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**REPORT**



**THE UNEQUAL SHARE OF CENTRAL  
FISHERIES SUBSIDIES AND SCHEMES  
TOWARDS AQUACULTURE IN INDIA**

**NATIONAL FISHWORKERS FORUM  
(NFF)  
2024**







Artisanal clam fisherwoman, Goa  
Source: Sarita F

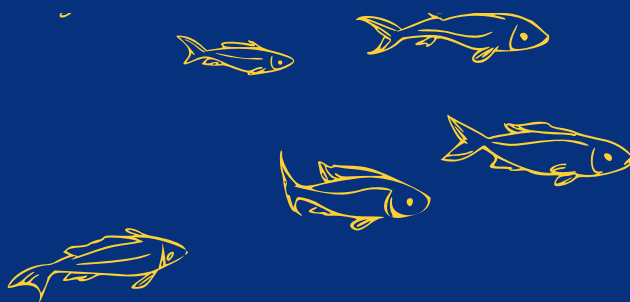


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# MESSAGE FROM OUR LEADERS

**OLENCIO SIMOES,  
GENERAL SECRETARY**

**LEO COLACO,  
CHAIRPERSON**



“It's clear that the government has shifted its focus from marine fisheries to fish farmers, by allocating huge subsidy to aquaculture is a clear indication that government wants to kill the traditional small scale fishers across the country”

“In previous times, aquaculture was considered a neglected sector, however the unprecedented boost is possible from the priority set by the central government to boost aquaculture. Awarding almost 80% subsidies towards one type of fisheries is unjust and unfair to the entire fisheries sector”





# ABOUT THE NATIONAL FISHWORKERS FORUM:



**NFF brings various fishworker unions and associations from different states, union territories and islands across India's ~8000 km coasts and islands.**



The National Fishworkers' Forum (NFF), registered under the Trade Union Act of India, is the only national federation of state level small and traditional fish workers' unions of India. NFF has fifteen affiliated organizations in all the coastal states and union territories of the Indian mainland. NFF works to protect the life and livelihood of the fishing communities and its basic source – fisheries resources, biodiversity and natural environment since 1970s.

The National Fishworkers Forum (NFF) was formally registered in 1985 to address the concerns and escalating and dynamic issues faced by the fishing community and to advocate for their rights.





About 70% of all centrally sponsored fisheries subsidies are allocated for the development and growth of inland and coastal aquaculture in India. (Department of Animal Husbandry and Dairying (DAHD), 2024)

Fisheries subsidies in India are a long standing topic on it's role in the development of fisheries, type of fisheries and which fishworkers benefit from government resources, especially the share that small-scale and artisanal fishworkers receive from them. Subsidies and schemes are financial benefits made by the government or public bodies that provide a private or sector-specific benefit. (Aswathy N et al. 2012). However, the equitable share of most fisheries subsidies and schemes, in India and globally, is an active subject of debate, especially the share of harmful subsidies that are presently provided to commercial and ecologically destructive forms of fisheries. The equitable share of subsidies and schemes towards fish stock sustainability, protection of small scale fishworker rights, their social and economic welfare, gender-workforce upliftments and restoration of crucial fishing beds and habitats have witnessed a back-end and low to negligible priority of central government schemes and subsidies since the last decade.

The purpose of the report is to highlight the present distribution of India's centrally sponsored subsidies and schemes towards the fisheries sector and the unequal, lion share of subsidies and schemes that goes towards the present and projected development of commercial inland and coastal aquaculture in India.



Aerial shot | Indonesia shrimp ponds (2021)





# 1. INTRODUCTION:

Fishing is one of the oldest economic activities carried out by human beings and remains to this day a vital source of income for many countries. It is a particularly important source of nutrition and protein for coastal populations in addition to being one of their main sources of income for more than 100 million people globally, most of them small-scale and poor. (UNEP, 2024). The Government of India supports the fisheries sector through direct and indirect subsidies. Direct subsidies cover the purchase of vessels, gears, engines, and fuel, as well as assistance for aquaculture activities. Indirect subsidies provide financial support for welfare schemes, the construction of ports, fishing harbours, fish landing centres, and the development of post-harvest and market infrastructure. (Aswathy N et al. 2012) Apart from these two categories, state governments also provide grants and direct support to the development and welfare of fishworker communities.



**FAO**

A direct or indirect payment, economic concession, or privilege granted by a government to private firms, households, or other governmental units in order to promote a public objective. (FAO Fisheries Glossary and Encyclopaedia Britannica 2001). FAO also issued voluntary guidelines on small-scale fishworkers (SSF) and the different government interventions that can support SSFs in different regions.



**UNEP**

The UNEP study (2005) distinguishes between eight different types of fisheries subsidies, namely (i) subsidies to fishing infrastructure (e.g. construction of port-facilities); (ii) management services (e.g. monitoring and surveillance, management related research); (iii) subsidies to securing fishing access (iv) subsidies to decommissioning of vessels (v) subsidies to capital costs (e.g. grants, loan guarantees) (vi) subsidies to variable costs (e.g. fuel, insurance), (vii) income supports and (viii) price supports (e.g. guaranteed minimum price). (Aswathy N et al. 2012)



**WTO**

A subsidy exists if “there is a financial contribution by a government or any public body within the territory of a Member” and this contribution fulfils certain specified conditions, or if “there is any form of income or price support in the sense of Article XVI of GATT 1994”. (WTO 1994 Agreement on Subsidies and Countervailing Measures, article 1, also described in Milazzo 1998)





## a. Rise in Fish Production from Aquaculture:

As wild fish stocks and marine fisheries face increased pressures, aquaculture production is rapidly growing to fill the gap in supply and demand. Between 2007 and 2012, global aquaculture fish production for food/direct consumption purposes increased from about 50 million to 66.6 million tons, showing a compound annual growth rate of 5.9 per cent per year during that period. Aquaculture production projections for 2013 were in the region of 70 million tonnes (UNCTAD, 2016). This is further highlighted in Figure 1.

