Briefing

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Financing Myanmar's fisheries through fiscal reform

Policy pointers

The Myanmar government could more than triple the revenues currently collected from the hilsa fish value chain by making revenue collection more efficient and better targeting those who profit most from hilsa.

These extra revenues could be used to finance incentive-based fisheries management that compensates all artisanal fishers in the Ayeyarwady Region for complying with fishing regulations.

Whether revenues are decentralised or managed nationally, policymakers must earmark at least some for incentive-based hilsa fisheries management and may need to strengthen institutional capacity for fund administration.

Policymakers must consider the full range of potential impacts of fiscal reform (social, political, economic and environmental) and what measures they can take to reduce negative and unintended impacts.

The hilsa shad is one of Myanmar's most commercially valuable fish species. It also provides income for thousands of artisanal fishing households in some of Myanmar's most impoverished areas. Yet hilsa stocks appear to be in decline. Existing fiscal tools — such as taxation and licence fees, already used by the government to generate revenue from hilsa production and trade — could be used to mobilise additional resources from the value chain. Doing so could provide financing for a system of incentive-based hilsa fisheries management. By increasing revenue collection efficiency and adapting current tools to better target actors nearer the top of the hilsa value chain, the government of Myanmar could triple current revenues and use these to support more sustainable and inclusive hilsa fisheries.

The hilsa shad (*Tenualosa ilisha*) is one of Myanmar's most commercially valuable fish species. While some hilsa is consumed domestically, its high value is driven by strong and steady demand from export markets.[1] Migrating seasonally between marine and fresh waters for breeding and feeding,[2] hilsa support small-scale and artisanal fisheries in Myanmar's coastal and delta regions, and offshore fisheries in the Bay of Bengal. They are particularly important in the Ayeyarwady Region, where fishing contributes an average of 63% of household income in coastal and delta communities.[3] In some areas, hilsa fishing alone generates between 77% and 97% of household income.[4]

It is perhaps unsurprising, then, that hilsa stocks are under threat.[5,6] Not only are catch rates too high, too many juveniles are caught in small-meshed nets, and egg-laden females — a high-value Chinese delicacy — are often targeted during their inland spawning migration. This seasonal migration also means that hilsa are susceptible to land-based threats such as habitat loss and water pollution. The government urgently needs to do more to secure the future of Myanmar's hilsa.

Protecting hilsa in Myanmar: the potential of incentive-based management

New ecological understanding shows the need for new fishing regulations to protect hilsa, including sanctuaries, gear restrictions and better-timed closed seasons.[7,8] But regulations typically rely on enforcement, for which Myanmar's Department of Fisheries has limited capacity.

Regulations also tend to impose a short-term economic cost on fishers, for instance by restricting access to fishing or requiring investment in specific gear. Ayeyarwady Region fishing households already struggle with insufficient and unpredictable income flows and rely on informal loans to meet even their basic needs during low-catch periods.[3] Locked into cycles of debt, fishers have limited ability to shoulder the additional cost of compliance with regulations — and little willingness to, given the low threat of enforcement.

One promising solution to these kinds of challenges is incentive-based management, wherein governments provide monetary or in-kind compensation to fishers to reduce or offset the short-term costs of compliance with regulations.[9] By strengthening individual or collective motivations for compliance, incentive-based management reduces the need for top-down enforcement.

Its economic value would make investment in the hilsa fishery a good business decision for the government

Although this type of approach does require a sustainable source of finance, these resources can be mobilised by reforming fiscal policy — that is adapting government tools for revenue collection (eg taxes, fees and charges) and spending (eg grants and conditional transfers).[10,11]

This briefing outlines the potential for the Myanmar government to finance incentive-based fisheries management through fiscal reform. It is based on a diagnostic study,[12] conducted as part of a wider IIED-led research project, Darwin-Hilsa[MM],[13] which draws on literature review, interviews and focus group discussions with individuals involved in Myanmar's hilsa production and trade.

The study characterised the actors in Myanmar's hilsa value chain and assessed information on how (and how effectively) the government currently raises revenue from these actors. Through this analysis we identified opportunities to generate additional finance by improving collection efficiency and better targeting those who profit most from hilsa.

Not only would the fiscal reforms outlined help Myanmar's Department of Fisheries (DoF) to fulfil its mandate for sustainable hilsa fisheries management, they could also contribute to Myanmar's poverty alleviation objectives. And the economic value of the hilsa fishery would make investment in the hilsa fishery a good business decision for the government.

