



Partnership | Progress | Prosperity



GLOBAL CENTRE ON
BIODIVERSITY
FOR CLIMATE



Fisheries and biodiversity in Uganda: The need for **adaptive fisheries management and governance**

**1st National workshop of the BAGC project
3rd-5th Sep. 2024**

**Laban Musinguzi (PhD)
National Fisheries Resources Research Institute (NaFIRRI)**



Is the current fisheries management regime/approach in Uganda satisfactory?

Focus

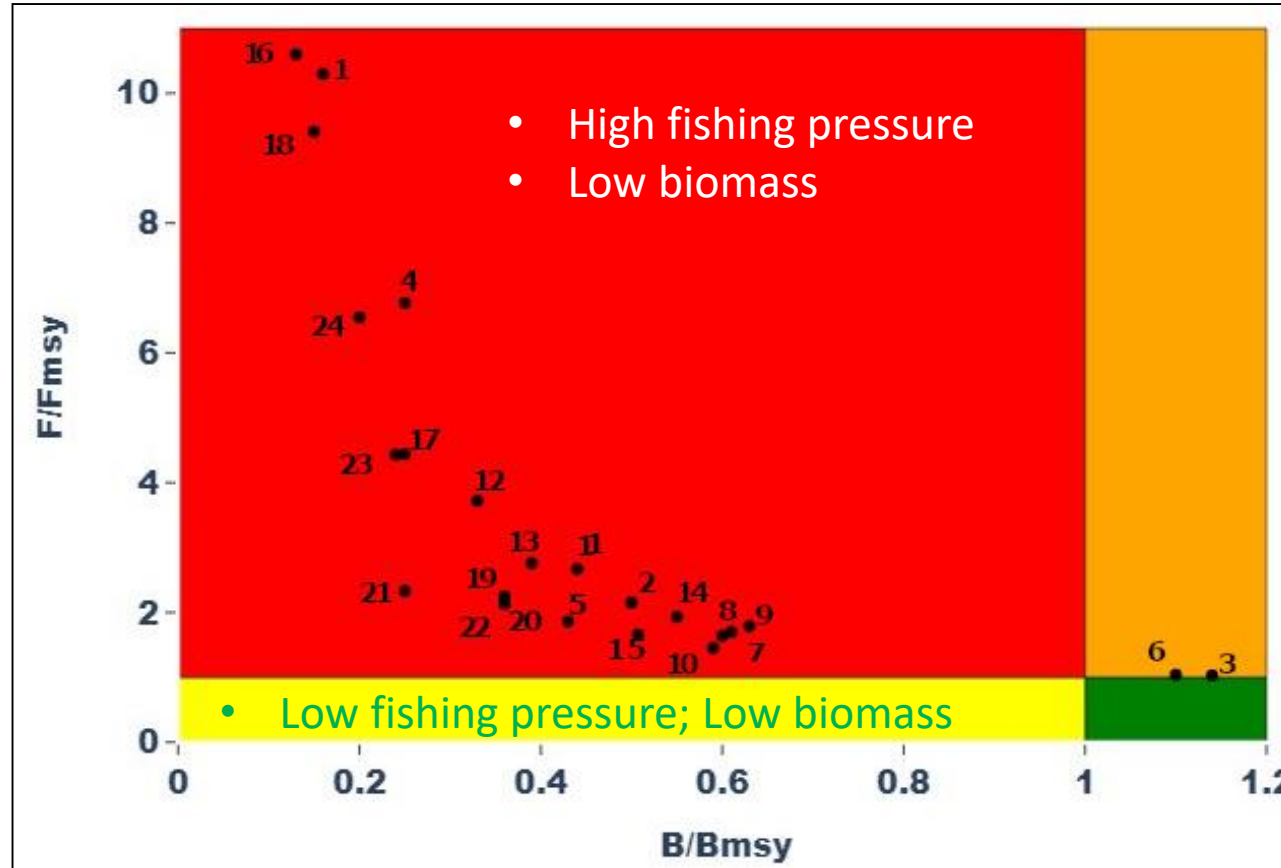
1. Justify the need of **adaptive fisheries management or governance** using existing knowledge on fisheries.
2. Clarify why biodiversity conservation should be fully integrated in fisheries management and governance.

