



Improving Freshwater Fisheries Management in Myanmar

Options towards a more sustainable and equitable exploitation of inland fish resources

Leasable fishery in the Ayeyarwaddy Delta. Photo by E. Baran

SECTOR SNAPSHOT

Freshwater fisheries are those in freshwater bodies including rivers, streams, ponds and lakes of permanent or temporary nature.

- With 1.5 million tonnes of freshwater fish yielded in 2015, Myanmar's freshwater capture fisheries are the largest in Southeast Asia and represent 28% of the total national fish production.
- Freshwater fisheries provide job opportunities to 1.5 million people and 27% of the fresh fish consumed.
- There are two management regimes of inland fisheries: leasable fisheries where exclusive exploitation rights of delimited water bodies are auctioned and open fisheries for which fishing gears licenses are issued by the Department of Fisheries.
- There is evidence of a rapid reduction in the catch per fisher (catch per unit effort) and in the abundance of high market value fish species.

SUMMARY

The freshwater fisheries in Myanmar are economically significant and important to livelihoods and food security. Yet significant threats to the resource base and public demand call for the development of management initiatives, legal adjustments and a people-centered approach. This brief identifies a series of options and priorities that could help improving freshwater fisheries management towards a more sustainable and equitable exploitation of inland fish resources. These include better knowledge of the resource base; integrated land and water management; the creation of opportunities through emerging Region/State legislation; the improvement of existing capture production systems and the development of new fish production systems.

KEY MESSAGES

- Better knowledge about the fishery resource base is needed to ensure its sustainable exploitation.
- Integration of agriculture, irrigation and fisheries under a single ministry is the opportunity to address conflicts and help integrate land/water management.
- The new legislation can improve the contribution of fisheries to food security and livelihoods at the State/Region level.
- Existing fish production systems (open fisheries, leasable fisheries) can be improved, in particular through co-management, for greater sustainability and benefit sharing.
- New fish production systems such as irrigation reservoirs can be developed.

INTRODUCTION

The inland capture fish resource is considerable and very significant to the national economy, food security and rural livelihoods. Yet significant threats and conflicts in the sub-sector call for new management approaches. Based on a series of research activities and consultations over the past three years, we detail below five points that aim at people-centered, biologically sound and sustainable management of freshwater fisheries in Myanmar.

1. GENERATE BETTER KNOWLEDGE ABOUT THE INLAND FISH RESOURCE BASE

The way annual fishery yields are estimated leads to large biases in estimates, and data are not detailed enough to inform management (e.g. catch per species are absent in national landing statistics). A monitoring system is required at least for some target species (e.g. Hilsa) to ensure sustainable exploitation. There is considerable potential in bringing together the Department of Fisheries, Universities, NGOs and the private sector for coordinated knowledge generation. The research capacity of the Department of Fisheries needs to be strengthened and a formal mechanism is required to ensure that policy and decision-makers receive and utilize updated information and scientific evidence. If no initiative is taken, knowledge of the resource will remain insufficient to protect it; the resource will remain exploited without status monitoring, i.e. until it is fishers who send a socially critical signal of overexploitation to authorities.

2. SEIZE THE CHANCE TO INTEGRATE LAND AND WATER MANAGEMENT

Expansion of agriculture and irrigation has created conflicts between fishers and farmers in seasonally flooded environments. Water supply is controlled by the Agriculture Department with agricultural production as a priority. In the dry season, agricultural lands tend to expand over areas that are fishing grounds in the flood season. Meanwhile, the demarcation of leasable fisheries is outdated, including areas that are permanently dry. This creates water use and land use conflicts, with no formal mechanism for conflict resolution. With the new integration of agriculture, irrigation and fisheries

“Our daily catches are decreasing and the fish we get are becoming smaller every year”

Open water fisherman, Bogalay TS, Ayeyarwaddy Delta, 2015

under a single Ministry, there is an opportunity to open dialogue between government departments and to coordinate a more formal mechanism for cross-sectoral coordination and integrated management of the resources.

3. USE LEGAL REFORMS TO STRENGTHEN FOOD SECURITY AND LIVELIHOODS

The Freshwater Fisheries Law, enacted 25 years ago, focuses on revenue generation based on arbitrary targets and has limited provisions for management of the resource. Thus, the existing legal framework is not fully adapted to the current status, constraints and trends in this sector. The legislative framework needs to evolve from a rent-based approach towards a people-centered approach. The ongoing development of a Freshwater Fisheries Law in each State and Region is a great opportunity to see amendments and management options integrated.

More support and guidance from the Union government should be provided to State/Regional governments to ensure that principles of sustainable resource management and equitable benefit sharing among stakeholders are integrated into each of the new fisheries laws. Preliminary legal steps include

integration of principles from the FAO Code of Conduct for Responsible Fisheries and Voluntary Guidelines For Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication. If no initiative is taken, the legal framework will not make provisions for sustainable management of the resource in a context of declining resources.

