

Special Initiative "Transformation of agricultural and food systems"
Global Programme Sustainable Fisheries and Aquaculture

Newsletter #10

05.06.2023

Dear reader,

Welcome to the 10th issue of the **Global Programme Sustainable Fisheries and Aquaculture newsletter**.

For the Global Program Sustainable Fisheries and Aquaculture, sustainability is a multi-faceted concept. Our focus is not only on creating long-lasting improvements to the livelihoods of our beneficiaries but also on combating food insecurity through a healthy and sustainable diet. Last but not least, sustainability for us involves offering solutions to environmentally harming fishing and aquaculture practices and thereby combating contamination, litter and illegal, unreported & unregulated (IUU) fishing.

In light of the *World Environmental Day* and the *Day for the fight against IUU fishing*, we want to share our experiences and insights gained from handling these issues within our projects, and their efforts to protect biodiversity, foster ecosystems and ensure sustainable fish production for generations to come.

We hope you enjoy reading and learning about our ongoing projects!

The Communication Team

The Fight against Environmental Pollution and IUU Fishing



In this issue, you will find articles from our modules in:

Uganda



Malawi



Madagascar



Zambia



Cambodia



Mauritania



Circular economy, environmental pollution and the fight against IUU fishing

Guest article:
Global Project
Go Circular

With millions of tonnes of plastics entering the ocean every year, urgent action is required to prevent further harm to the environment.



Although developing countries are not among the largest producers of plastic waste, the lack of waste disposal capacity often results in high levels of macro- and microplastic leaking into the environment. In addition, [Abandoned, Lost and otherwise Discarded Fishing Gear \(ALDFG\)](#) poses a particular threat to aquatic biodiversity.

The GIZ has been supporting global efforts to improve waste management systems for more than 25 years and is currently implementing more than 20 projects focussing especially on marine litter prevention. Furthermore, GIZ supports the German government in several global processes and alliances on circular economy, waste management and marine litter prevention (e.g., PROBLUE, [PREVENT Waste Alliance](#),

Basel Convention). Currently, the ongoing negotiations under the United Nations Environment Assembly towards a global Plastics Treaty represent a unique opportunity for global achievements against plastic pollution. Furthermore, it is important to support global efforts against IUU-Fishing, which is a major driver for ALDFG.

Based on this experience, GIZ published a [new report on marine litter prevention in international development cooperation projects](#), including measures on collection and recycling of ship generated waste and used fishing gear. It concludes that successful measures must consider the entire value chain of plastics and thus support the circular economy.

Information on GIZ efforts against plastic pollution:

- [TOPIC / Waste and Circular Economy, Resource Efficiency](#)
- [Global Project Go Circular](#)
- [PREVENT Waste Alliance](#)
- [BMUV Support Project Marine Litter](#)
- [Rethinking Plastic - Ports & Fisheries](#)
- [Strengthening reduce, reuse, recycle \(3R\) to preserve marine biodiversity](#)
- [SICA: Preventing plastic waste in Central America and the Caribbean](#)



"Beach Waste Collection", Izmir Turkey.

© Mateo Garcia Prieto / GIZ

Beach clean-ups as a strategy to reduce plastic pollution of lakes in Uganda



The cash for work initiative at Lake Victoria and Kyoga aimed at strengthening household food resilience of 6.756 beneficiaries affected by the rising food prices due to the Ukraine war and addressing waste management challenges of fish landing sites that alter the status of fish breeding grounds and water environment.



In collaboration with the Fund for the Promotion of Innovation in Agriculture (i4AG) the Responsible Fisheries Business Chains Project (RFBCP) conducted beach cleanups at 34 major landing sites between November and December 2022. The cleanup activities involved awareness creation meetings with the district leadership, landing site committee members, fisher communities and primary schools near the landing sites. Participants were trained on proper waste disposal and management, as well as cleaning, sorting, grading, weighing and selling of special plastic waste to recyclers. A total of over 83.000 kg of organic and non-organic waste was collected from the landing sites, including dead plants and food remains, as well as solid plastics and plastic bags, old nets, rubber and much more. While plastic, metal and biodegradable waste could be sold to recyclers or fertilizer-making companies, other waste was sent to dumping sites. GIZ-RFBCP has been able

to link fishing communities to potential plastic recyclers like Africa Reform and Eco plastics, who can buy plastic waste routinely collected at landing sites. The large quantities of waste collected within two months highlight the magnitude of pollution of the lakes. To improve proper waste management in fishing communities, there is a need to streamline waste management policies along water bodies and establish waste management committees at landing sites. Additionally, periodic awareness raising that involves practical skilling on how to reduce, reuse and recycle waste and the provision of personal protective equipment materials to the landing site committees, are essential for successful waste management.