What is adaptive fisheries management or governance?

1. Robust and therefore more effective than the conventional approach.
2. Complex, dynamic, and unpredictable.
3. Risks and uncertainties.
4. Emphasizes data acquisition and monitoring.

Status of fish stocks based on stock size and fishing pressure

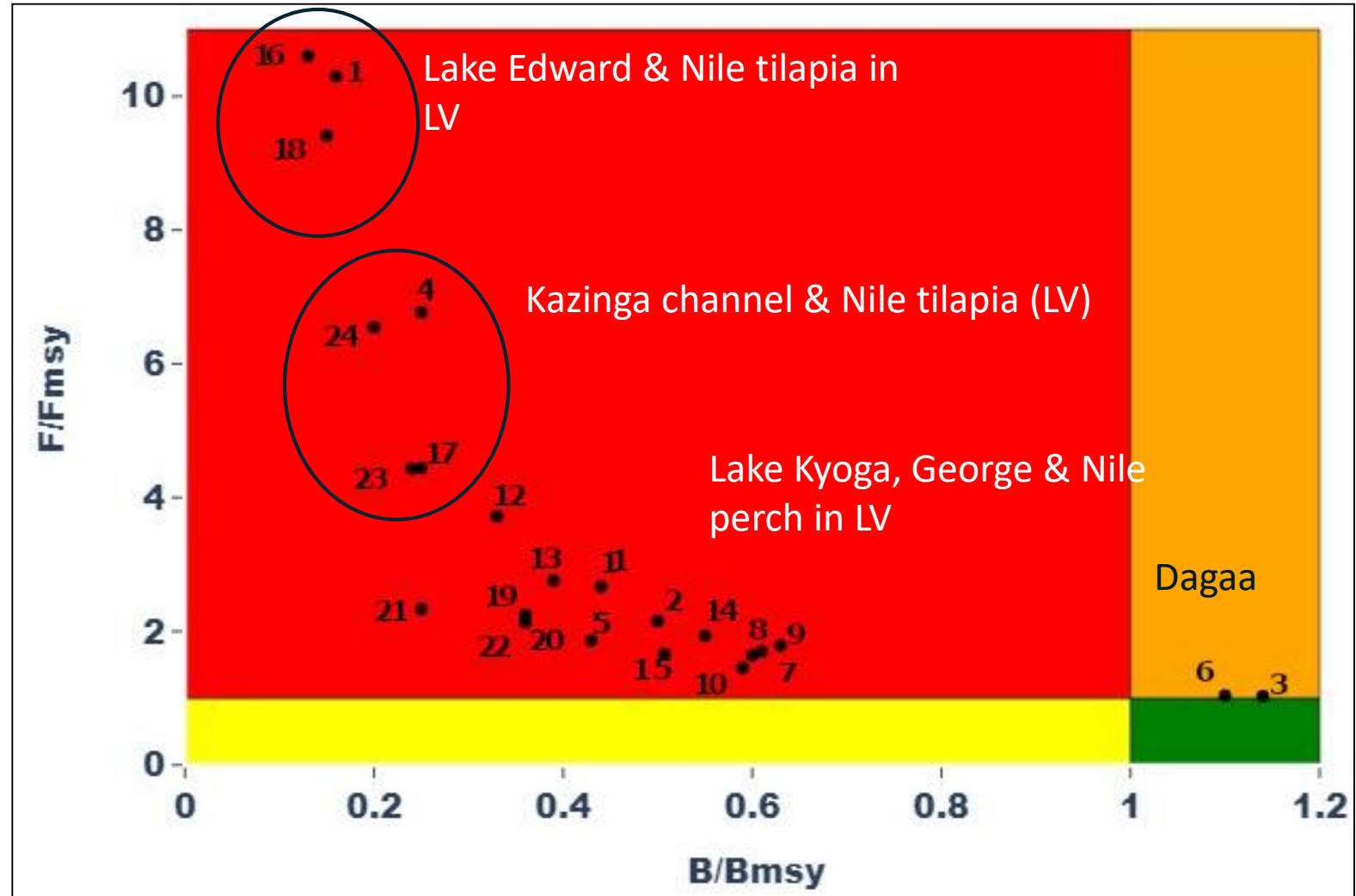
1. Robust & more effective



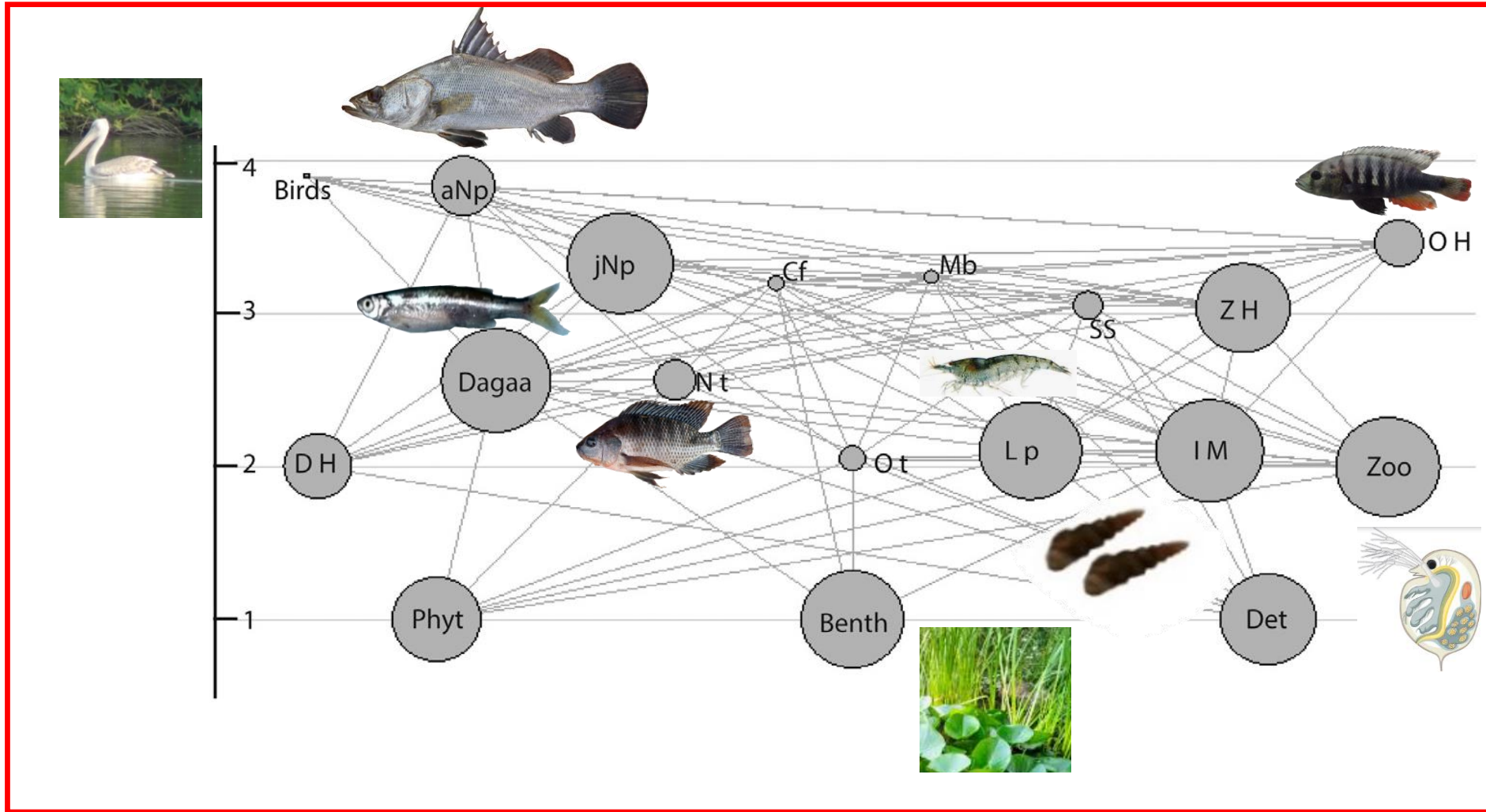
A Kobe plot for all the assessed stocks

❖ The status of the stocks is poor: overfished, recruitment impaired, or collapsed.

