OPPORTUNITIES AND CHALLENGES IN ZAMBIA’S LIVESTOCK AND FISHERIES SECTOR

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Presented at the Copperbelt Provincial Outreach Meeting, Ndola, 4th May, 2016
Presentation Outline

1. Overview of livestock sector
2. Opportunities
3. Smallholder Livestock Production
4. Challenges
5. Policy Options
Overview of the Livestock and Fisheries Sector

Livestock contributes

- 3.2% to national GDP and over 30% to agric. GDP
- 6% to smallholder households’ income
  - Can be as high as 30% (among livestock market participants)
- constitutes 20% of household assets

Yet livestock budget share of the Poverty Reduction Program still remains very small
Livestock revolution taking place

- Population growth, urbanization, increasing incomes
- Increase demand for livestock/livestock products

Evidence - as people emerge from poverty, consumption patterns change

- Consume more high protein foods derived from Fish, livestock and livestock products,

Projections of Zambia’s total meat/milk demand from 2012 to 2027 show that

- (120 to 600) thousand tonnes of meat
- (260 -1200) million litres of milk

Opportunities
With the rapidly increasing demand
- deficit of ~320 thousand tonnes of meat and 760 million liters of milk will result (MAL et al, 2011)
- Deficit of 35,000mt of fish

Meeting this rapidly increasing demand for animal-source foods presents a

“big opportunity for smallholders to earn a better living”
Smallholder Livestock Production
## Distribution of Livestock among Smallholder Households by Province in 2015

<table>
<thead>
<tr>
<th>Province</th>
<th>Cattle</th>
<th>Goats</th>
<th>Pigs</th>
<th>Sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>439,660</td>
<td>613,907</td>
<td>40,468</td>
<td>4,356</td>
</tr>
<tr>
<td>Copperbelt</td>
<td>276,598</td>
<td>101,297</td>
<td>52,861</td>
<td>9,132</td>
</tr>
<tr>
<td>Eastern</td>
<td>625,851</td>
<td>371,083</td>
<td>440,434</td>
<td>16,548</td>
</tr>
<tr>
<td>Luapula</td>
<td>8,136</td>
<td>173,402</td>
<td>31,878</td>
<td>6,857</td>
</tr>
<tr>
<td>Lusaka</td>
<td>112,327</td>
<td>135,381</td>
<td>27,969</td>
<td>8,410</td>
</tr>
<tr>
<td>Muchinga</td>
<td>79,185</td>
<td>128,678</td>
<td>52,669</td>
<td>2,244</td>
</tr>
<tr>
<td>Northern</td>
<td>44,586</td>
<td>130,095</td>
<td>58,174</td>
<td>1,536</td>
</tr>
<tr>
<td>North western</td>
<td>63,210</td>
<td>119,098</td>
<td>8,155</td>
<td>3,251</td>
</tr>
<tr>
<td>Southern</td>
<td>1,294,580</td>
<td>1,085,652</td>
<td>96,313</td>
<td>47,155</td>
</tr>
<tr>
<td>Western</td>
<td>362,538</td>
<td>27,589</td>
<td>33,409</td>
<td>0</td>
</tr>
<tr>
<td><strong>National</strong></td>
<td><strong>3,306,671</strong></td>
<td><strong>2,886,182</strong></td>
<td><strong>842,330</strong></td>
<td><strong>99,489</strong></td>
</tr>
</tbody>
</table>

Source: Indicative numbers from RALS 2015
Livestock Production Trends - National

<table>
<thead>
<tr>
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<th>Cattle</th>
<th>Goats</th>
<th>Pigs</th>
<th>Sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>1489728</td>
<td>1179301</td>
<td>492465</td>
<td>51336</td>
</tr>
<tr>
<td>2012</td>
<td>2162357</td>
<td>2073493</td>
<td>942349</td>
<td>49063</td>
</tr>
<tr>
<td>2015</td>
<td>3306676</td>
<td>2886187</td>
<td>842334</td>
<td>99492</td>
</tr>
</tbody>
</table>

Fisheries Sub-Sector

- Capture Fisheries
  - Wild fish in natural water bodies
- Aquaculture Fisheries
  - Fish and plant farming
Fisheries Resources

- **Two major basins**
  - **Zambezi Basins**
    - Kafue, Kariba, Lukanga, Zambezi (Upper, Middle and Lower), Itezhi-tezhi, Luangwa and Lusiwashi.
  - **Congo Basins**
    - Bangweulu, Mweru-Luapula, Mweru Wantipa, Chambeshi and Tanganyik
Importance of fisheries in Zambia

- **Employment – Directly & indirectly**
  - > 1million

- **Contribution to GDP**
  - 0.4% - Agriculture, Forestry and Fishing GDP in 2010 (CSO, 2014)

- **Food and nutrition security**
  - 53.4% of animal protein (FAO, 2012)
Fish Catches - 2014

- Bangweulu: 15,332 tons
- Mweru-Luapula: 15,536 tons
- Mweru-Wantipa: 13,806 tons
- Tanganyika: 5,507 tons
- Kafue: 4,241 tons
- Kariba: 10,592 tons
- Lukanga: 3,811 tons
- Upper Zambezi: 7,714 tons
- Lusiwashi: 833 tons
- Lower Zambezi: 476 tons
- Itzhi-tezhi: 2,033 tons
- Chambeshi: 945 tons

Fishery
Aquaculture – small scale (2014)
Potential for Aquaculture in Copperbelt
Opportunities in the fishing sector