Weighing of the collected plastic waste at Namasali landing site, Amolter District.

© Peace Kabaliisa GIZ / RFBCP



Integrated agriculture aquaculture: solution to sustainable water management



The GIZ Aquaculture Value Chain Project for Higher Income and Food Security in Malawi (AVCP) promotes Integrated Agriculture Aquaculture (IAA) among fish farmers.



In Mzuzu City, in northern Malawi, dwells a farmer called Mr. Mwangonde. He started as a regular fish farmer with a 10 by 30 metres pond, using a community shared river as water source. Since his fish farming enterprise, located in a flood-prone area, expanded to four hectares, the downstream waters are susceptible for pollution. To address this issue, Mr Mwangonde ventured into integrated farming with bananas and sugarcane to improve water management through recycling. With nutrient rich water from his ponds, he irrigates and fertilizes his four-hectare sugar and banana plantation, preventing any eutrophic water from reaching the river and affecting other users downstream.

"In addition to reduced pollution and good water management, integration is the way to go to maintain cash flow. You may have low harvest on fish, but cash obtained from sugarcane or banana sells can maintain your enterprise." Mr. Mwangonde advised to other fish farmers.

Through the KFW Matching grant facility, Mr Mwangonde secured a 17.000 Euros grant, which he used to buy irrigation pumps and a greenhouse for hatchery operations, enabling him to produce fingerlings through the year.



Fish harvest at Mr. Mwangonde's fishfarm and banana plantation in Mzuzu, Malawi.

© Animal Lab / GIZ-AVCP

Rice and fish: A symbiosis providing environmentally friendly ecosystem services



Studies indicate that the presence of fish benefits rice farming by reducing insects, diseases, and weeds and increasing yields.



In turn, the rice fields provide shelter, food, and nursery for fish, creating a symbiosis between these two. To meet the food needs of Madagascar's growing population, integrating fish into rice farming is becoming increasingly important.

The preparation of rice fields is simple. Farmers must dig a refuge pond for fish, providing shelter in deeper and colder waters on hot days. To prevent fish from escaping and to improve water management, the dikes around the rice fields need to be heightened.

The approach utilizes the productivity of the natural environment to produce fish – without artificial feed, drugs, or fertilizer. This prevents the oversaturation with nutrients, hormones or pharmaceutical substances and preserves the rice field as habitat to a diverse range of species.

Fish feed, in form of phytoplankton, is naturally present in the rice fields. To enhance productivity, natural, home-made fertilizers such as a mixture of rice straw and manure can be used for plankton growth. The correct amount of fertilizer can be determined by the water colour. In training sessions, the fish farmers learn not to use too much fertilizer, as it can reduce oxygen levels in the water and harm the fish. Overall, integrated rice-fish farming boosts productivity, reduces costs and financial risks for the farmer and has a low environmental footprint.



A rice-fish farmer distributes fertilizer in the refuge canal of the rice field, Madagascar

© Fidisoa Ramanahadray / GIZ

Community-based management approaches for sustainable dam-based fisheries



Common pool resources such as the community dams in the Eastern province of Zambia are prone to overexploitation by the surrounding population.



To curb numerous occurrences of Illegal, Unreported and Unregulated (IUU) fishing in these small water bodies, the Fish for Food Security Project (F4F) has reformed Dam Management Committees (DMC). These community-based leadership structures have the aim to manage the dams after years of overfishing. Alongside the F4F Project and the Department of Fisheries, the DMCs have established community-based approaches to regulate dam-based fisheries and reduce IUU fishing.

Through capacity building activities, the DMCs and selected fishers learned how to adopt sustainable fishing practices such as restricted net sizes, maintaining fish populations for the benefit of all community members. The committees have developed strategies for sustainable dam-based fisheries management which are actively

supported and implemented by the community to mitigate IUU. DMCs established a permit system to restrict illegal access to dams and sometimes implement a fish ban to allow breeding. Further did they implement a monitoring system to collect data on fish populations and biodiversity. The penalty system generates revenues for the DMC to do various maintenance and monitoring activities. The DMCs have also extensively conducted community sensitization meetings on permits and right fishing gears and have the blessings of the traditional leaders. The DMCs are still learning together with the communities on how best to manage their small water bodies to ensure a sustainable use of their community resource.



Fishermen fishing in Rukuzye Dam in Zambia's Eastern Province, using approved fishing gear.

