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AGENDA ITEM 8

Enhancing fishery and aquaculture data to support the monitoring and sustainability of the sector, and contribute to SDGs –achievements and challenges

Zambia Experience

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Summary

- This document provides the status of fisheries and aquaculture statistics in Zambia, data collection methods used, fish catch and production level;
- The major policy framework which supports collection of fisheries and aquaculture statistics will also be highlighted;
- The current efforts being implemented to improve mostly the status of aquaculture statistics, challenges faced and recommendations will be discussed.

Background of fisheries and aquaculture data collection in Zambia

- **Capture fisheries**

  - Zambia's capture fishery is inland constituted by freshwater lakes and rivers

  - Fishing is mostly artisanal and small-scale fishers while semi-industrial Kapenta (a type of sardine) fishing is conducted on Lake Kariba

Source: https://www.zambiatourism.com/destinations/rivers/

The boundaries and names shown and the designations used on these map(s) do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontier and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Background of fisheries and aquaculture data collection in Zambia

- **Capture fisheries CONT…**
  - Zambia has been implementing **Bazigo's approach** to derive annual fish catch estimates since 1978
  - **Fishery frame surveys** are undertaken regularly to provide information on the composition, magnitude and distribution of fishing effort; facilities and services in fishing villages to guide development and management of the fisheries resources
  - **Catch Assessment Survey (CAS)** ascertains annual fish production through collecting fish catch - effort data from respective fisheries at specified intervals

Background of fisheries and aquaculture data collection in Zambia

- **<u>Capture fisheries CONT…</u>**
  - In 2011, Zambia participated in the capacity building training course in fisheries statistics and data collection in Accra, Ghana aimed adopting a cost effective and accurate De Graaf (FAO, Biostatistician) data collection approach
  - The de Graaf Approach has since been implemented on Lake Tanganyika with Technical support of FAO and financial support of AfDB. Other fishery areas are still using the traditional Bazigo's approach
  - Generally, capture fisheries data collection in Zambia has been irregular and hence compromising on its reliability

Background of fisheries and aquaculture data collection in Zambia

- **<u>Capture fisheries CONT…</u>**
  - Other capture statistics collection through administrative means include;
    - boat registration,
    - fishing licenses
    - kapenta catch returns from Kariba
    - spot fishing returns
    - fish market statistics
    - fish import and export