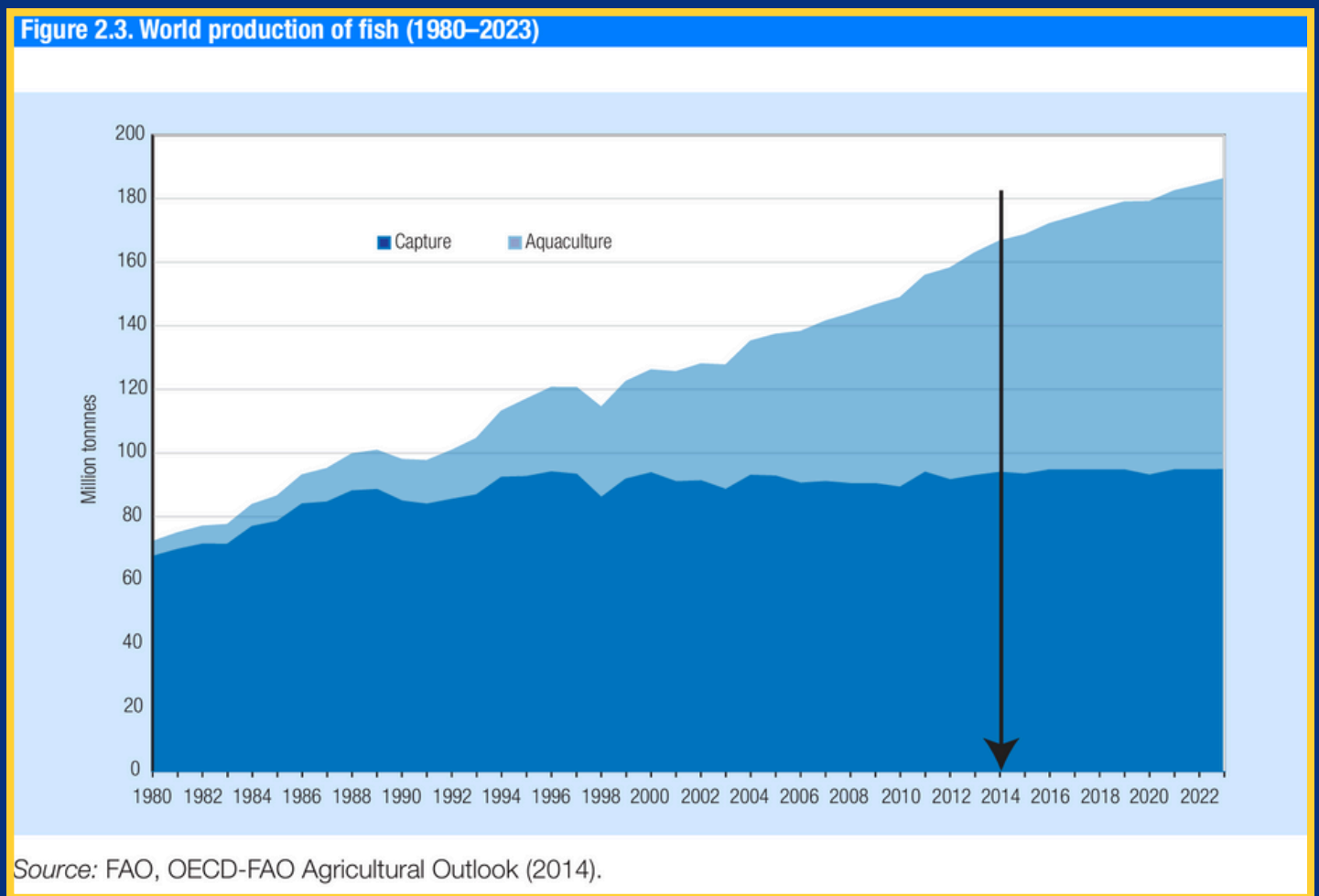


Figure 1: World Fish Production (1980-2023) | Source: FAO, OECD-FAO Agricultural Outlook (2014).



In India, fish production from inland fisheries and aquaculture increased from 2.18 lakh tons in 1950-51 to 121.12 lakh tons in 2021-22. (PIB, 2023) This marks a 5456% increase in aquaculture fish production in India. More closer to the 21st century, fish production from inland fisheries and aquaculture increased from 61.36 lakh tons at the end of 2013-14 to 121.12 lakh tons at the end of 2021-22, an increase of 97.39% in one decade. (PIB, 2023). This is further highlighted in Figure 2. below:

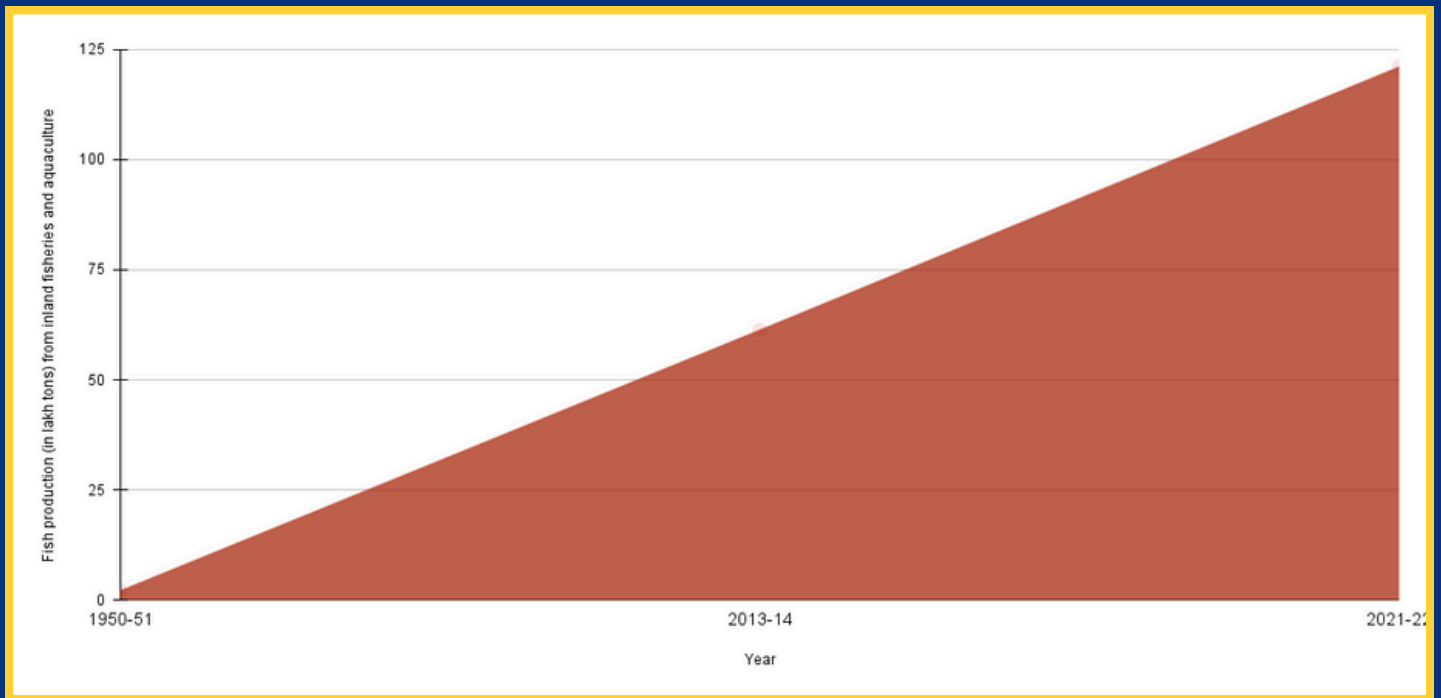


Figure 2: Fish production (in lakh tons) from inland fisheries and aquaculture

### b. Rise in Fish Farm Licences and Area:

During June, 2019 to May, 2020, 1248 farms with a total farm area of 2,460.55 ha (Water Spread Area – 1,713.50 ha) were renewed. Total renewal of the fish farm licences with a total farm area of 15,000.49 ha (Water Spread Area – 10,507.21 ha) was done from 2013 till May 2020. Totally 1,179 shrimp farms with a total farm area of 1,251.74 ha (Water Spread Area – 855.02 ha) were registered from June, 2019 to May, 2020. Altogether 39,705 shrimp farms with total farm area of 61,044.89 ha (Water Spread Area - 41,624.70 ha) received from State Level Committees/ District Level Committees of states were registered from inception to till May, 2020. (Handbook On Fisheries Statistics 2020). This is further highlighted in Figure 3 and Figure 4.



## Total Aquaculture Fish Farms (till May 2020)

# 39,705

Figure 3: Total number of aquaculture farms till May 2020 by Handbook on fisheries statistics 2020. As per MPEDA, they have generated a database of nearly 70000 aquaculture farms across the coastal states of India (no time period specified in MPEDA data)