© Jason J. Mulikita/ GIZ

CFR contributes to the productivity of rice-field fishery systems in Cambodia



Contributing to the rise of Community Fish Refuge (CFR) systems in order to improve physical and ecological conditions, reduce IUU and increase yield.



Rice-field-fisheries systems in Cambodia provide two of the country's main sources of carbohydrates and animal protein, as they produce both rice and fish. Additionally, these systems create jobs and income for numerous households. The core components of these systems include flooded rice fields, lakes or ponds, and connecting canals. Healthy and productive rice-field-fisheries systems provide a safe refuge pond for fish and other aquatic animals in the dry season. During the rainy season, fish migrate through canals to the flooded rice fields for feeding and breeding. Here, people can then catch fish using approved fishing gear. However, this important resource is under grave threat due to illegal fishing practices,

contributing to the loss of biodiversity and natural habitats.

The project Sustainable Aquaculture and Community Fish Refuge Management (SAFR), with financial support from BMZ, works with partners and the local communities to establish 20 Community Fish Refuges (CFR). The purpose is to improve the physical and ecological conditions of refuge ponds, to provide shelter for fish in the dry season. This process involves the election of a CFR Committee, creating a CFR management plan, improving the physical and biological conditions of the CFR, and patrolling the CFR and the no-take zones. Properly managed CFR sees a remarkable reduction in illegal fishing activities, and the catch increases between 10 – 15 % per year.



A community member catching fish in a canal connected to a Community Fish Refuge pond.

© Conor Wall/ GIZ

Sustainable fisheries management in Mauritania - challenges and solutions



The declared goal of any fisheries management is to maintain a balance between fishing activities and biological productivity, but obtaining accurate data on this can be challenging.



To establish a sustainable fisheries management system in Mauritania, more transparency within the sector is essential. However, Mauritania's fisheries sector is characterized by a high degree of informality, an enormous waterbody and limited resources to monitor all active actors, which allows for illegal fishing. The country's coast guard covers an area of 230,000 km². To address these challenges, the Sustainable Artisanal Fisheries project in Mauritania (Pêche Artisanale Durable en Mauritanie, PADeM) supports the Fisheries Transparency Initiative (FiTI). FiTI is a global multi-stakeholder initiative, aiming to increase transparency and participation in fisheries governance for more sustainable management, based on two principles:

1. Transparency: The FiTI standard consists of 12 requirements to achieve a high level of transparency in maritime fisheries management, by making verified information accessible online.

2. Participation: FiTI is based on the principle of diverse participation through National Multi-stakeholder Groups consisting of representatives from government, industry and civil society.

In collaboration with national multi-stakeholder groups in Mauritania, PADeM has facilitated the preparation of the 3rd Annual FiTI Report to contribute to the improvement of data quality. PADeM further plans to continue supporting the GNM by holding regular group meetings and building a dialogue platform to discuss recommendations of elaborated reports and future steps. These ongoing efforts will help the country to improve the transparency in the fisheries sector.



Volume of artisanal fishing boats to be controlled by the coast-guard, Nouadhibou.

© Alena Goebel / GIZ

Transparency of fisheries in Mauritania

Guest article:
Fisheries Transparency Initiative,
Sven Biermann

Who is allowed to fish in Mauritanian waters? How much fish is caught in these waters? And how does fisheries contribute to food & nutrition security for this desert country in West Africa?



Just two years ago, those and other basic questions could not be answered, despite widespread fears of overfishing. Since then, Mauritania has significantly enhanced its level of transparency by collaborating with the Fisheries Transparency Initiative (FiTI), clearly acknowledging that the public availability of credible information is paramount to achieving sustainable fisheries. Through a multi-stakeholder approach, Mauritania is now regularly disclosing important information on their fisheries sector, including fishing licenses, foreign fishing agreements, stock assessments, financial contributions, catch and landing data and subsidies, that are publicly accessible through the [latest FiTI report](#).

Beyond worries about legal overfishing, Mauritania is also seen as being vulnerable to Illegal, Unreported and Unregulated (IUU)

fishing, partly because of its limited ability to police its waters. In addition to various mitigating measures, such as implementing the Port State Measures Agreement (PSMA), the national authorities of Mauritania are also using the FiTI to provide access to information on their policies and activities to monitor and control fishing activities, as well as information on the outcomes of investigations. As this information is further combined with detailed data about its commercial fisheries, including a public registry of industrial fishing vessels, it enables stakeholders to obtain a comprehensive understanding of the challenges posed by IUU fishing and the adequacy of national responses.



Confiscates foreign fishing vessel Nessa 7.

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