Background of fisheries and aquaculture data collection in Zambia

- **<u>Aquaculture</u>**
  - Mainly constitutes of land-based and cage fish farmers
  - Small-scale fish farmers dotted around the country
  - Large scale located mainly near lakes and rivers and urban centres
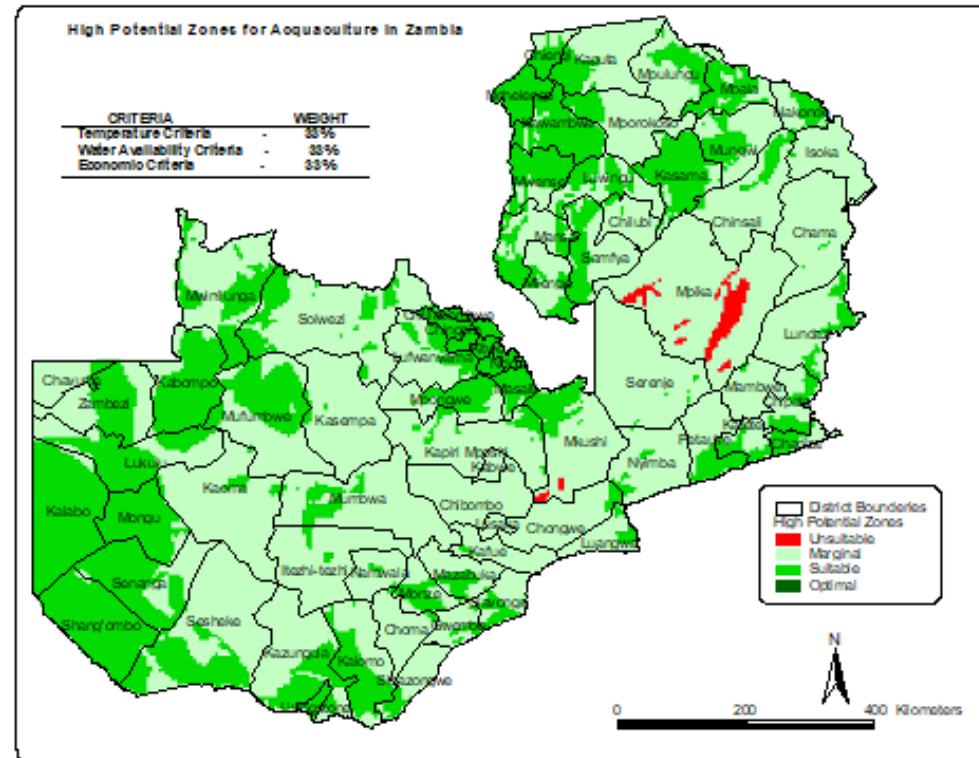
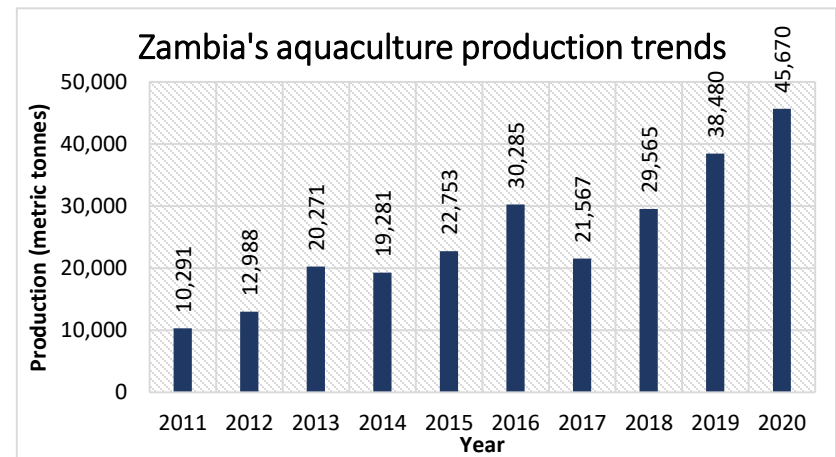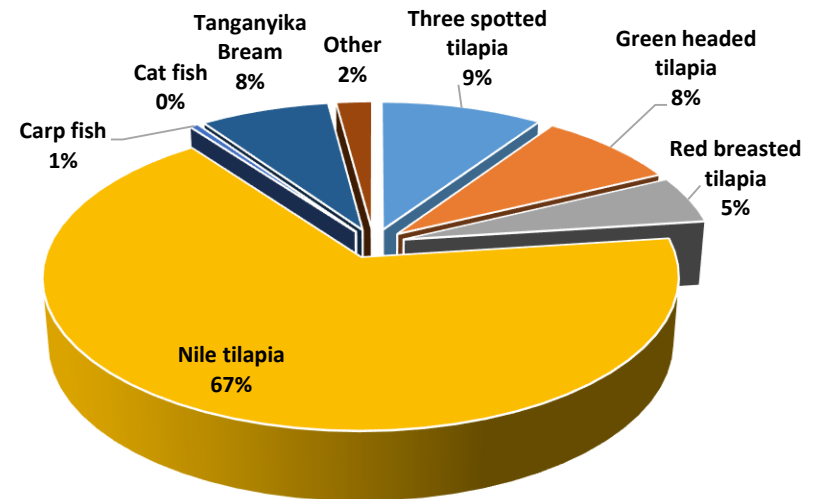Source: National Aquaculture Development Plan (2005 – 2010)

