



# Fuel Subsidies to Marine Fisheries in India:

## An overview

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July 2022

This brief builds on a longer report on government support for marine fisheries in India, which is available [here](#).

## Introduction

India's vast coastline of 7,500 km helps facilitate a large marine fisheries sector that provides livelihoods to millions of often small-scale and low-income fishers and nutritional security to many more people across the country. The sector is socially and economically significant to coastal communities and provides 1% of the country's gross domestic product overall. The national fisheries policy 2020 suggests that to prevent the overexploitation of nearshore resources, fishing efforts should be rationalized and focus on oceanic waters (National Fisheries Development Board, 2020).

When looking at the best way for the fisheries sector to continue to support critical socio-economic and environmental objectives, a key factor to consider is government support. In India, support for marine fisheries comes at many stages of the value chain and is offered by both national and sub-national governments. To help generate a coherent data picture on this topic, the International Institute for Sustainable Development examined the role of government support to marine fisheries in the country, mapping both national and state-level public support to the sector in a bottom-up database and associated report (Sharma et al., 2021a, 2021b). This work revealed that fuel subsidies are the most significant type of support for marine fisheries in India. Given that such subsidies can pose important risks in terms of social, economic, and environmental sustainability, the report recommended that the impacts of such subsidies be evaluated in detail.



This work is an area of growing importance with rising fuel prices, which may increase the fuel subsidy burden for state governments. Based on this report, this brief presents several key figures and facts on fuel subsidies to marine fisheries in India, including new, updated state-level information on the level of support in four focus states—Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu—which account for more than 50% of total fish landings in India. The brief then explains why these fuel subsidies provided to the fishing sector should be evaluated and possibly reformed to better support small-scale and low-income fishers efficiently and sustainably. Finally, it highlights a few key lessons from broader fossil fuel subsidy reform in the country.

## Fuel Subsidies to Marine Capture Fisheries in India

Fuel accounts for a major share of the cost of fishing operations. For example, a recent study in Andhra Pradesh found fuel costs to be approximately 75% of total fishing operating costs for mechanized vessels and between 12% and 33% for motorized vessels (Raju & Ghosh et al., 2022). In light of this finding, it is barely surprising that fuel subsidies are the most substantial type of government support provided to marine fisheries. In fiscal year (FY) 2019, such subsidies accounted for an estimated 32% of total government support to the sector (see Figure 1<sup>1</sup>). As opposed to other important types of support, fuel subsidies are provided exclusively by state governments, which support fishers by offering mostly subsidized diesel and kerosene, the latter targeted at artisanal fishers, and occasionally subsidized electricity to ice plants.

Looking specifically at the four states for which the most comprehensive data was collected (see Figure 2), fuel subsidies grew considerably (by 142%) between 2016 and 2019 but then slightly decreased between 2019 and 2021. These trends can be primarily attributed to the evolution of the global price of oil and the taxation of fossil fuels in these respective periods. The sharp rise in world oil prices in early 2022, triggered by the Russian invasion of Ukraine, will likely lead to another increase in state governments' expenditure on fuel subsidies.

