Fisheries resources accounts – informing fisheries management for the future

Policy Recommendations

• Invest in regular stock assessments, catch assessments and monitoring trade in illegal, unregulated and unrecorded fish on more water bodies to set appropriate standards for boats, fishing gear and catch quotas.
• Invest in ecosystem monitoring and restoration. This should include lake-wide water quality and invasive species monitoring. Ecosystem restoration can also help to boost fisheries stocks. Areas in lakes must be gazetted as no fishing zones, and nursery grounds improved through wetland conservation, pollution control and invasive species removal.
• Improve processing technology, increase value addition and reduce loss in the post-harvest subsector to improve livelihoods.
• Promote aquaculture where appropriate to reduce pressure on capture fisheries and create livelihoods.

Introduction

Fish are critical to the people and national economy of Uganda. More than 500 species are found in Uganda’s water bodies, providing a source of food, a focus for livelihoods and a significant contribution to foreign exchange earnings. Yet the pollution of freshwater ecosystems, threats to fish nursery grounds, the spread of invasive weeds, the use of indiscriminate fishing methods, over-harvesting and trade in illegal, unregulated and unrecorded (IUU) and immature fish, threaten the sustainability of the sector.

Fisheries Resources Accounts provide critical data to inform urgently-needed decisions on changes in policy and practice in response to these pressures. They provide information on the main capture fisheries in Uganda (Figure 1), as well as minor lakes and rivers and aquaculture production.

Figure 1: Main capture fisheries in Uganda  Source: NEMA (2021) Fisheries Resources Accounts for Uganda
Why are fish and the fisheries sector important?

As the most common and cheap source of animal protein, fish provide food and livelihoods for Ugandans. Between 70 and 90 per cent of the fish caught in Ugandan waters is consumed locally, with annual consumption of fish estimated at about 12.5 kg per head. While below the global average in 2018 of 20.5 kg per head, this is relatively high for East Africa and illustrates the importance of fish for national food security.

The fisheries sector is also an important part of the Uganda economy. In 2006/2007 the sector contributed 1.9% to GDP; in 2017/2018 the figure was 1.5%. The overall trend in revenue from fisheries, including aquaculture, is generally increasing (from UGX 495 billion in 2009 to UGX 1.6 trillion in 2016). It is also a key foreign exchange earner in Uganda. In 2018, Uganda earned US$1.53 million from exporting 20,364 metric tons of fish and fish products to regional and international markets.

Because of the significant food security, nutrition and export benefits from the sector, the National Development Plan for Uganda to 2025 (NDP III) targets fisheries as one of 10 commodities for its sustainable agro-industrialisation agenda.

Understanding capture fisheries in Uganda

The maximum sustainable yield of Uganda’s capture fisheries is estimated at 600,000 metric tons per annum. In 2011, Uganda recorded almost 500,000 metric tons of fish catch. This fell to 345,000 metric tons in 2018, although NDP III identifies fishing regulation enforcement in 2017 as contributing to increased catches from 2018. Catch per unit effort has reached a high of 15.1 metric tons/boat/year in 2004 but had decreased to 4.5 metric tons/boat/year in 2018.

Fish and fish product exports have been on a downward trend since 2005, with a low point in 2017. In 2006/2007, Uganda exported 36,600 metric tons of fish and fish products; in 2017, the figure had fallen to 14,248 metric tons. Nonetheless, the Fisheries Resources Accounts show the contribution of the Nile Perch fishery to exports was UGX 568 billion in 2018.

Fish catches on Lake Victoria have fluctuated since 2001, along with fish species stocks. For Mukene, declines in fish stocks in the lakes are believed to be due to overfishing and bad practice, but Haplochromines fish numbers have gone down because of increasing competition from Nile perch. Most of these Nile perch are small, suggesting that they are not reaching maturity, and therefore fishing efforts are not sustainable.