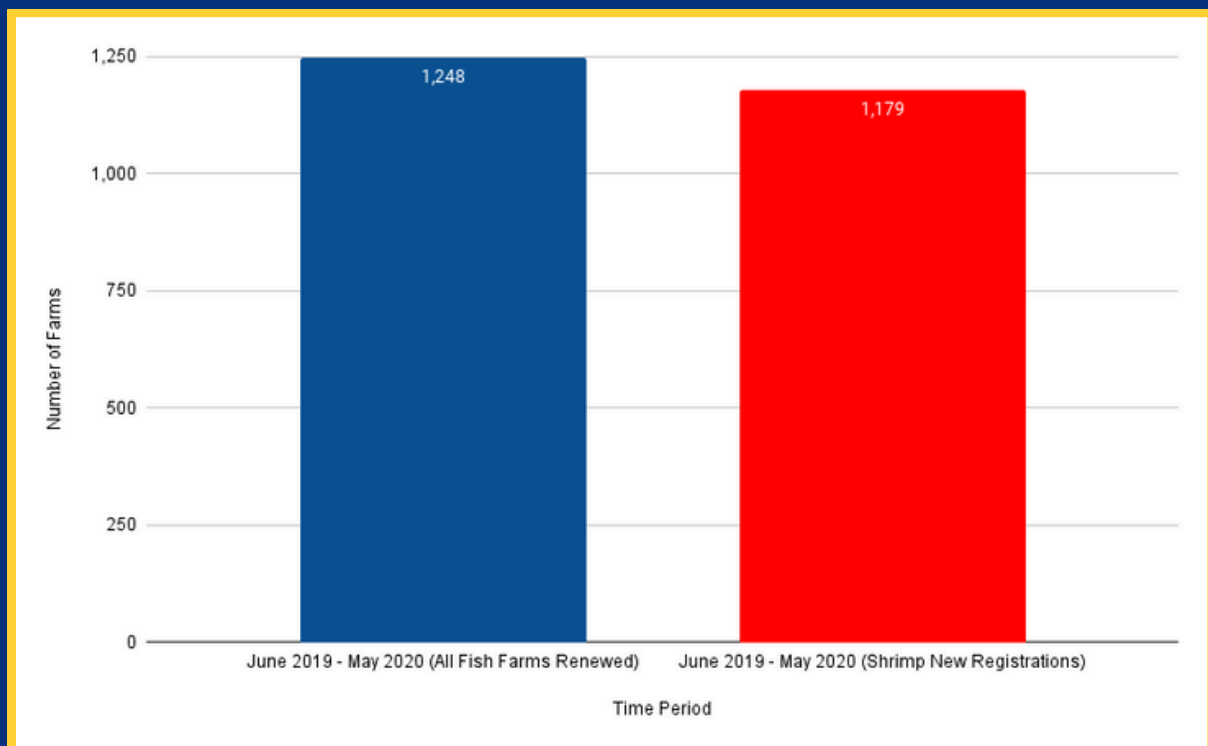


Figure 4: Total number of all aquaculture farms and shrimp farms renewed from June 2019 to May 2020

Total renewal of the fish farm licences with a total farm area of 15,000.49 ha (Water Spread Area – 10,507.21 ha) was done from 2013 till May 2020. For context, 15,000.49 hectares is equivalent to approximately 150 square kilometres. Mumbai has an area of about 603.4 square kilometres. Thus, 15,000.49 hectares/150 square kilometres would be about a quarter of Mumbai's total area highlighted in Figure 5.



Figure 5: Highlighted area of quarter of Mumbai City (approx 150 sq. km) to compare the area allocated for new aquaculture fish farms to Mumbai city for comparative analysis. Map not to scale.





## 2. THE UNEQUAL SHARE OF CENTRALLY SPONSORED SUBSIDIES AND SCHEMES FOR FISHERIES IN INDIA

### a. How is aquaculture monitored in India?

In 2019, The Complete Prohibition Of Light Fishing And Protection And Development Of Traditional Fishing Technique In Coastal Areas Bill, 2019 was tabled in the Lok Sabha (parliament) to halt the destructive use of LED light fishing methods to protect fish stocks and small-scale fisheries in India. The bill remains in legislative limbo, with an effective on-paper ban supported by several state governments, with no effective implementation of the ban implemented in any state. Similar aspirations were witnessed in the The Coastal Aquaculture Authority (Amendment) Act, 2023 which specified certain restrictions on the species of fish farmed, use of certain antibiotics and steroids, waste management, prohibition of fish farms in no development zones (NDZ), backwaters, ecologically sensitive areas (ESA). However, the monitoring mechanisms of the Coastal Aquaculture Authority have no data available publicly on the type and number of aquaculture related grievances or the licences of fish farms cancelled who did not adhere to the provisions of the provisions of the Act. As most of the coastal zones are also governed by other authorities like the State Coastal Zone Management Authority (SCZMA), State and Central Pollution Control Boards (SPCB)s and other local governing bodies like panchayats, who monitors the operations and conducts any checks and balances on the impacts on fish farms in India remains missing through data or public information.



## 2. THE UNEQUAL SHARE OF CENTRALLY SPONSORED SUBSIDIES AND SCHEMES FOR FISHERIES IN INDIA

**b. The *L. Vannamei* (Whiteleg shrimp) farm obsession:** Based on the data available on the Coastal Aquaculture Authority website, the total number of the *L. Vannamei* (whiteleg shrimp) farms in India are 2634 farms in 2024. Of those 2634 farms, almost half the shrimp farms, 1179 farms were granted new licences in 2020 alone. (Coastal Aquaculture Authority 2023, Handbook on fisheries statistics 2020, PIB 2023) Almost 8-10% of all centrally sponsored fisheries subsidies and schemes allocated for inland aquaculture development is earmarked for the production growth of shrimp farming in India. (DAHD, 2024)

The whiteleg shrimp is native to the Eastern Pacific coast from Sonora, Mexico in the North, through Central and South America as far South as Tumbes in Peru, in areas where water temperatures are normally  $>20\text{ }^{\circ}\text{C}$  throughout the year. Whiteleg shrimp live in tropical marine habitats. In the wild, adults live and spawn in the open ocean, while post the larvae stage migrate inshore to spend their juvenile, adolescent and sub-adult stages in coastal estuaries, lagoons or mangrove areas. Males become mature from 20 grams and females from 28 grams onwards at the age of 6–7 months. (FAO, 2006).