The figures set out in this briefing illustrate the revenue potential of fiscal reform in Myanmar and aim to stimulate discussion; they should not be considered definitive.

Triple revenues by adapting existing policy

Introducing new tools can be a lengthy process requiring new laws, so we focused on opportunities to adapt existing revenue collection tools. The DoF, Ministry of Planning, Finance and Industry (MoPFI) and other government bodies use a range of fiscal tools to collect revenues from actors involved in Myanmar's hilsa value chain (Box 1).

We estimate that more efficient revenue collection and better targeting of fees and taxes could generate US$91 million annually — more than 3.5 times our estimate of current revenues. Based on the transaction and administration costs of an incentive scheme for hilsa fishing households in nearby Bangladesh (between US$1.40 and US$88 per household per year), these additional revenues would be enough to provide incentives to all artisanal fishers across the Ayeyarwady Region, including those who are currently not registered.

Improving revenue collection efficiency

We estimate that fiscal tools currently raise US$25.6 million a year from the hilsa value chain, but our calculations also indicate that revenue collection efficiency could be improved across many of these tools, more than doubling the total to US$56.9 million. For example, while 63,000 artisanal fishers pay annual registration and licence fees to the DoF, the same number again are thought to be operating without paying fees. While it may not be appropriate or possible to charge every artisanal fisher these fees — as for some fishing is only one of many income-generating activities — raising revenue collection efficiency by just 50% could generate an additional US$220,500 every year for the DoF.

Similarly, while 3,172 offshore vessels were licensed to fish in Myanmar in 2017/18, paying an estimated US$1.3 million in fees to the DoF and the Port Authority, we estimate that another 1,586 vessels operate without paying any fees. If fees were collected from each of these vessels, the annual total generated could be increased to US$2 million.

All traders, wholesalers and exporters are required to pay the DoF, per unit volume of fish, for their annual licence to operate. Given evidence of illegal transhipments and unreported harvests in Myanmar, we estimate that, on top of the volumes of hilsa officially traded, 50% more goes unreported. Based on typical fees and average volumes of fish reportedly traded by each actor, the DoF could therefore be collecting a total of US$26,022 per year — 1.5 times more than our estimate of current revenues.

Companies are also required to pay corporate income tax (CIT), but experts involved in this research suggested that some take advantage of tax loopholes, which they estimate could result in a 35% revenue loss. Experts also estimated that up to half of all township traders avoid registering as companies altogether. If all corporate actors involved in the hilsa value chain were to pay the official tax rate on their profits from hilsa, it could generate US$53.4 million per year for the MoPFI

— more than double our estimate of current levels.

Raising revenues through better targeting

The total annual licence fees and other charges that hilsa value chain actors are required to pay represent 0.02% or less of typical annual profits from hilsa for exporters, wholesalers and traders; 0.20% for artisanal fishers; and 1.26% for offshore fishers. These amounts do not reflect the variation in profits, which range from US$3,728 (artisanal fishers) up to US$5.8 million (export companies) (see Figure 1). This means that although export companies typically make annual profits from hilsa that are three orders of magnitude higher than those made by artisanal fishers, their total fees are proportionally smaller. And while the annual profits of a wholesaler are typically nearly 50 times those of a village trader, the proportions of their profits spent on fees are almost equal.

Similarly, CIT is set at the same rate for all companies in Myanmar (25%),[14] regardless of their relative profits. The only difference is for exporters — the highest earners from hilsa — who are required to pay a 2% advanced income tax on the assessed value of goods, which is offset against CIT due at the end of the year.

Not only should these fees and taxes be distributed more equitably across the value chain (ie, to better target those actors with greater ability to pay), it is clear from our value chain analysis that more revenues could be collected from actors nearer the top of the chain without affecting their business models. For instance, our analysis indicated that actors could tolerate licence fees and other charges being raised to make up 1% of annual hilsa profits for village traders and progressively higher amounts throughout the value chain, up to 7% of annual profits for exporters. These changes could generate a total of US$451,970 per year for the DoF and other government bodies. Similarly, a

Box 1. Fiscal tools used to collect revenues from the hilsa value chain in Myanmar

The Department of Fisheries (Ministry of Agriculture, Livestock and Irrigation) collects:

- Fees from artisanal fishers for fisher registration (ID card) and boat, engine and fishing gear licences
- Fees from offshore vessels for licence to fish, and
- Fees from village and township traders, wholesalers and exporters for licence to trade fish, per unit volume of fish.