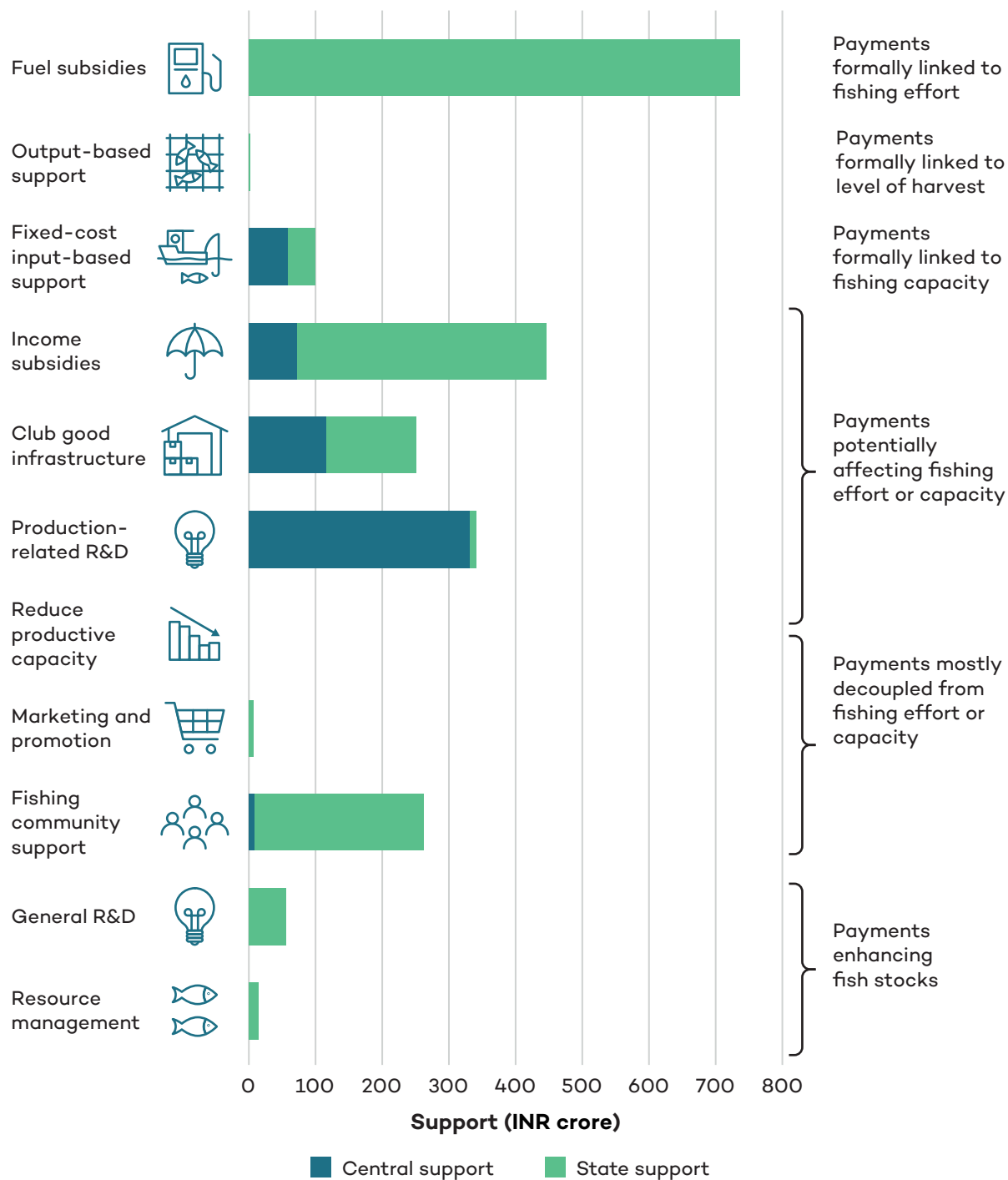
State governments provide subsidized diesel and kerosene to fishers through a variety of mechanisms. States often use reimbursement of or exemption from a sales tax on fuel, but in some cases, especially for subsidized kerosene, fuel is also sold at low prices through specific retail outlets accessible to fishers. Some states, like Karnataka, have implemented a mechanism to directly credit the subsidy amount to the bank accounts of fishers. This approach has prompted other states like Tamil Nadu to consider the same mechanism. In most states, the sale of subsidized fuel is tracked through a fuel passbook owned by the fisher of a vessel possessing a fishing certificate. While diesel subsidies target mechanized fleets, subsidized kerosene is used by traditional and smaller-scale motorized vessels. Both types of boats have their respective annual limits for purchasing subsidized fuel.

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<sup>1</sup> For more information, details on data coverage, methodology, and a complete list of policies quantified in this figure, see Sharma et al. (2021a) and the accompanying dataset (Sharma et al., 2021b). The total amount of support of INR 2,224.5 crore (USD 316 million) in FY 2019 is closely linked to this report's broad conception of public support for marine fisheries. Reducing the scope to only capture the measures that would most likely fall within the scope of new World Trade Organization rules on fisheries subsidies, for example, would decrease that total to INR 829 crore (USD 118 million).



