, AEZ customised Aquaculture production systems; Developing AEZ customised enterprise budgets and guidelines on Best Management Practices (BMPs).
Opportunities

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Way forward

- Comprehensive integrated Lake Victoria Basin Management plan
- Lake User Policy harmonization with LVB countries e.g.
  - East Africa cage aquaculture guidelines
  - Cage fish farming policy for the EA community
- Managing the Ecosystem in a sustainable manner
  - Identification and mapping of cage aquaculture sites