Boosting Livelihoods and Local Economies through Sustainable Fisheries and Aquaculture

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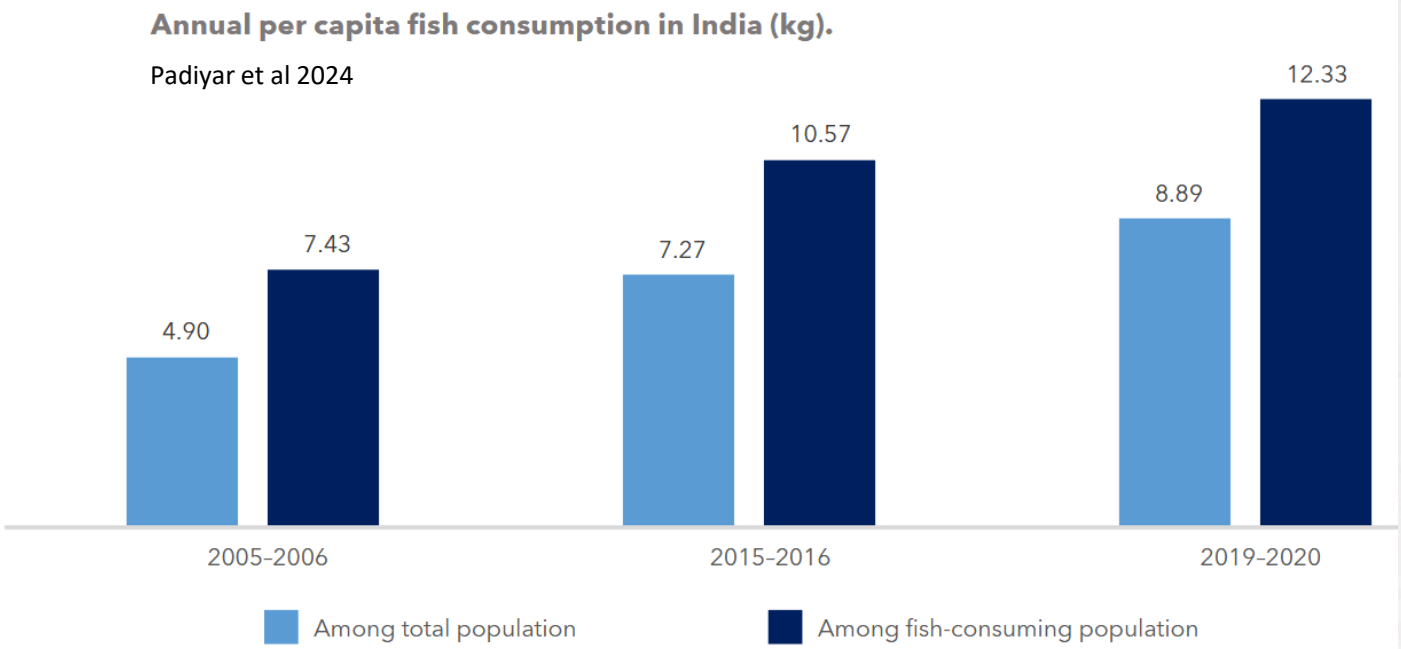
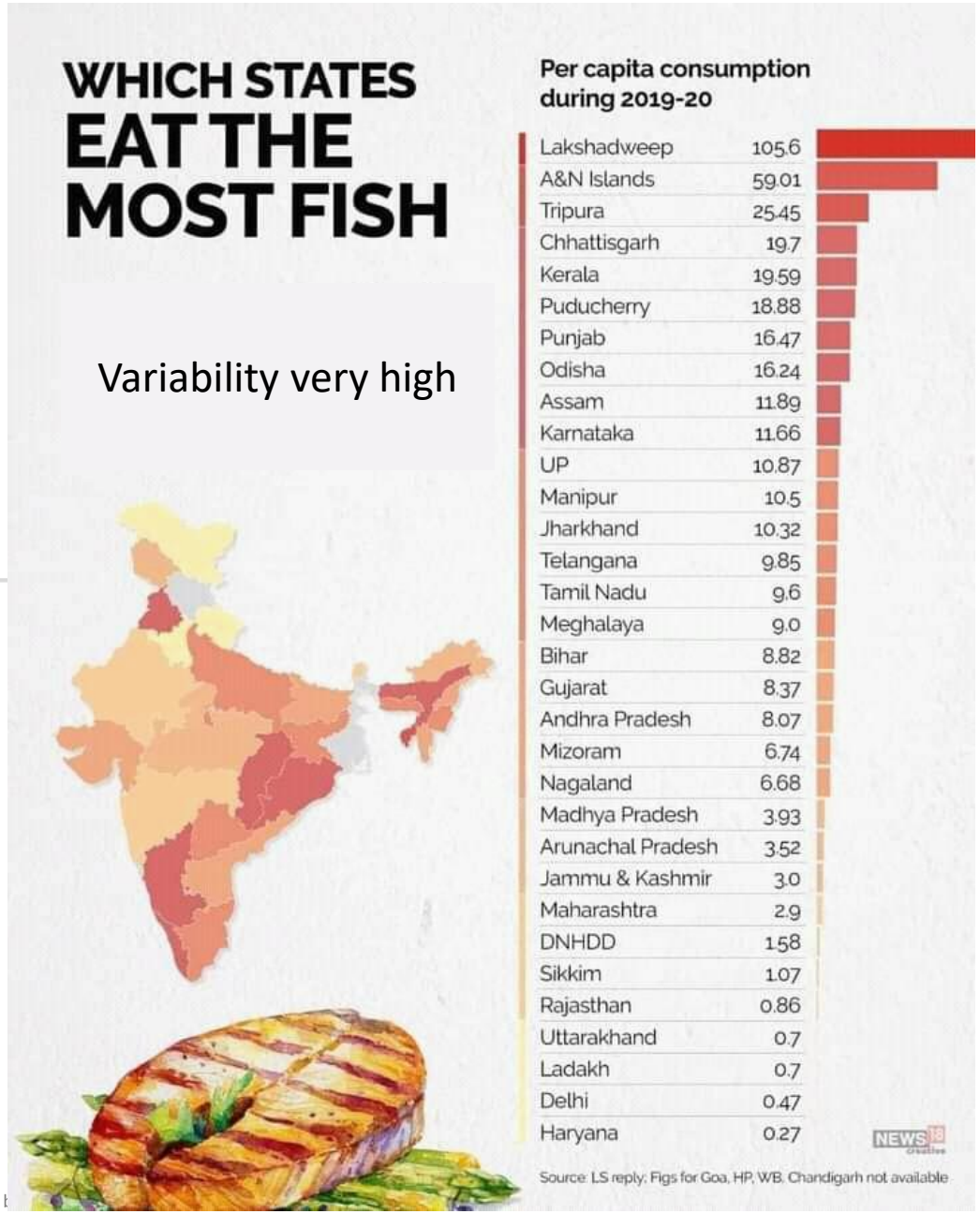
SSNI
SUSTAINABLE SEAFOOD NETWORK INDIA