1. Robust & more effective



2. Fisheries are **complex and dynamic**, not always predictable



Environmental conditions/
water quality

Climate change

Behaviour of
fishers



Environmental
conditions/water
quality

Politics

Market & economic
conditions

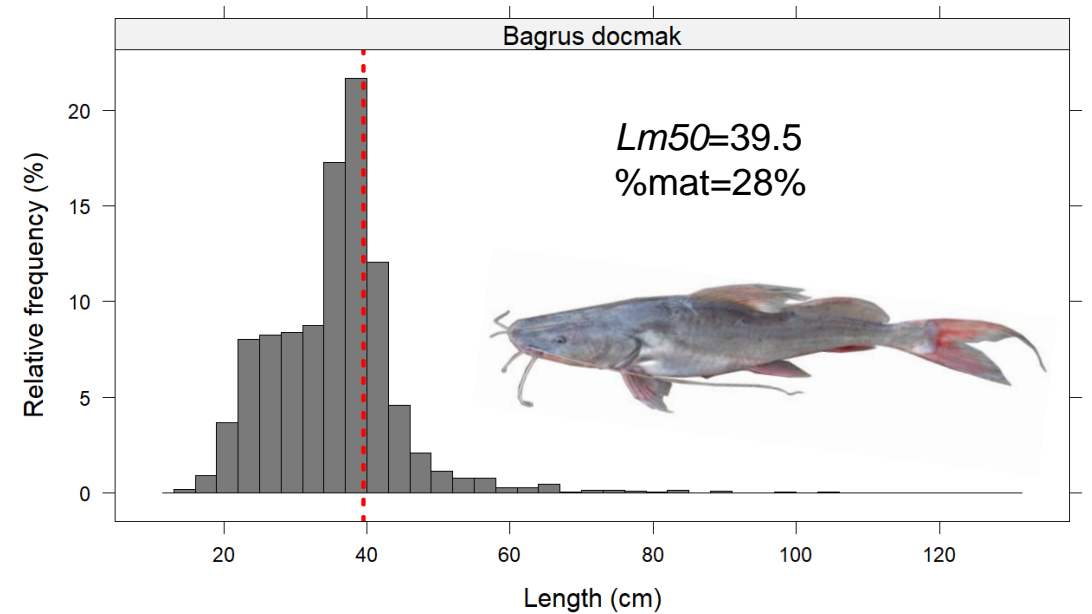
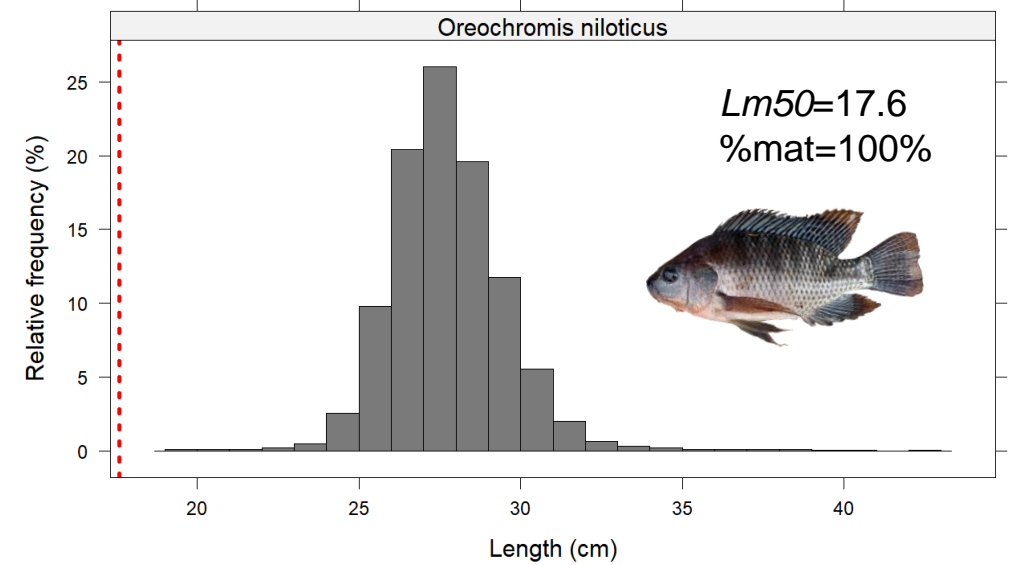
2. Fisheries are **complex and dynamic**, not always predictable

