FISHERIES IN ZAMBIA AND LUAPULA PROVINCE

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Fisheries subsector

AGRICULTURE

FISHERIES

CAPTURE FISHERIES

Wild fish in natural water bodies

AQUACULTURE

Fish and plant farming
Regulatory framework

- Fisheries Act. No. 22 of 2011
  - Excludes GMF
- Animal Health Act. No. 27 of 2010
  - Includes fish in the definitions of animal
    - For example article 57
- Biosafety Act No. 10 of 2007
  - Regulates all GMOs [including fish] importations
- EMA Act No. 12 of 2011
  - Article 77
Fisheries resources

- 15 million ha of water in form of rivers, lakes and swamps.
- 8 million ha of wetlands (ADP, 2009).

- Two major basins
  - Zambezi
    - Kafue, Kariba, Lukanga, Upper Zambezi, Lower Zambezi, Itezhi-tezhi and Lusiwashi
  - Congo basins.
    - Bangweulu, Mweru-Luapula, Mweru Wantipa and Tanganyika.
Importance of fisheries in Zambia

- **Employment**
  - > 1 million

- **Contribution to GDP**
  - 3.3% - Agriculture GDP
  - 0.3% - overall GDP

- **Food and nutrition security**
  - 40% of animal protein
Global trend

World fish supply

World per capita fish supply

Fish production (million tonnes)

Capture
Aquaculture

Per capita fish supply (kg)


Analysis of Fisheries and Aquaculture production

Global = 19.2kg
Analysis of Fisheries and Aquaculture production

Fish consumption/capita
Fish production/capita
Desired fish consumption/capita

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The Future

- Total production (tons)
- Capture fisheries (tons)

Fish production (kg)

Year


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Fisheries in Luapula

Total fish production (tons)

CPUE (fisher)
‘Tragedy of the commons’
Fish production - 2013

33%
Declining fish catches per fisher

- **Mweru - Luapula**
  - 1974 = 1.2 tons; 6,000 fishers
  - 2013 = 0.2 tons; 21,222 fishers

- **Bangweulu**
  - 1974 = 1.4 tons; 7,696 fishers
  - 2013 = 0.9 tons; 18,150 fishers
Declining water level in Bangweulu Complex – 1956 - 2011

The lake has reduced in its depth by 0.66m between 1974 and 2011

\[ y = -0.0131x + 27.672 \]

\[ R^2 = 0.2726 \]
Aquaculture in Luapula – small scale (2009)

<table>
<thead>
<tr>
<th>Province</th>
<th>Production (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>354</td>
</tr>
<tr>
<td>Lusaka</td>
<td>168</td>
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<tr>
<td>Western</td>
<td>99</td>
</tr>
<tr>
<td>Southern</td>
<td>27</td>
</tr>
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<td>North-Western</td>
<td>283</td>
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<tr>
<td>Northern</td>
<td>1287</td>
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<td>Eastern</td>
<td>1185</td>
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<td>Luapula</td>
<td>195</td>
</tr>
<tr>
<td>Copperbelt</td>
<td>531</td>
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</tbody>
</table>
Challenges

No clear management objective
---Challenges

- Low production and productivity
- Unknown stock biomass in major fisheries
- Lack of quality fingerlings and feed
  - CEEC
- Weak enforcement of fisheries regulations
  - Gear restrictions
  - Fishing ban
---Challenges

- Effects of Climate change
- Dependence syndrome
- Weak R & D
- Exotic
Recommendations

- Stock assessment
- Promotion of aquaculture – cages/pond based
- Establishment of input supply – private sector
- Review of capture management strategies
THANK YOU!!