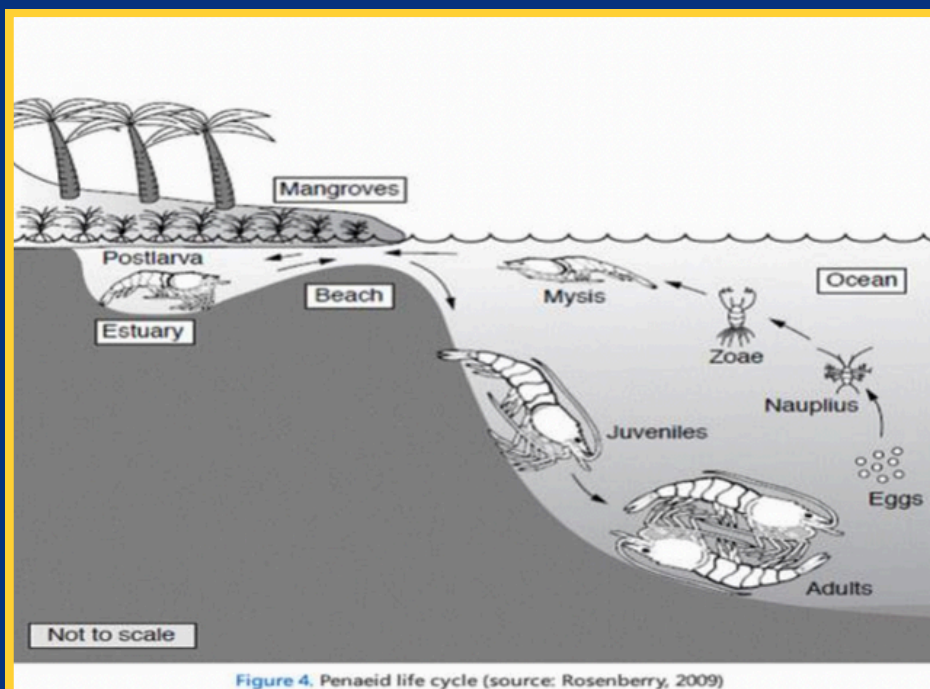


Figure 6: An overview of the whiteleg shrimp life cycle. Source: Resenberry, 2009)



The expansion of whiteleg shrimp farming globally has generated many public debates and scientific studies on its impact on the environment, public health and its sustainability as a business model. FAO listed some of the following destructive impacts of shrimp farms in local ecosystems: (FAO, 2006)

1. Destruction of mangroves for use of mangrove ecosystems for pond construction.
2. Slash and burn style use of ponds for a few years, before moving to new areas.
3. Salinisation of groundwater and agricultural land.
4. Pollution of coastal waters by pond effluents and contaminants.
5. Overuse of marine fish meals leading to inefficient use of vital protein sources and disruption of marine ecosystems.
6. Biodiversity issues arising from collection of wild seed and broodstock and introduction of non-native species and their attendant pathogens.
7. Social conflicts with other resource users.
8. Farm discharges, causing self-pollution in shrimp growing areas.