Mukene vs Nile perch in Lake Victoria



2. Fisheries are **complex and dynamic**, not always predictable

Nile tilapia vs semutundu in Lakes Edward & George



Length frequency histograms of two fish species in commercial catches in Lake Edward, Uganda (Data is May-Oct. 2023).

3. Risks and uncertainties

Risk

There are chances that something will happen

- Water hyacinth invasion of lakes Edward and George.

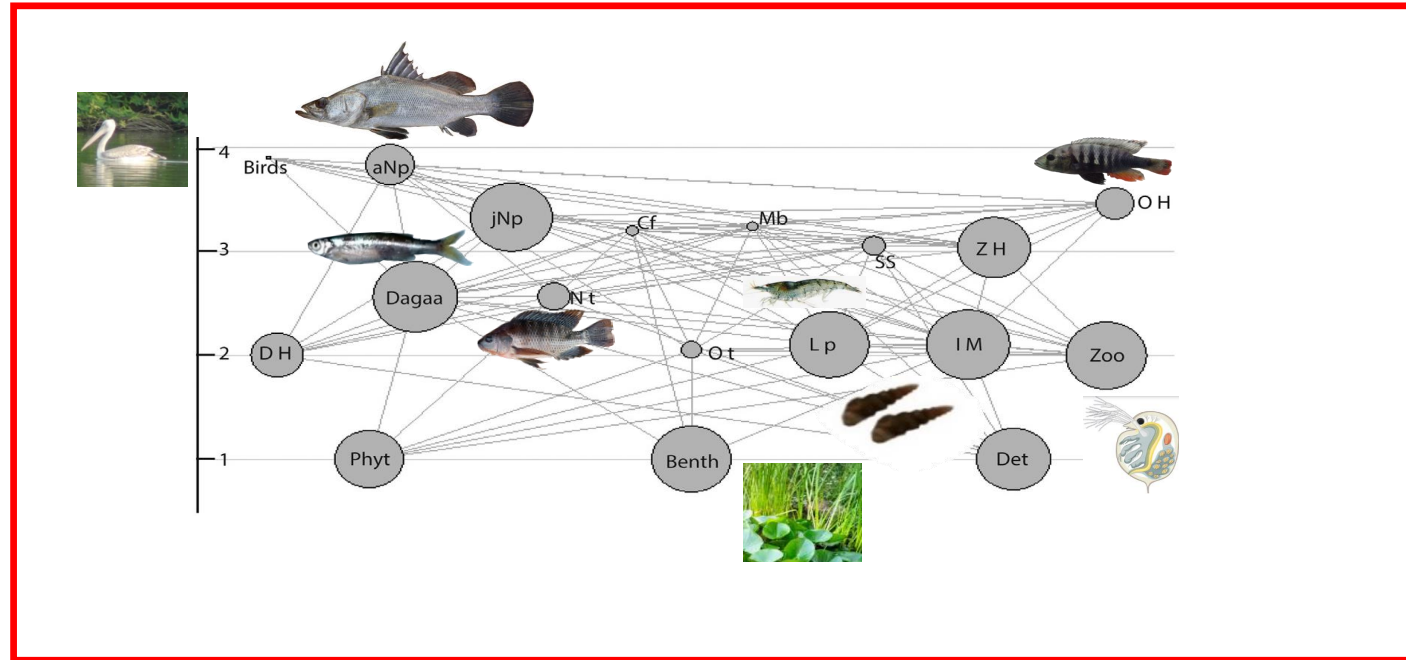


Water hyacinth plants from on Lake Edward

3. Risks and uncertainties

Risk

- Nile perch in Lake Victoria may become unpalatable future.