The boundaries and names shown and the designations used on these map(s) do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontier and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.
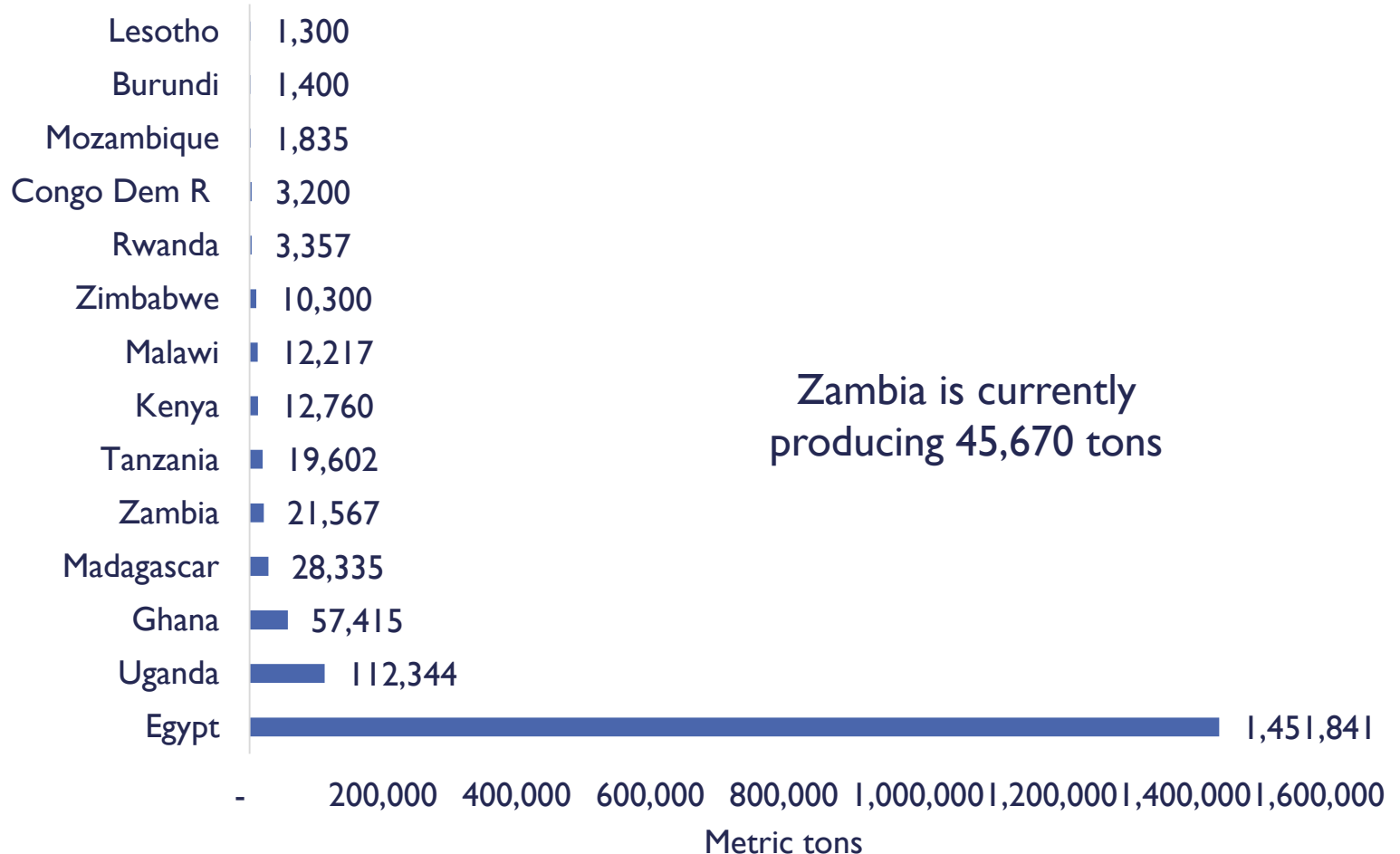
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Background of fisheries and aquaculture data collection in Zambia

- ## **<u>Aquaculture CONT…</u>**

  ◦ Only one nationwide survey census for aquaculture was conducted under the 2017/18 Livestock and Aquaculture Census. Other surveys have been region-based