- **High Demand- Supply gap**
  - Annual aquaculture production: 20,000mt
  - Annual capture fisheries production: 75,000mt
  - Total Annual consumption: 130,000mt
  - Deficit: 35,000mt

- **Favorable environmental factors - High temperature**

- **A lot of water**
  - 12 million ha of water and 8 million of wet lands

- **Export Market**
## Gross margins

<table>
<thead>
<tr>
<th></th>
<th>Fish production on 100 m² (equivalent to 1 Ha)</th>
<th>Maize Production on 1 Ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue</td>
<td>K 213,840.00</td>
<td>K 2,914.30</td>
</tr>
<tr>
<td>Total Cost</td>
<td>K 147,064.50</td>
<td>K 1,051.30</td>
</tr>
<tr>
<td>Gross Margins</td>
<td>K 66,775.50</td>
<td>K 1,863.00</td>
</tr>
</tbody>
</table>
Challenges in Livestock & Fish Production
East Coast Fever status in Zambia

Source: Mwacalimba and Makungu, (2014)
High Livestock Mortality Rates

Livestock mortality rates (per 1000) by province 2013/14

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<th>Cattle</th>
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<th>Pigs</th>
</tr>
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<tbody>
<tr>
<td>Central</td>
<td>279</td>
<td>111</td>
<td>78</td>
</tr>
<tr>
<td>Copperbelt</td>
<td><strong>80</strong></td>
<td><strong>98</strong></td>
<td><strong>74</strong></td>
</tr>
<tr>
<td>Eastern</td>
<td>83</td>
<td>48</td>
<td>390</td>
</tr>
<tr>
<td>Luapula</td>
<td>15</td>
<td>83</td>
<td>24</td>
</tr>
<tr>
<td>Lusaka</td>
<td>148</td>
<td>59</td>
<td>29</td>
</tr>
<tr>
<td>Muchinga</td>
<td>88</td>
<td>99</td>
<td>338</td>
</tr>
<tr>
<td>Northern</td>
<td>57</td>
<td>123</td>
<td>198</td>
</tr>
<tr>
<td>NorthWestern</td>
<td>38</td>
<td>74</td>
<td>111</td>
</tr>
<tr>
<td>Southern</td>
<td>93</td>
<td>126</td>
<td>52</td>
</tr>
<tr>
<td>Western</td>
<td>174</td>
<td>166</td>
<td>266</td>
</tr>
<tr>
<td>Overall</td>
<td><strong>127</strong></td>
<td><strong>100</strong></td>
<td><strong>259</strong></td>
</tr>
</tbody>
</table>

Source: RALS (2012)
Livestock Diseases Prevalence

% Smallholder Households with Diseased Animals

- **CATTLE**: 32.8 (Copperbelt), 44.6 (National)
- **GOATS**: 21.67 (Copperbelt), 21.79 (National)
- **PIGS**: 21.67 (Copperbelt), 32.69 (National)
- **VILLAGE CHICKEN**: 47.51 (Copperbelt), 45.47 (National)

Source: RALS (2015)
Copperbelt Province: Extent and Methods of Disease Control

The diagram shows the extent and methods of disease control for different animals in Copperbelt Province. The percentages are as follows:

- **Cattle**: 80% treated with Veterinary drugs/vaccines, 20% not treated.
- **Goats**: 60% treated with Veterinary drugs/vaccines, 40% traditional medicine.
- **Pigs**: 70% treated with Veterinary drugs/vaccines, 30% not treated.
- **Village Chickens**: 50% treated with Veterinary drugs/vaccines, 50% not treated.

The methods of disease control include:
- **Not treated**
- **Veterinary drugs/vaccines**
- **Traditional Medicine**
.....Other Challenges in livestock

- Limited availability of high quality breeding stock
- Availability of cheap feedstock has been an area of concern to many farmers
- Energy challenges (costs and consistent supply) for poultry production
- Poor research and extension support on livestock production
- Inadequate input support to livestock farmers from government
Challenges in Fisheries

- Lack of fish storage facilities
- Low production and productivity
- Limited access to Credit and Finance
- Inadequate number of breeding centers for fingerlings
- Climate change
- High financing and feed costs
- Weak institutional arrangements and regulatory frameworks
- Lack of quality fingerlings and feed
What are the Policy Options?
Encourage farmers to use veterinary drugs and vaccines through:

- Livestock vaccination campaign
- Improve availability of veterinary drugs (esp. vaccines)
- Through flexible electronic input voucher
- Stocking up para-vet kits

Strengthen the vet. extension service delivery:

- Improve training for vet assistant officers/para-vets
Policy Options to Increase Production

**Effective breeding programs**
- Rehabilitate the existing breeding centers to fully operational
- Promoting cross breeding to enhance the fertility rate and improve productivity
- Promotion of aquaculture

**Restocking program**
- Undertake restocking of livestock in areas where these were wiped out by diseases
- But should be cautious of importing animals from disease infested areas
Policy Options to Increase Access to Livestock Services

- Training /deploy more veterinary assistants
- Construction of new and rehabilitation of existing community dip tanks
- Encourage private sector participation
  - Establish and operationalize through PPPs livestock service centers; breeding centers; milk collection centers
**Final Remarks**

Ultimately effective implementation of the suggested policy options will require:

<table>
<thead>
<tr>
<th>Increasing the budget allocation/actual release to livestock sector</th>
<th>Sustained funding from both public and private sector</th>
<th>Timely release of funds</th>
</tr>
</thead>
</table>

Thank you