Investing in freshwater ecosystem monitoring and protection

The NDP III identifies the deteriorating quality of water sources resulting from aquatic pollution as contributing to the decline in fish stocks. The Uganda Green Growth Development Strategy (UGGDS) also identifies aquatic ecosystem management as a core area for fisheries development. For Lake Victoria, the Fisheries Resources Accounts show the proliferation of water hyacinth (an invasive species) and highlight the potential impacts on capture fisheries. They also highlight the number of fish breeding areas, which are essential for maintaining capture fishery stocks. Further investment is needed to improve the monitoring of the condition of capture fishery ecosystems, including of invasive species, fish breeding areas and pollution. This will help inform appropriate investments in lake ecosystem restoration to boost fishery stocks, for example by reducing the invasive weed problem and mitigating pollution from surrounding land uses.

Adding value and create livelihoods

Total employment in the fisheries sector is estimated to be between 1-1.5 million people in production and the marketing value chain, with many more people directly depending on the sector for their livelihoods. However, as resource rent calculations in the Fisheries Resources Accounts show, in many of Uganda’s fisheries the costs of capital and labour outweigh the revenue from the products, making fisheries economically inefficient.

Promoting aquaculture

Promotion of sustainable fish farming practices is a core area for development via the UGGDS and highly relevant to the agro-industrialisation agenda of the NDP III. The Fisheries Resource Accounts show that aquaculture production increased from 1,500 metric tons of fish in 2005 to 120,000 metric tons in 2018.

Creating more livelihood opportunities and adding value will improve the efficiency of the sector. The NDP III identifies improved fish processing capacity, including secondary processing activities. The Fisheries Resources Accounts reveal that post-harvest loss in the Mukene fishery amounted to UGX 14.29 billion in 2018. Improved post-harvest facilities could help capture this lost value.

Sustainable aquaculture has great potential for further development. Encouraging aquaculture will reduce the pressure on capture fisheries and create job opportunities. However, there is also a need to tackle the challenge of quality and affordability of fish seeds and feeds, as well as skills development among farmers and access to capital.
Natural capital accounting: better data for better policy

Natural capital accounting uses consistent and comparable data to show how natural resources contribute to the economy and generate wealth — and how the economy affects natural resources. This helps integrate the benefits of biodiversity management into sector development planning that delivers on international commitments and national priorities for green growth, poverty alleviation and biodiversity enhancement. Natural capital accounts are consistent with existing national accounts but paint a broader picture of economic development than standard measures such as gross domestic product (GDP).

Integrating Natural Capital into Sustainable Development Decision Making in Uganda

The National Environment Management Authority (NEMA), Uganda Bureau of Statistics (UBOS) and National Planning Authority (NPA), in collaboration with the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), the Institute for International Environment and Development (IIED) and the Institute for the Development of Environmental-Economic Accounting (IDEEA) implemented a project on Integrating Natural Capital into Sustainable Development Decision Making in Uganda between 2019 and 2021. The project was funded by the UK Government through the Darwin Initiative and supported the development of three biodiversity-related natural capital accounts (NCAs): Fisheries Resources Accounts, Land and Soils Improvement Accounts, and Biodiversity and Tourism Accounts.

Action needed now

To achieve the national ambitions for the fisheries sector, coordinated practical action between the Ministry of Agriculture Animal Industries and Fisheries (MAAIF) and fisheries associations is required to establish sustainable fishing practices and control the use of illegal fishing gear. To do this, they must monitor fishing efforts and assess stock and catch levels on a regular basis across all water bodies in Uganda.

Action is required to identify and protect fish breeding areas and set up consistent lake-wide water quality monitoring programmes to assess the condition of the water bodies. This needs to include monitoring the levels of invasive plant species and pollution across all water bodies, which threaten the sustainability of the sub sector.

In line with the NDP III and the aspirations of the UGGDS, a sustainable agro-industrialisation agenda needs to be fast tracked for the fisheries sector. This needs to deliver a solid strategy for adding value to the sector and promoting aquaculture where appropriate. Regular compilation of Fisheries Accounts Resources will be essential for identifying opportunities and understanding the viability of the agenda. This will be key to realising the potential of the sector to create jobs, boost incomes and deliver poverty alleviation benefits.

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