4. IMPROVE SUSTAINABILITY AND BENEFIT SHARING OF EXISTING FISH PRODUCTION SYSTEMS

Open fisheries, which contribute to 75% of the total inland fish production, are currently poorly regulated and managed (management is restricted to gear size and fishing seasons). As demonstrated elsewhere in Southeast Asia, co-management—sharing of management responsibilities between the state and resource users—is an effective approach. Co-management can help improve resource monitoring and law enforcement and can distribute benefits more equitably among resource users. The process needs to be carefully prepared and staged, while drawing lessons from neighboring countries. If the open fisheries remain poorly regulated, the resources are expected to decline and the competition over productive fishing grounds will intensify.

More sustainable management of leasable fisheries is also needed. Revenue seeking practices have resulted in increased tensions between lease holders and local communities and have created improper incentives for overfishing. Furthermore, the management effectiveness of stocking all leases with hatchery fishes is not proven. Reviewing good local or former practices in leasable fisheries (e.g. leaving 10-20% of the lease area for exploitation

by community fishers) and instituting new management rules based on these practices will promote sustainability and benefit local communities. If the current practice continues, the resources of leasable areas will decline further and the value of these leases will eventually go down, reducing an important revenue source for the government.

“There are now opportunities to maximize collaboration between Universities, fisheries communities and the Government for a more sustainable management of the fisheries sector”

Dr. Thet Thet Lwin - Monywa University, 2015

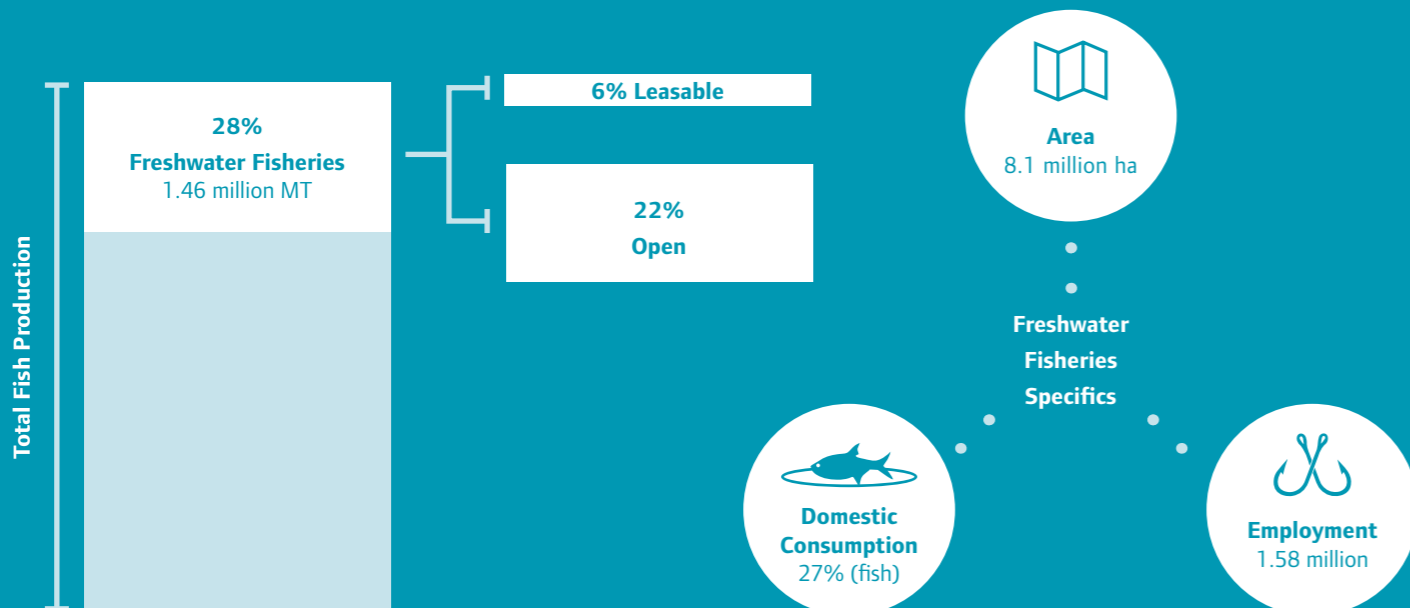
5. DEVELOP NEW FISH PRODUCTION SYSTEMS SUCH AS IRRIGATION RESERVOIRS

Experience from other Asian countries shows that irrigation and dam reservoirs can generate high fish production. However, customary rules prohibit fishing and aquaculture in reservoirs, even though the Department of Fisheries stocked 27 million fingerlings in 124 reservoirs in 2014-2015. Removal of customary obstacles and provisions for effective use of reservoirs for fisheries purposes should be added to the Freshwater Fisheries Law, in coordination with the Irrigation Department, in order to increase production and benefit local communities.