**Figure 1.** Government support to India’s marine fisheries by category (FY 2019)

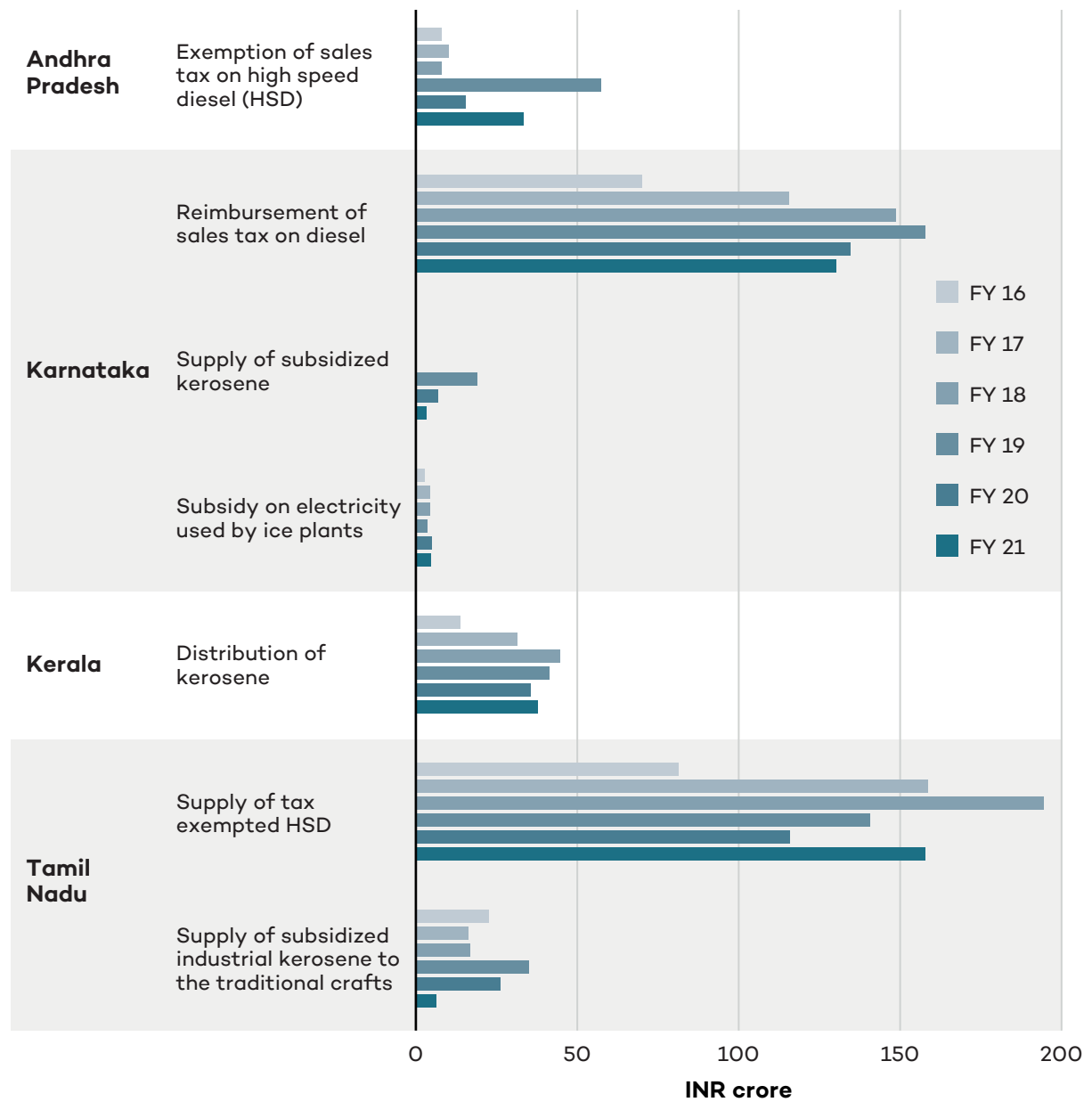


Source: Sharma et al., 2021a.

