FISHERIES: MUCHINGA PROVINCE

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INTRODUCTION

HIS EXCELLENCY MR. EDGAR CHAGWA LUNGU

Strategies

- E-voucher
- Hatcheries
- Co-management
- Aquaculture Parks
- Zambia Aquaculture Enterprise Development Project
- Ministry of Fisheries and Livestock
  - 80,000 tons of farmed fish
  - 90,000 tons from capture fisheries
FISHERIES SUBSECTOR

CAPTURE FISHERIES
(Wild fish in natural water bodies)

AQUACULTURE
(Farmed aquatic spp)
Zambia has two basins

- **Zambezi**
  - Kafue, Kariba, Lukanga, Zambezi (Upper, Middle and Lower), Itezhi-tezhi, Luangwa and Lusiwashi.

- **Congo basins**
  - Bangweulu, Mweru-Luapula, Mweru Wantsipa, Chambeshi and Tanganyika.
Current status

- Annual aquaculture production = 20,000 mt
- Annual fish catches from Capture = 75,000 mt
- Per capita fish production/catch = 6.6 kg
- Per capita fish consumption = 10.3 kg
- Total consupption = 130,000 mt
- Deficit = 35,000 mt
- 53.4% source of animal protein
- Contribution to Gross Domestic Product = 0.3%
- **Tilapia** and **catfish** are the main fish types that have been adapted to Zambia
- Aquaculture production has increased by 15,000 mt per annum between 2006 and 2013
- Global per capita fish consumption has increased from 9.9 kg in 1960s to 19.2 kg in 2012, however Zambia’s consumption per capita has reduced
- Importation of fish increased from nearly 25% in 2015 to 37% in 2016
OVERVIEW OF FISHERIES AT GLOBAL LEVEL (FAO, 2016)
OVERVIEW OF FISHERIES AT GLOBAL LEVEL
OVERVIEW OF FISHERIES AT GLOBAL LEVEL (FAO, 2016)

**CAPTURE**
- 93.4 million tonnes,
- 81.5 million tonnes from marine waters
- 11.9 million tonnes from inland waters

**AQUACULTURE**
- 73.8 million tonnes,
- first-sale value of US$160.2 billion
- China more than 60%
**OVERVIEW OF FISHERIES – ZAMBIA AND ITS NEIGHBOURS IN 2013 (FAO, 2014)**

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>CAPTURE (MT)</th>
<th>AQUACULTURE (MT)</th>
<th>PER CAPITA SUPPLY (KG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>275,000</td>
<td>450</td>
<td>14.2</td>
</tr>
<tr>
<td>Botswana</td>
<td>431</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>DRC</td>
<td>227,414</td>
<td>2,869</td>
<td>5.6</td>
</tr>
<tr>
<td>Malawi</td>
<td>112,248</td>
<td>3,705</td>
<td>5.7</td>
</tr>
<tr>
<td>Mozambique</td>
<td>222,101</td>
<td>721</td>
<td>8.5</td>
</tr>
<tr>
<td>Namibia</td>
<td>485,738</td>
<td>470</td>
<td>12.0</td>
</tr>
<tr>
<td>South Africa</td>
<td>412,510</td>
<td>4,010</td>
<td>5.7</td>
</tr>
<tr>
<td>Tanzania</td>
<td>381,510</td>
<td>3,477</td>
<td>5.9</td>
</tr>
<tr>
<td>Zambia</td>
<td>86,527</td>
<td>20,271</td>
<td>6.6</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>10,500</td>
<td>10,000</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Fish import and export trends for Zambia (ZRA, 2016)

(In 2016 Imports = 126,345MT, Exports = 271MT)
Informal fish trading

Large quantity of imported fish (Marine) is exported to DRC (WFC, 2017)
Fish catch/production trends for Zambia (DOF, 2016)
Fish catches in 2015 (DOF, 2015)

- Bangweulu: 17,849 MT
- M/Luapula: 18,542 MT
- M/Wantipa: 4,082 MT
- L. Tanganyika: 12,609 MT
- Kafue: 4,490 MT
- L. Kariba: 11,309 MT
- Lu/Chambeshi: 2,555 MT
- U/Zambezi: 6,109 MT
- Lusiwashi: 1,589 MT
- L/Zambezi: 920 MT
- Itzhi-tezhi: 912 MT

Department of Fisheries
Catch per Unit Effort in kg (DOF, 2015)
Chambeshi fishery (DOF, 2013 frame survey)

<table>
<thead>
<tr>
<th>Stratum</th>
<th>No. villages</th>
<th>No. fishers</th>
<th>No. boats</th>
<th>No. gears</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>31</td>
<td>1,400</td>
<td>1,084</td>
<td>3,679</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>743</td>
<td>579</td>
<td>1,176</td>
</tr>
<tr>
<td>TOTAL</td>
<td>56</td>
<td>2,143</td>
<td>1,663</td>
<td>4,855</td>
</tr>
</tbody>
</table>
Gillnet mesh size

Mesh size (inches)

No. of nets

Prohibited mesh size

Recommended mesh size
Staffing levels and transport situation in districts manning Chambeshi fishery

<table>
<thead>
<tr>
<th>District</th>
<th>Chinsali</th>
<th>Shiwang’andu</th>
<th>Mpika</th>
<th>Mungwi</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of staff</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Vehicles</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Motor bikes</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Boats</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>
## Fish farming (DOF, 2016)

<table>
<thead>
<tr>
<th>District</th>
<th>No. of fish farmers</th>
<th>No. of ponds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chama</td>
<td>210</td>
<td>110</td>
</tr>
<tr>
<td>Chinsali</td>
<td>355</td>
<td>812</td>
</tr>
<tr>
<td>Isoka</td>
<td>183</td>
<td>293</td>
</tr>
<tr>
<td>Mafinga</td>
<td>157</td>
<td>115</td>
</tr>
<tr>
<td>Mpika</td>
<td>532</td>
<td>716</td>
</tr>
<tr>
<td>Nakonde</td>
<td>122</td>
<td>234</td>
</tr>
<tr>
<td>Shiwang’andu</td>
<td>162</td>
<td>280</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,721</strong></td>
<td><strong>2,560</strong></td>
</tr>
</tbody>
</table>
Aquaculture opportunities in Muchinga

• Favorable environmental factors - High temperature and adequate rainfall
• A lot of water – Chambeshi river (480km in total)
• Demand – Supply gap
• Export Market
Challenges

- Low staffing, transport
- Low production and productivity
  - Current = 3.4 tons/ha
- Unknown stock biomass in major fisheries, weak R & D
- Limited access to inputs (FFF)
- Climate variability
- Weak enforcement of fisheries regulations
  - Gear restrictions
  - Fishing ban
Conclusion

- Zambia has huge fisheries resources
  - Aquaculture
  - Capture Fisheries

- Low production and productivity

- Muchinga Province – favorable environmental conditions

- There has been increase in fishing effort
Recommendations

• Stock assessment
• Promotion of aquaculture
• Post harvest loss intervention
• Establishment should be filled (current at 23%)
I THANK YOU