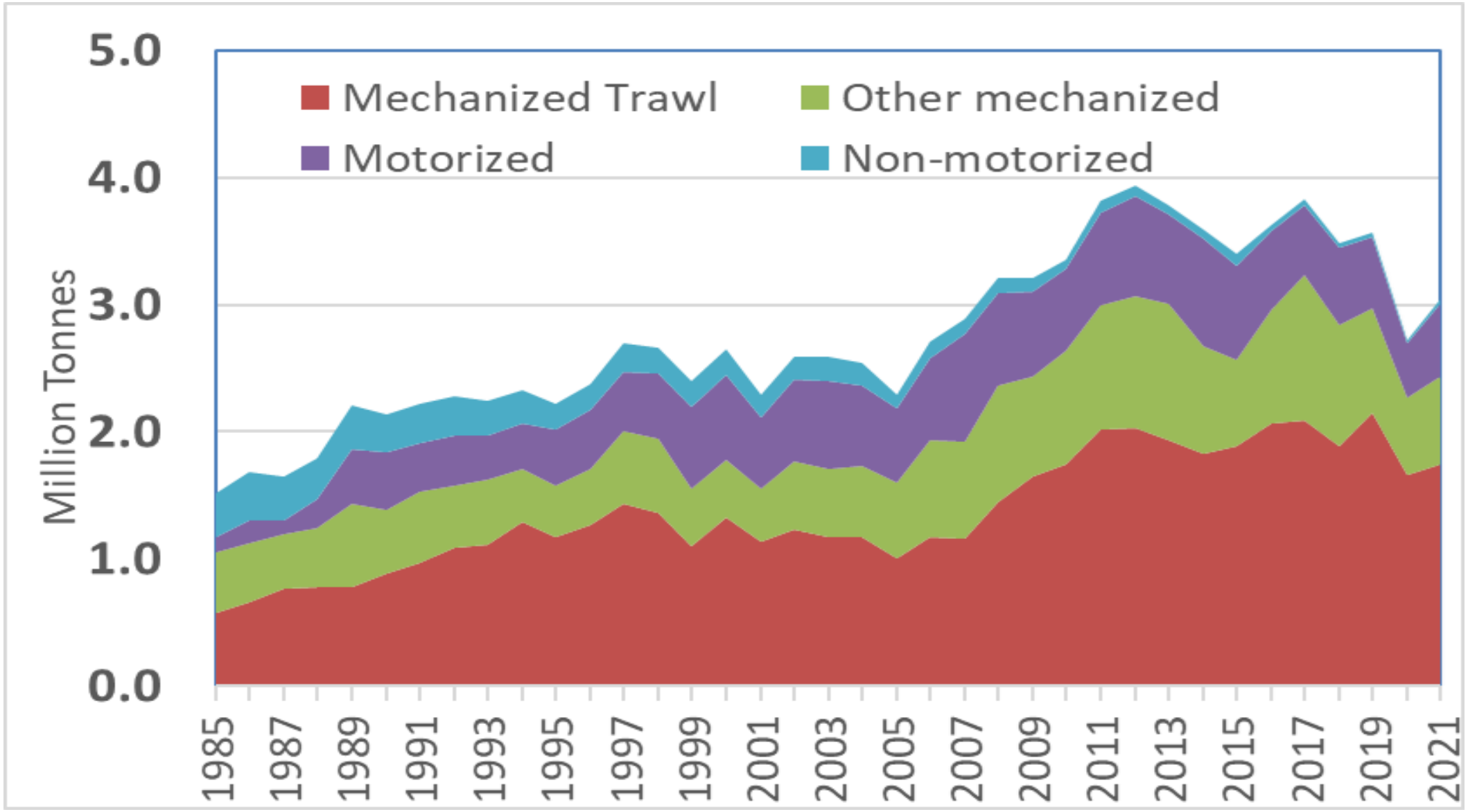
India





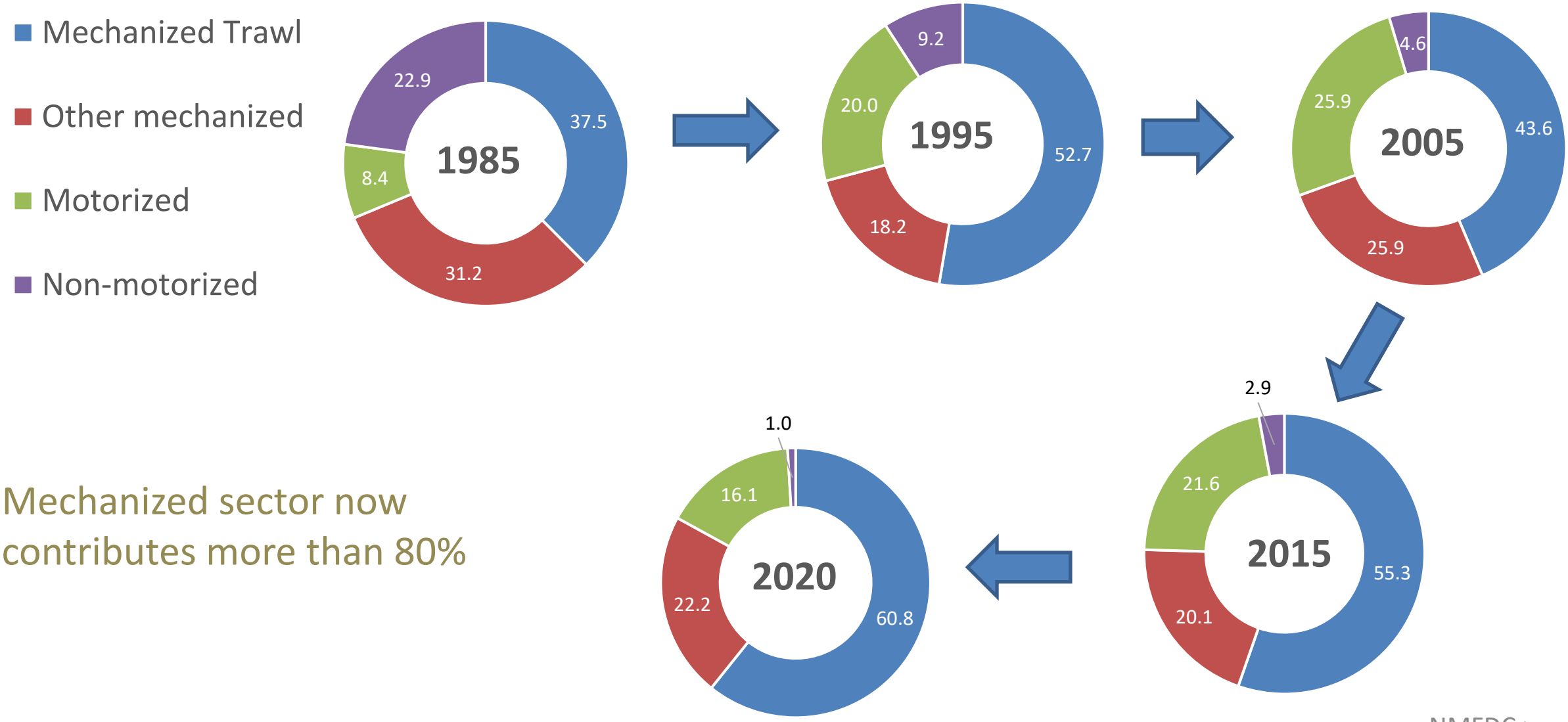
The global average fish consumption per capita is 20.7 kg per year, [according to the Food and Agriculture Organization (FAO)]

Estimated Marine fish landings in India 1985-2021



Source: NMFDC CMFRI