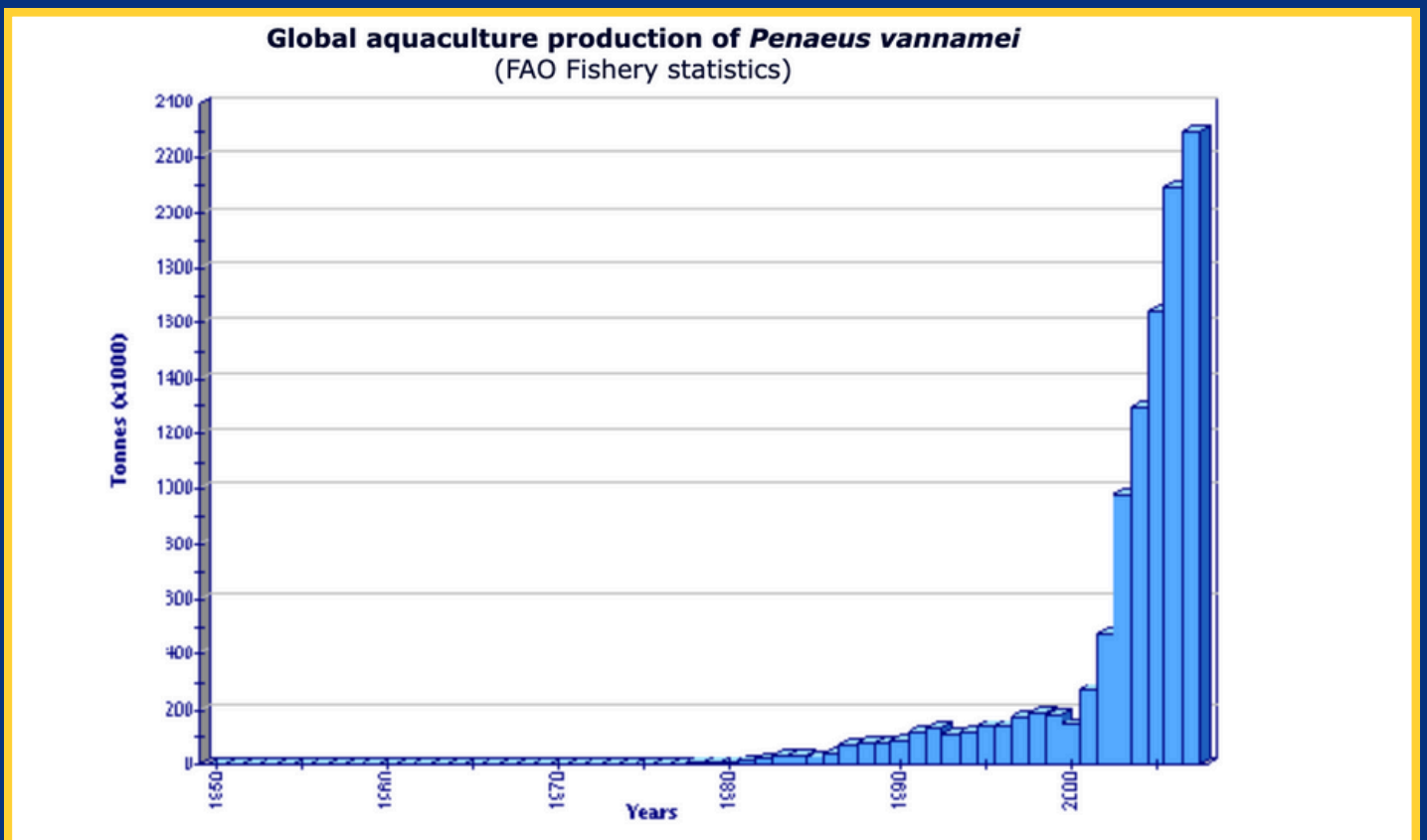


Figure 7 highlights the global rise in fish farming of the whiteleg shrimp/penaeus vannamei. Image source: FAO, 2006

### c. List of centrally sponsored subsidies and schemes for fisheries in India:

A total of 54 schemes and subsidies are available on the Department of Animal Husbandry & Dairying (DAHD) for Inland Fisheries and Aquaculture and Marine Fisheries, Infrastructure and Post Harvest Operations. Of these about 37 schemes are allocated for the development of Inland Fisheries and Aquaculture, while 17 schemes are allocated for the development of Marine Fisheries, Infrastructure and Post Harvest Operations which also includes 2-4 schemes on the welfare development of traditional and small-scale fishers within these 17 schemes and subsidies. This is highlighted in Figure 7. Alongside, the total sub-categories in which the centrally sponsored schemes and subsidies are divided under which most schemes and subsidies are allocated for the Development of Freshwater Aquaculture, Coldwater Fisheries and Aquaculture and Development of Inland Capture Fisheries (Reservoirs/Rivers etc). This is highlighted in Figure 8. About 8-10% of all centrally sponsored fisheries subsidies and schemes allocated for inland aquaculture development is earmarked for the production growth of shrimp farming in India. This is highlighted in Figure 9.

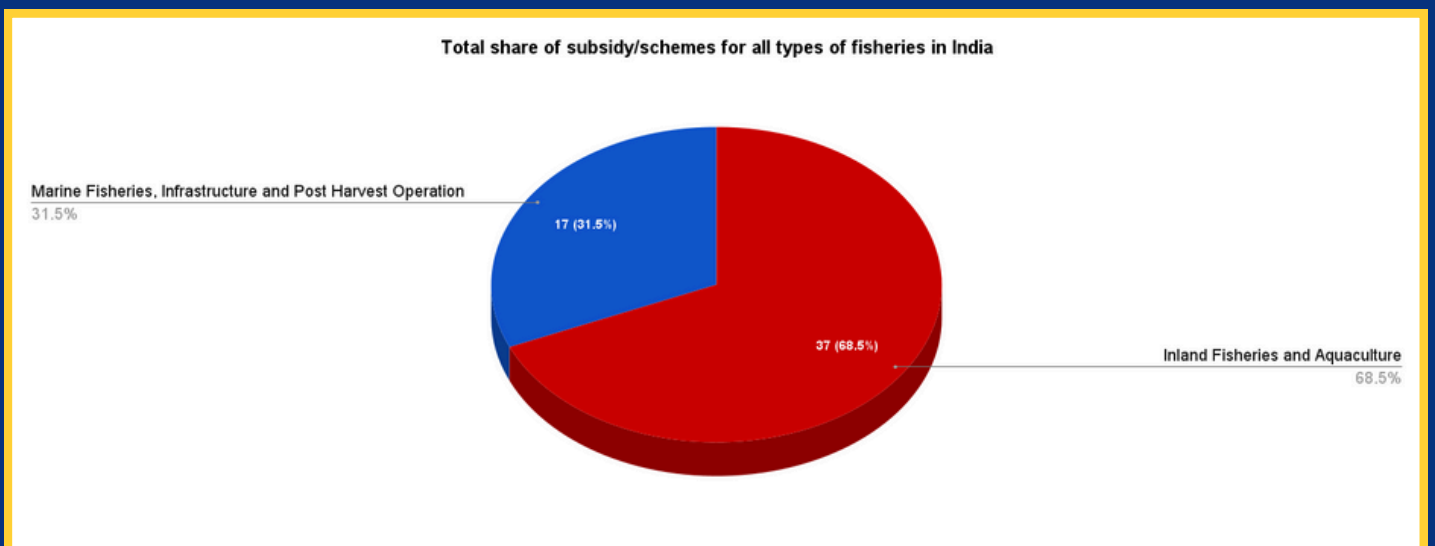


Figure 8: Total share of subsidy/schemes for all types of fisheries in India



India also stands at 2nd in aquaculture production and is one of the top shrimp producing and seafood exporting nations in the world. A total budgetary allocation of Rs. 2,616.44 crore has been made for the Department of Fisheries (GoI) for the year 2024-25 against Rs. 1,701.00 crore (Revised Estimate) during the year 2023-24. (PIB, 2024)