Environmental conditions/water quality



Market & economic conditions

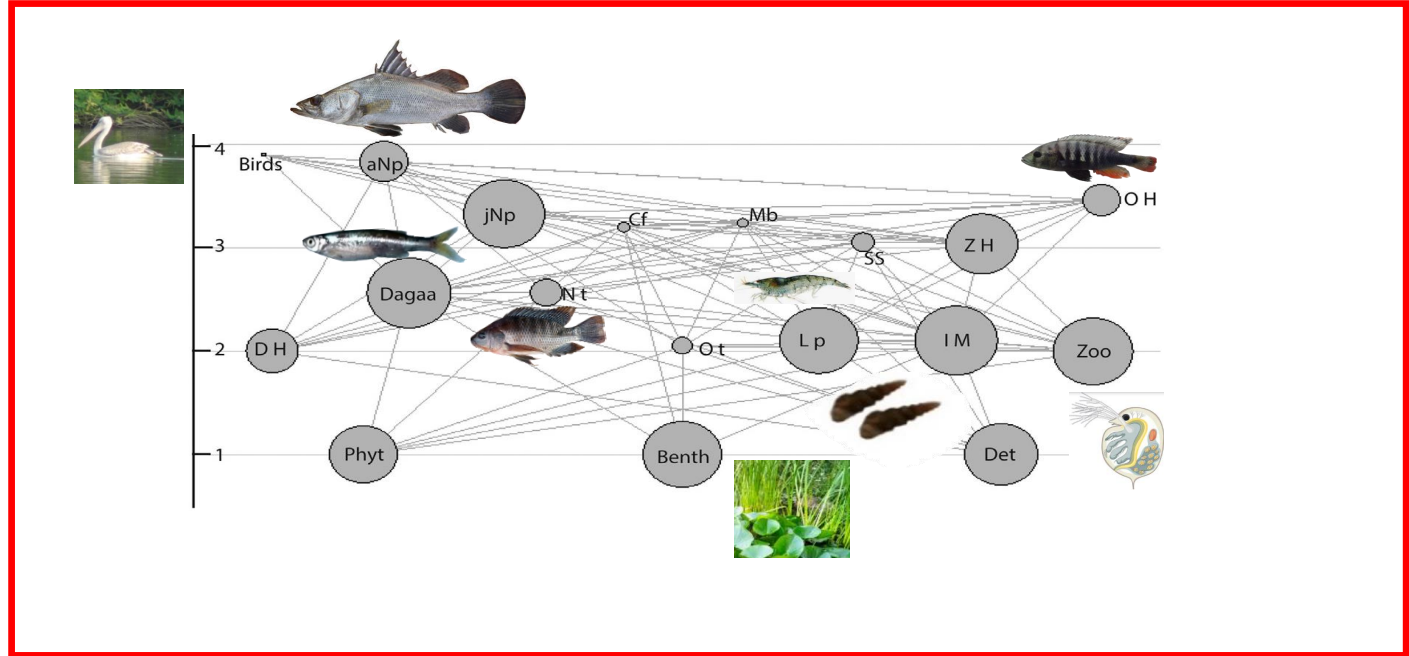
- Market access issues

3. Risks and uncertainties

Uncertainty

You have no idea that something will happen/occur

- The covid-19 pandemic;
- The removal of BMUS followed by the deployment of FPU



Uncertainty

Environmental conditions/
water quality

Climate change

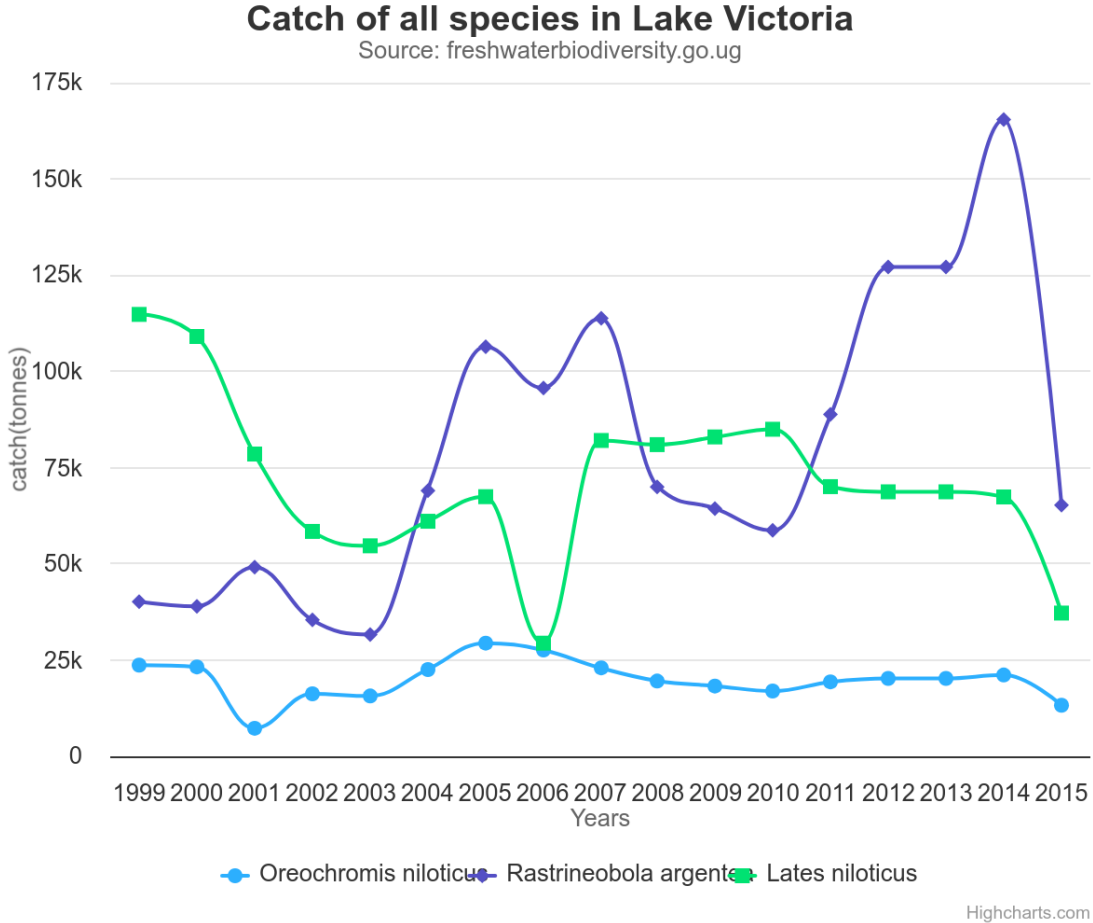
Behaviour of
fishers

Environmental
conditions/water