  ◦ Aquaculture statistics are mainly obtained through administrative means

Pie chart labels:
- Carp fish 1%
- Cat fish 0%
- Tanganyika Bream 8%
- Other 2%
- Three spotted tilapia 9%
- Green headed tilapia 8%
- Red breasted tilapia 5%
- Nile tilapia 67%

Zambia's aquaculture production trends

Production (metric tonnes) vs Year:
- 2011: 10,291
- 2012: 12,988
- 2013: 20,271
- 2014: 19,281
- 2015: 22,753
- 2016: 30,285
- 2017: 21,567
- 2018: 29,565
- 2019: 38,480
- 2020: 45,670

Major aquaculture producing in Africa

Country	Metric tons
Lesotho	1,300
Burundi	1,400
Mozambique	1,835
Congo Dem R	3,200
Rwanda	3,357
Zimbabwe	10,300
Malawi	12,217
Kenya	12,760
Tanzania	19,602
Zambia	21,567
Madagascar	28,335
Ghana	57,415
Uganda	112,344
Egypt	1,451,841

Zambia is currently producing 45,670 tons

Metric tons: -   200,000   400,000   600,000   800,000   1,000,000   1,200,000   1,400,000   1,600,000

Source: FAO 2017

Capture and aquaculture fish production (2005 to 2020)
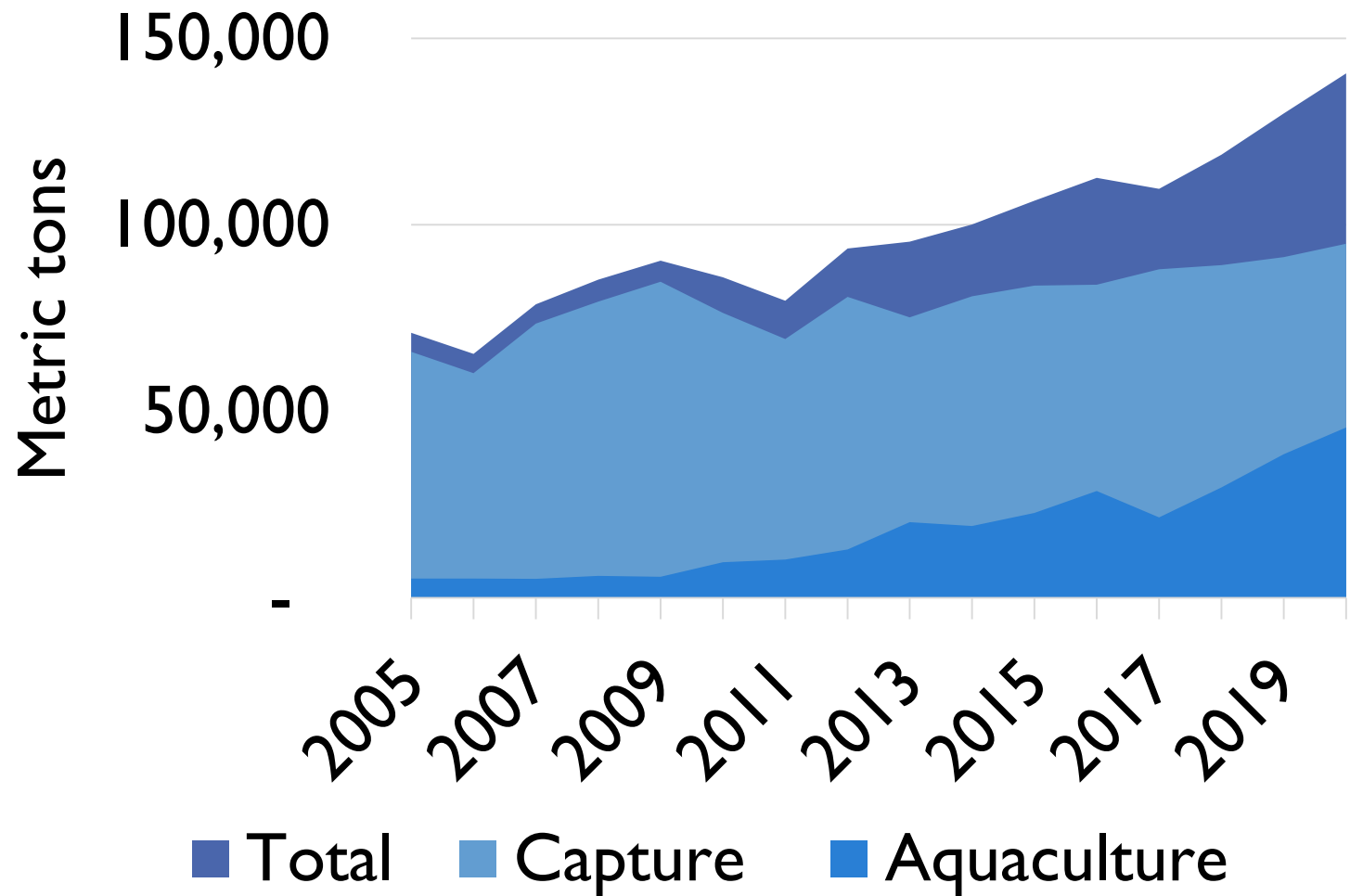
Policy and legal framework for supporting statistics in Zambia