Sr. No	Sub-Categories of Centrally Sponsored Schemes and Subsidies	Number
1	Development of Freshwater Aquaculture (FFDA's) Ongoing Component	15
2	Coldwater Fisheries and Aquaculture (New Component)	8
3	Inland Capture Fisheries (Reservoirs/Rivers etc.) - New Component	6
4	Development of Marine Fisheries with following sub-components	6
5	Subsidy for the construction of new ponds and tanks, reclamation/renovation of ponds/tanks	5
6	Development of Coastal Fisheries	4
7	Productive Utilization of Inland Saline/Alkaline Waters for aquaculture (New Component)	3
8	Development of Deep Sea Fishing	2
9	Development of Post Harvest Infrastructure	2
10	Development of Infrastructure and Post-Harvest Operations	1
11	Maintenance of Dredger TSD Sindhuraj.	1
12	Development of Infrastructure Facilities (Marine capture, coastal harbours, post harvest infrastructure)	1

Figure 9: Sub-category list of the centrally sponsored schemes and subsidies for fisheries in India

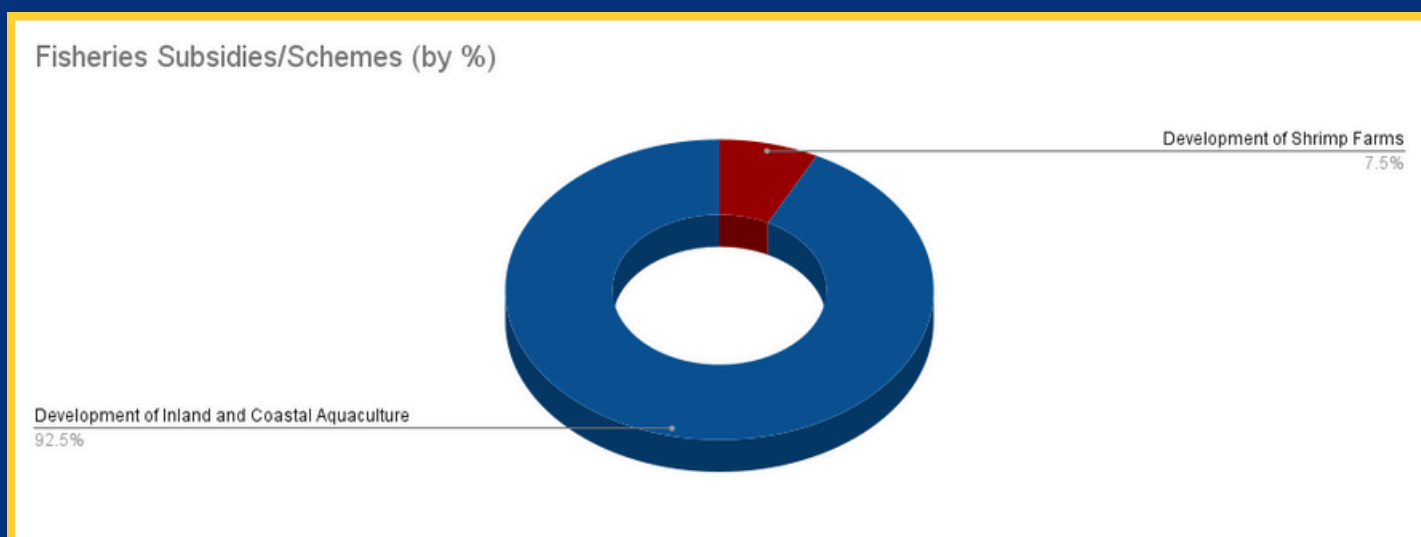


Figure 10: Rising distribution of subsidies and schemes for shrimp farming in India

Aquaculture surpassed capture fisheries in aquatic animal production for the first time, as per the State of World Fisheries and Aquaculture report 2024. The 2024 edition of The State of World Fisheries and Aquaculture (SOFIA) said global fisheries and aquaculture production in 2022 surged to 223.2 million tonnes, a 4.4 percent increase from the year 2020. Production comprised 185.4 million tonnes of aquatic animals and 37.8 million tonnes of algae. (FAO-SOFIA, 2024)





Aerial view of shrimp farming in Philippines.  
Source: Alexpunker from Getty Images



# 3. URGENT RECOMMENDATIONS BY NFF:

## a. Redistribution and Allocation of schemes and subsidies for the welfare of small-scale fishworkers in accordance to FAO's guidelines on (SSFs):

Based on the unequal distribution of subsidies and schemes, NFF recommends an allocation and redistribution of centrally-sponsored fisheries schemes and subsidies for the welfare and development of small-scale and traditional fishworkers in India. The FAO guidelines on Small-scale fisheries, an international organisation to which India is a member to, provides a comprehensive list of schemes and welfare initiatives a state can initiative to protect the interests and welfare of small scale fishers (SSF) from rising threats of displacement, sea-level rise, pollution and under-representation.

## b. Monitoring the impacts of aquaculture fish farms on ecosystems, food security and nutrition:

The impacts of fish farms on local ecosystems are concerning and urgent. Groundwater pollution, introduction of invasive species in local ecosystems and spread of diseases are some of the real threats that commercial aquaculture poses to a local region. Alongside, due to the monoculture of only a few species of fish, prawns, crustaceans etc, a temporary loss of fish farming owing to a fish flu epidemic like bird flu or swine flu could lead to a loss of food security for local communities that depend upon fish products as a nutritious source of protein and food. It could also harm the local economy that depends on the sale of such products, causing losses to the several entrepreneurs and also impacting the supply-chains of the fisheries sector. Alongside, the high use of antibiotics and steroids in farmed fish could pose a serious nutrition threat to the consumers, especially children, pregnant women and vulnerable groups, consuming such products as most of the fish products produced from aquaculture farms pass low to negligent quality and safety inspections in India and other developing and least developed countries.