Seine fishing along the Ayeyarwaddy River. Photo by E. Baran

OVERVIEW OF MYANMAR FRESHWATER FISHERIES SUBSECTOR



CONCLUSIONS

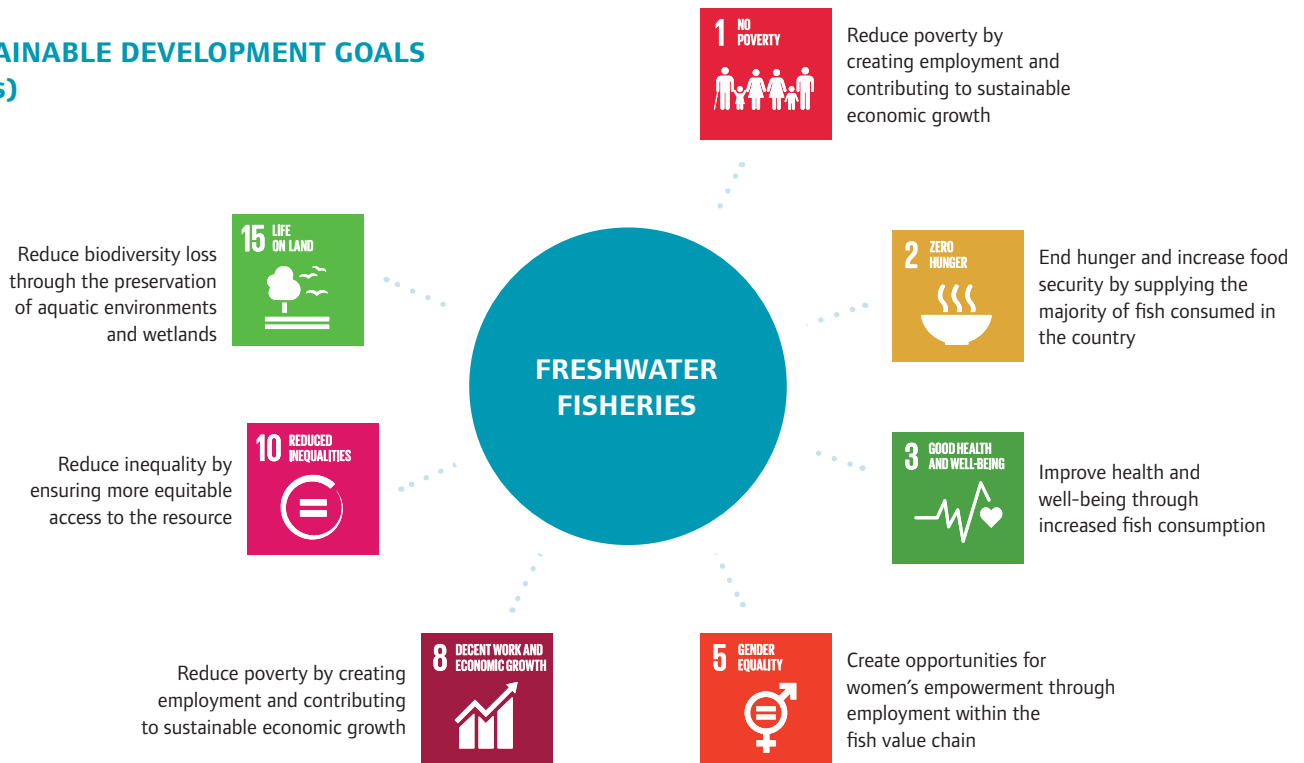
The sustainability of freshwater fisheries is challenged by a number of internal and external pressures, such as overexploitation and conflict over land and water. Fisheries benefits are not equitably shared between all segments of the population. Yet the changing legal framework and some management innovations offer opportunities for increased fish production and for a more biologically sustainable and socially equitable exploitation of the resource. Priority areas of interventions are local community engagement in resource management, dialogue and coordination between irrigation and fisheries authorities, improving the knowledge base and establishing a coherent legal framework to support these interventions.

PURPOSES

The purpose of this brief is to inform policy makers at the Union and State/Regional level about:

1. The challenges and needs in freshwater fisheries;
2. Priorities and options for improving management of this sub-sector, with a focus on increased production, sustainability and equitable benefit sharing; and
3. Opportunities for improving governance in this sub-sector.

SUSTAINABLE DEVELOPMENT GOALS (SDGs)



ACKNOWLEDGEMENTS

- Eric Baran, WorldFish
- Yumiko Kura, WorldFish
- Khin Maung Soe, WorldFish
- Htin Aung Kyaw, Myanmar Fisheries Federation
- Min Naung, Department of Fisheries
- Ohnmar Tun, Department of Fisheries
- Xavier Tezzo, WorldFish
- Shakuntala H. Thilsted, WorldFish

KEY REFERENCES

- FAO-NACA. Myanmar aquaculture and inland fisheries (2003)
- Department of Fisheries. Myanmar Fisheries statistics (2015-2016)
- Khin Maung Soe et al. Myanmar inland fisheries (2016)

Disclaimer: The recommendations and opinions expressed in the policy brief are entirely those of the participants and not necessarily those of the parent organization.

DONORS



OTHER SPONSORS



MYANMAR FISHERIES PARTNERSHIP