Census Act of 2018

- Provides for establishment an integrated National Statistical System; provide for mechanisms for co-ordination, collection, management and dissemination of statistics

National Strategy for Development of Statistics (NSDS2)

- Designed to provide a holistic, coherent and comprehensive framework for improving the NSS and developing official statistics in the country in a sustainable manner.

Strategic Plan for Agriculture and Rural Statistics (SPARS 2019 - 2023)

- Provides framework for the coordination of statistical activities within the agricultural sector and a mechanism for consultation between the Government and others on the development of agricultural statistics and the resources required.

Issues and Challenges of Fisheries Statistics Data Collection

Issue	Challenge
Strategic (leadership, Policy, legal advocacy)	• Limited commitment from top management • Lack of suitable organization structure and system • Insufficient appreciation of statistics by managers and decision makers • Unwillingness by some respondents to share information.
Capacity (human, Physical and ICT)	• Inadequate numbers and inadequately trained personnel; this adversely affects the collection of administrative statistics where such officers are required to be present on the ground most of the time for enforcement, registration or data collection; • Lack of funds for training and capacity building; • Lack of a website which would avail an online information platform; • Inadequate expertise in analytical tools

Issues and Challenges of Fisheries Statistics Data Collection CONT…

Issue	Challenge
Statistics Production (data collection, processing, analysis, report)	• Low sampling intensity • Lack of adequate budget to support data collection affecting both surveys and administrative data collection (including the late release of funds from Treasury). This includes a lack of transport, camping equipment, computers (including tablets for data capture in the field); • Absence of disaggregated data at the lowest level of administration • Lack of analytical tools (such as GIS software)
Dissemination	• Inadequate manpower • Inadequate resources to support dissemination • Inadequate communication infrastructure

Efforts being undertaken to improve aquaculture statistics system

- The Government of the Republic of Zambia, through the Ministry of Fisheries and Livestock (MFL) in partnership with the African Development Bank is implementing an Aquaculture Value Chain Development Project, the Zambia Aquaculture Enterprise Development Project (ZAEDP).

- ZAEDP is currently supporting the establishment of the National aquaculture statistics information system and capacity building among the key line staff within the aquaculture sub-sector.

- PAPI and CAPI aquaculture data tool has so far been developed

- Efforts are being made to create sector statistics annual budget lines and improve staffing within the Ministry

Key recommendations

- There is need for continuous lobbing to higher government management to improve funding to Fisheries and Aquaculture Statistics

- There need for improved collaboration among Statistics stakeholders

- There is need to improve related to statistics infrastructure, staffing for increased efficiency and effectiveness of fisheries and aquaculture data system (data collection, collation and dissemination)

- There is need to strengthen statistical related legislation in order to improve administrative data collection

Conclusion

- There is increasing demand for updated and reliable fisheries and aquaculture statistics at national, regional and international level which should be provided for in timely manner.
- Therefore, having a functional aquaculture statistics system is be crucial.

THANK YOU