Fuel subsidies data presented in Figure 2 for the four focus states shows considerable variation between states. While diesel subsidies are highest in Tamil Nadu, followed by Karnataka and Andhra Pradesh, the largest kerosene subsidies, offered to small-scale fishers, is provided in Kerala, followed by Tamil Nadu and Karnataka. The size of fleets is a factor that partly—but not completely—explains these differences, which highlights the importance of particular policy choices. For example, the state government of Kerala does not provide any subsidy to diesel despite a relatively large number of mechanized fishing vessels.



**Figure 2** Fuel subsidies to marine fisheries disaggregated by states from FY 2016 to FY 2021



Source: Sharma et al., 2021a.



## Are Fuel Subsidies Aligned With Sustainable Development Objectives?

Fuel subsidies have a long history in India of being inefficient in transferring benefits to the poor. They generally tend to accrue more significant benefits to well-off consumers who can afford to purchase more subsidized fuel, which in the fisheries sector favours larger-scale fishing activities. For example, a study in Karnataka found that larger vessels (>130 horsepower) can receive up to four times more diesel support than smaller vessels (<40 horsepower) (Government of Karnataka, 2017). Fuel subsidies are also widely recognized as one of the riskiest types of support to fisheries in terms of sustainability (Martini & Innes, 2018). In the absence of strict fisheries management measures, they tend to increase fishing efforts, often beyond sustainable levels. In a country like India, where marine fisheries are still largely open access and so many people depend on fish and fishing activities to meet their basic needs, these considerations deserve careful attention and call for an evaluation of the impacts of fuel subsidies.

An evaluation of fuel subsidies could focus on several aspects, including their immediate effectiveness and efficiency in supporting low-income fishers in India, as well as their longer-term impacts on fisheries' ability to deliver essential development benefits sustainably. Such an assessment could also include considering several particular operational issues, including delays in the reimbursement of diesel subsidies to fishers or granting of fisher identification cards, with a view to helping to improve policy design and social outcomes. Finally, possible reform options could be examined to assess whether revising such measures or redirecting resources toward other types of support for marine fisheries could better serve the desired policy objectives.

## What Can Be Learned From a Broader Discussion on Fossil Fuel Subsidies in India?

India has significant experience in reforming its economy-wide non-fisheries fossil fuel subsidies, and several lessons can be considered for reforming fuel subsidies in the marine fisheries sector. Overall, India's oil and gas subsidies have fallen from INR 224,199 crore (USD 30.2 billion) in FY 2014 to INR 55,250 crore (USD 7.4 billion) in FY 2021 (Aggarwal et al., 2022). Most of that decrease is related to the reform of subsidies for diesel, kerosene, and liquefied petroleum gasoline used in cooking.

India formally deregulated diesel prices in October 2014, which marked the end of a 2-year process of price reform. The pricing reform included an initial substantial price hike followed by small monthly increments. An important lesson from this reform process was that the phased monthly price hikes limited economic disruptions and political opposition (Clarke, 2015). Another crucial piece of the reform sticking was policy continuity—the phased price increases introduced by the government in 2012 were adopted by the subsequent newly elected government in 2014, leading to the eventual deregulation of prices later that year. In the marine fisheries sector, any diesel price reform will have to be undertaken with care, in particular, by mitigating the negative impacts of price reforms on the most affected fleets—especially trawlers. Such mitigation measures are important because price hikes will increase



fishing operating costs for trawlers, leading to a risk that these trawlers will attempt to compensate for this by overfishing.

Kerosene subsidies reform offers another key lesson: the importance of offering a viable alternative; in the case of kerosene: a cleaner and affordable alternative. Subsidized kerosene was sold throughout the country through government outlets, but there were high levels of leakage, leading to significant inefficiency: only 49% of subsidized kerosene was reaching the intended households at the officially subsidized price (Jain & Ramji, 2016). Even at subsidized prices, the limited allocation of the subsidized fuel was not enough to meet poor households' cooking and lighting needs and required them to spend far more on their basic energy requirements. Similar to the phased approach in diesel subsidy reform, the government began to gradually reduce kerosene subsidies while dramatically increasing grid electrification and clean cooking alternatives (electricity generation and cooking being the two end uses of kerosene by households). The reduction of expenditure on kerosene subsidies came from two policies: first, reducing the limit of subsidized kerosene allocated to states, which, in turn, reduced allocations to each household, and second, small fortnightly price hikes. Kerosene subsidies have now been reformed in all other sectors and only exist in the fisheries sector. Some alternatives to kerosene subsidies are being tested in Kerala, including offering liquefied petroleum gasoline conversion kits to operators with kerosene-run vessels (New Indian Express, 2022) and the development of electric and hybrid outboard motor engines through a state-sponsored scheme, Parivarthanam.