quality

Politics

Market & economic
conditions

4. Emphasizes data acquisition and monitoring.



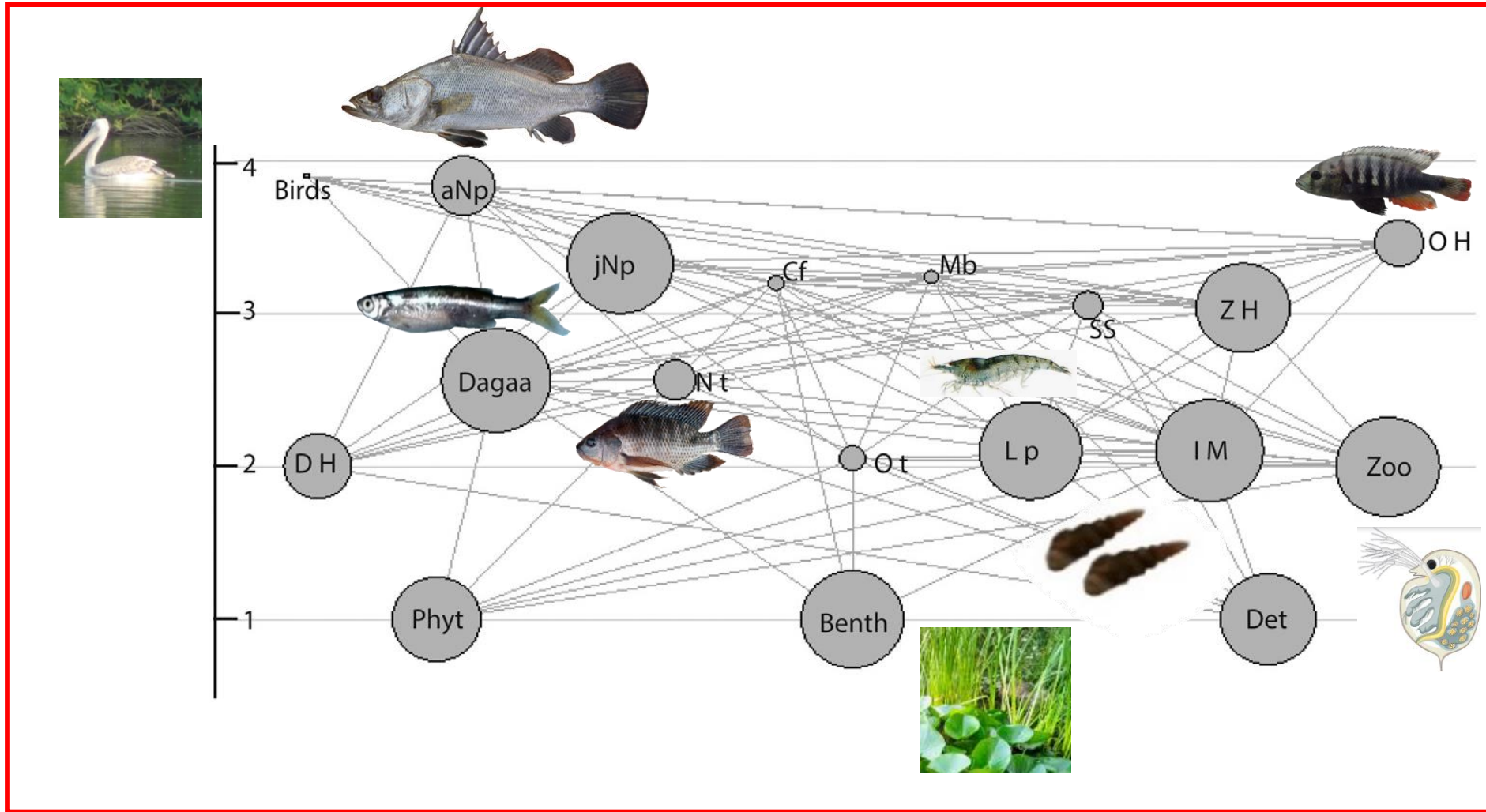
6- 8 years

- 2021 (Lake Victoria)
- 2023 for Lake Kyoga

Focus

1. Justify the need of adaptive fisheries management or governance using existing knowledge of national fisheries resources.
- 2. Clarify why biodiversity conservation should be fully integrated in fisheries management and governance.**

1. Biodiversity is important for maintaining exploited species



