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A critical look at fishing in Lake Tanganyika: will future generations still have access to fish?

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Key messages

Fisheries of Lake Tanganyika, a source of income for millions of people, are in danger. Human activities around the lake and poor fishing practices threaten the stocks. Fish have become more difficult to buy for the population.

The resource, which is shared between four riparian countries, requires harmonized and consistent management at all levels. Based on our investigations we propose concrete actions to improve the situation.

Fig. 1. Fishermen on Lake Tanganyika pulling an illegal purse seine from a beach at Kilomoni, Uvira.

Context

Lake Tanganyika is the longest freshwater lake in the world and the deepest in Africa, shared by four riparian countries: Burundi, the Democratic Republic of the Congo, Tanzania and Zambia. Fisheries and related activities in the region around the lake support the life of more than 10 million people, and serve as a main source of protein and income. However, their future is threatened: the misuse of the coast and the basin, the use of inappropriate fishing techniques and gear on prohibited sites, post-harvest losses, outdated regulations and their weak application, mean that the fish, yesterday common and accessible to all, are becoming a rare commodity.

Therefore, the question if fish will still be available for future generations becomes more than pressing. Based on our observations and surveys in the field, we suggest solutions and recommendations to improve the situation at different levels of intervention.

This policy brief is also available in French and Kiswahili.

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Some examples

Fig. 2. Mosquito net used for illegal fishing in Kasenga, Uvira.

Number of landing sites	304
Number of fishermen	51.652
Length of the coastline (km)	807
Number of fishermen / km	64
Number of active fishing units	13.596
People employed in post-harvest	23.154
Fishmongers	13.662
Total nr of people employed in the fisheries	89.796

Fig. 3. Figures (LTA 2012) on the importance of fishing around Lake Tanganyika (Congolese side).

Many fish reproduce in the coastal zone of the lake. However, illegal coastal fishing, pollution, deforestation and poor farming practices in the basin, and extraction of construction materials are a major threat to spawning grounds.

Fig. 4, 5 & 6. Illicit fishing gear are common in Uvira (left). Their use is barely sanctioned by fishery officers. Fishing with mosquito nets destroys coastal habitats and eliminates even the smallest fish in the lake (middle). Inadequate processing of the catch causes significant loss (right).

Fig. 7, 8 & 9. Destruction of the littoral zone by pollution (on the left), by deforestation on the hills around the lake (in the middle), and by extraction of building materials (on the right) in Uvira (DRC).

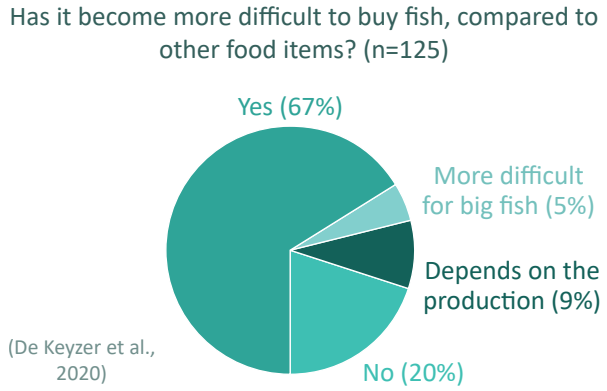
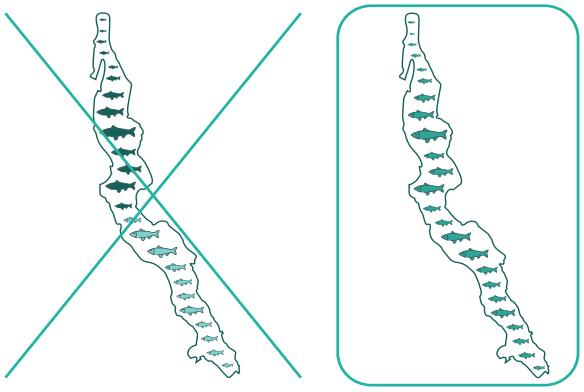


Fig. 10. Interviews with consumers in October 2019 in Uvira (DRC), revealed that fish from the lake has become less accessible to the population since captures declined.



(De Keyzer & De Corte et al., 2019)

Fig. 11. Fish know no boundaries: genetically the stocks of the most important species for fishing (sardine, ndakala: *Stolothrissa tanganicae*) are the same over the length of the lake. This means the fish migrate over the lake and the stocks require integrated management.

Fig. 12. LT-SAG Scientific Advisory Group, ACARE, Entebbe, November 5-7, 2019.

For shared resources such as Lake Tanganyika fish stocks, common management is necessary. Scientists active in the four riparian countries (CRH, UB, DOF, UZ, TAFFIRI, ALT, KU Leuven, RMCA, RBINS, UH and NU) have come together to develop a common vision for research on the lake (ACARE, Entebbe, November 2019; CRH, Uvira, October 2019 and August 2018). Now it is up to managers to join this process to put into practice measures based on their advice. This will ensure that future generations will still have access to fish.

Solutions

1. Diversification of economic activities, including the promotion of aquaculture.
2. Reforestation and promotion of good agricultural practices in the basin.
3. Identification, delimitation and protection of spawning grounds.
4. Strengthening and new recruitments of fishery officers, including their training and remuneration.
5. Promotion of good fish processing practices to reduce post-catch losses.
6. Promotion of good fishing practices for the recovery of fish in the lake.
7. Promotion of dialogue between users, scientists and managers for better management.

Recommendations

From standardized interviews with experts, the following recommendations emerge for policy-makers:

1. Encourage alternative activities to fishing and facilitate access to credit.
2. Educate and involve users and fishermen's organizations in monitoring and control.
3. Make the population aware of the importance of spawning grounds, good fishing practices and good conservation of catches.
4. Simplify and translate fishing regulations in local languages.
5. Base fishing regulations on scientific research.
6. Strengthen existing regulations on fishing and rigorously control fishing techniques and gear.

For the sustainable management of a common resource, the consortium of scientists from four riparian countries stresses the importance to:

1. Harmonize fishing regulations on the local, regional and international level, within existing structures and institutions.
2. Strengthen collaboration between policy-makers, resource users and scientists.
3. Encourage and strengthen international and regional collaboration between scientists.
4. Promote research and education in fish monitoring, fish biology and fish disease.

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Abbreviations:

CRH	Centre de Recherche en Hydrobiologie, Democratic Republic of the Congo
UB	University of Burundi, Burundi
DOF	Directory of Fisheries, Zambia
UZ	University of Zambia, Zambia
TAFIRI	Tanzania Fisheries Research Institute, Tanzania
ALT	Lake Tanganyika Authority, Burundi
KUL	KU Leuven, Belgium
RMCA	Royal Museum for Central Africa, Belgium
RBINS	Royal Belgian Institute of Natural Sciences, Belgium
ACARE	African Center for Aquatic Research and Education, USA
CEBioS	Capacities for Biodiversity and Sustainable Development, Belgium
UH	University Hasselt, Belgium
NU	Nord University, Norway

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