The Ministry of Planning, Finance and Industry collects:

- Corporate income tax (CIT) from companies (township traders, wholesalers, exporters and offshore fishers) at a flat rate of 25%, and
- Advanced income tax (2%) from export companies, which is offset against CIT at the end of the year.

The Ministry of Commerce collects fees from businesses for registration as a company authorised to engage in international trade.

Yangon City Development Committee collects fees from traders and exporters for use of market spaces and processing facilities.

Figure 1. Summary of key actors in Myanmar's hilsa value chain

Artisanal fishers
63,000 people registered + 63,000 not registered
Volume: 1.7 mt
Revenue: US$12,640
Cost: US$1,763
Profit: US$3,728

Village traders
1,165 people
Volume: 14.2 mt
Revenue: US$20,217
Cost: US$2,679
Profit: US$17,538

Township traders
773 companies
Volume: 104.8 mt
Revenue: US$33,863
Cost: US$8,032
Profit: US$31,205

Wholesalers
5 companies specialising in hilsa export
Volume: 4,221.0 mt
Profit: US$820,750

Exporters
80 companies, 10 of which export the most hilsa
Volume: 936.0 mt
Revenue: US$6.55 M
Cost: US$720,000
Profit: US$5.83 M

Offshore fishers
3,172 vessels licensed + 50% more unlicensed
Volume: 1.8 mt
Revenue: US$32,648
Cost: US$1,016
Profit: US$31,631

Notes: for each actor group, this figure shows estimated population size. Per actor in each group, this figure shows typical annual hilsa volumes (mt, metric tonnes), and costs (fixed and variable), revenues and profits (US$) from hilsa. Note that revenues and costs are unknown for wholesalers specialising in hilsa export, and offshore fishing companies can own up to 30 vessels, so typical profits at the company level are probably much higher than set out in this figure at the vessel level.

progressive taxation system that raised CIT rates by 3% for township traders, 5% for wholesalers and offshore fishers and 7% for exporters could potentially generate US$44.1 million in tax revenues a year for the MoPFI.

Factors for success

To maximise the success of fiscal reform — both in terms of raising additional revenues and ensuring that those revenues support more sustainable and inclusive hilsa fisheries management — policymakers should consider several factors.

Identify and mitigate unintended consequences. Policymakers should consider the full range of potential impacts (social, political, economic and environmental) to understand how fiscal reforms may affect different groups and explore how they can reduce possible negative impacts. For example:

- Raising fees or taxes could drive hilsa trade and export further underground. The government should commission research to understand exactly how much each value chain actor could pay without prohibitively negative impacts on their income or competitiveness, or on the value chain more broadly. Relevant government bodies could also design campaigns to communicate to actors the long-term benefits of any changes and to help build acceptance, and even provide some tangible short-term benefit to village and township traders to reduce negative perceptions.
- Traders could pass on the cost of increased fees to more vulnerable artisanal fishers by reducing purchase prices and imposing or raising interest rates on credit. Policymakers should work with Myanmar's financial institutions to improve access to affordable and suitable financial products and services for fishers, which could help to reduce this risk.

Earmark funds for hilsa fisheries management and conservation. Creating new opportunities to collect, manage and distribute funds can also create new opportunities for misuse of funds. This can in turn undermine perceptions of legitimacy and stakeholders' willingness to cooperate. Policymakers should ensure that at least a portion of revenues raised through fiscal reform are used to support a system of incentive-based fisheries management. To do this, institutional capacity for fiscal administration may need to be strengthened. We identified the following options for fund management:

- Revenues could be channelled into the DoF's research and development fund and earmarked for hilsa management, but this would require the bureaucratic approval process to be streamlined.
- The most feasible reforms are those that could be managed at a decentralised level within the scope of the 2018 Ayeyarwady Region Freshwater Fisheries Law (updated in 2019). This law would allow a regional conservation fund to be established for hilsa (Article 20d).
- A Conservation Trust Fund could be established for hilsa fisheries management. As legally independent grant-making institutions, Conservation Trust Funds can provide institutional capacity at local and national levels for transparent and accountable fund generation and allocation.[15]

Strengthen offshore governance. Despite a new compulsory Vessel Monitoring System, there is still a great deal of illegal, unreported and unregulated fishing by the offshore fleet. Until this changes, efficient collection of revenues from the offshore fleet will not be possible, and unsustainable marine fishing activity may undermine the impacts of improved hilsa management inland.

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Notes

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