Behaviour of
fishers

Environmental
conditions/water
quality

Politics

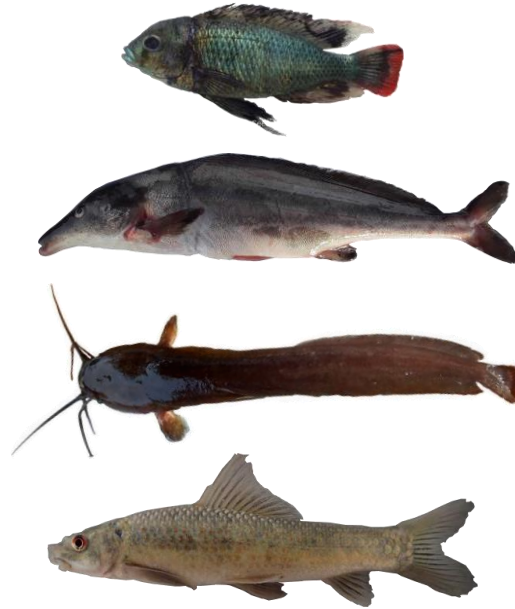
Market & economic
conditions

2. Several fishing practices degrade biodiversity

Mukene fishing



Nile perch fishing



Other practices

- Beach seining
- Fishing near the shoreline
- Tycooning
- Nets with small mesh sizes

What is Uganda losing or facing for not implementing adaptive fisheries management and governance?

Thank you!