# FAO GUIDELINES FOR SSFs:

The Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) are the first international instrument dedicated entirely to the important small-scale fisheries sector. The SSF Guidelines are aimed at all government and industry actors striving to secure sustainable small-scale fisheries, to end hunger and poverty and strengthen human rights. They are a tool to guide dialogue, policy processes, and action at all levels, from local communities to global fora.

Below are the key guidelines and suggestions for protection and development of SSFs to guide government and industry actors to provides subsidies, schemes and support-orienteted resources:

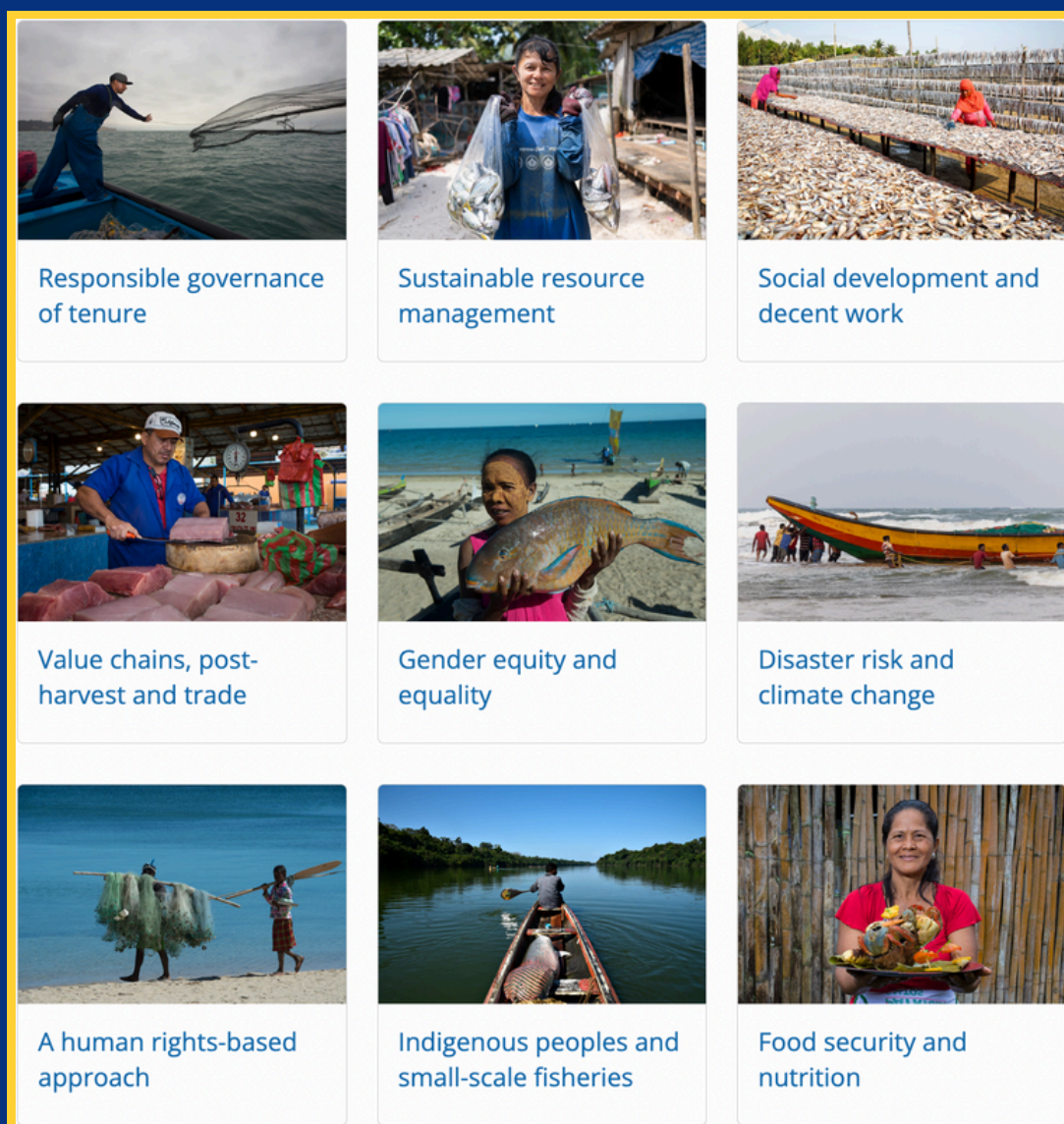
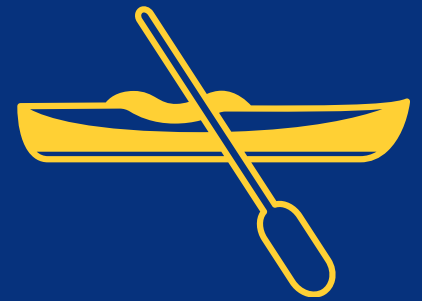


Figure 11: FAO SSF guidelines. Source: FAO (2024)





## 4. Conclusion

In summary, the proposed report along with urgent recommendations by the National Fishworkers' Forum (NFF) aim to address the critical challenges from low policy and negotiation representation and climate risks faced by small-scale fishworkers across India and globally. We hope the report supports policy makers and those in power to take the right steps and actions to empower the under-represented small-scale fishworker communities and strengthen their representation, to create a more resilient and informed small-scale fisher community that benefits and protects the aquatic and marine ecology and economy of India and the planet at large.

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