These past experiences highlight the crucial importance of protecting vulnerable households from any abrupt shock brought on by reform. Marine fisheries economically support many low-income fishers and broader coastal communities, which both could suffer a great deal if subsidies were abruptly removed. Before initiating any price reforms, policy-makers should thus ensure that appropriate support systems are in place for small-scale fishing operations, which may involve stock management measures, vessel buy-back schemes to reduce the total fishing fleet, and other types of interventions that would help protect small-scale fishers from the impacts of reform. Reform strategies include better targeting fuel subsidies to those most in need and removing more well-off fishers or, if more general elimination is decided, implementing it gradually and offering alternative and more sustainable forms of support to low-income fishers. To ensure it preserves and improves fisheries' ability to meet populations' needs sustainably, such assistance should be provided in a way that supports fishers and coastal communities without incentivizing excessive fishing pressure—for example, by improving the management of marine resources.



## References

- Aggarwal, P., Goel, S., Laan, T., Mehta, T., Pant, A., Raizada, S., Viswanathan, B., Viswamohan, A., Beaton, C., & Ganesan, K. (2022). *Mapping India's energy policy 2022: Aligning support and revenues with a net-zero future*. International Institute for Sustainable Development. <https://www.iisd.org/system/files/2022-05/mapping-india-energy-policy-2022.pdf>
- Clarke, K. (2015). *Diesel subsidy reform in India: Lessons learned*. International Institute for Sustainable Development. <https://www.iisd.org/publications/report/diesel-subsidy-reform-india-lessons-learned>
- Government of Karnataka. (2017). *Evaluation of distribution of tax exempted diesel and kerosene to fishing boats in Karnataka*. Department of Fisheries. <https://kmea.karnataka.gov.in/storage/pdf-files/Reports%20and%20other%20docs/Kerosene.pdf>
- Jain, A., & Ramji, A., (2016). *Reforming kerosene subsidies in India: Towards better alternatives*. International Institute for Sustainable Development. [https://www.ceew.in/sites/default/files/CEEW\\_Reforming\\_Kerosene\\_Subsidies\\_in\\_India\\_4May16.pdf](https://www.ceew.in/sites/default/files/CEEW_Reforming_Kerosene_Subsidies_in_India_4May16.pdf)
- Martini, R. & Innes, J. (2018). *Relative effects of fisheries support policies* (OECD Food, Agriculture and Fisheries Papers, No. 115). OECD Publishing. <http://dx.doi.org/10.1787/bd9b0dc3-en>
- National Fisheries Development Board (NFDB). (2020). *National fisheries policy: Sixth draft for consideration*. <http://nfdb.gov.in/PDF/Policy/english.pdf>
- New Indian Express. (2022, February 27). *Soon, fishing boats in Kerala to run on LPG*. <https://www.newindianexpress.com/states/kerala/2022/feb/27/soon-fishing-boats-in-kerala-to-run-on-lpg-2424393.html>
- Raju, S. S., Ghosh, S., Shyam, S. S., Pattnaik, P., Muktha, M., & Narayanakumar, R. (2022). Techno-economic evaluation of marine fishing operations in Andhra Pradesh, southern India. *Indian Journal of Fisheries*, 69 (1), 137–145. <http://eprints.cmfri.org.in/15907/>
- Sharma, S., Bellmann, C., Beaton, C., & Pant, A. (2021). *Supporting marine fishing sustainably: A review of central and state government support for marine fisheries in India*. International Institute for Sustainable Development. <https://www.iisd.org/system/files/2021-12/sustainable-marine-fisheries-india-en.pdf>

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