The growing dominance of the mechanized sector %



Mechanized sector now contributes more than 80%

Source: NMFDC | CMFRI

HOW THE EXPLOITATION IS CARRIED OUT ?

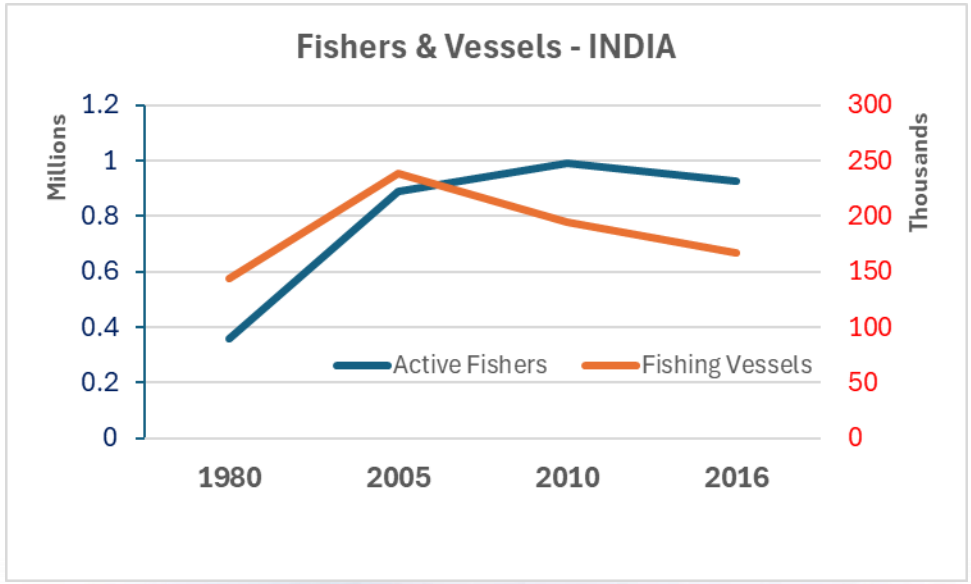
More than 30 craft gear combinations

Major Gears

- Trawl net
- Gillnet
- Bagnet
- Seines
- Hook and Line

Major Crafts

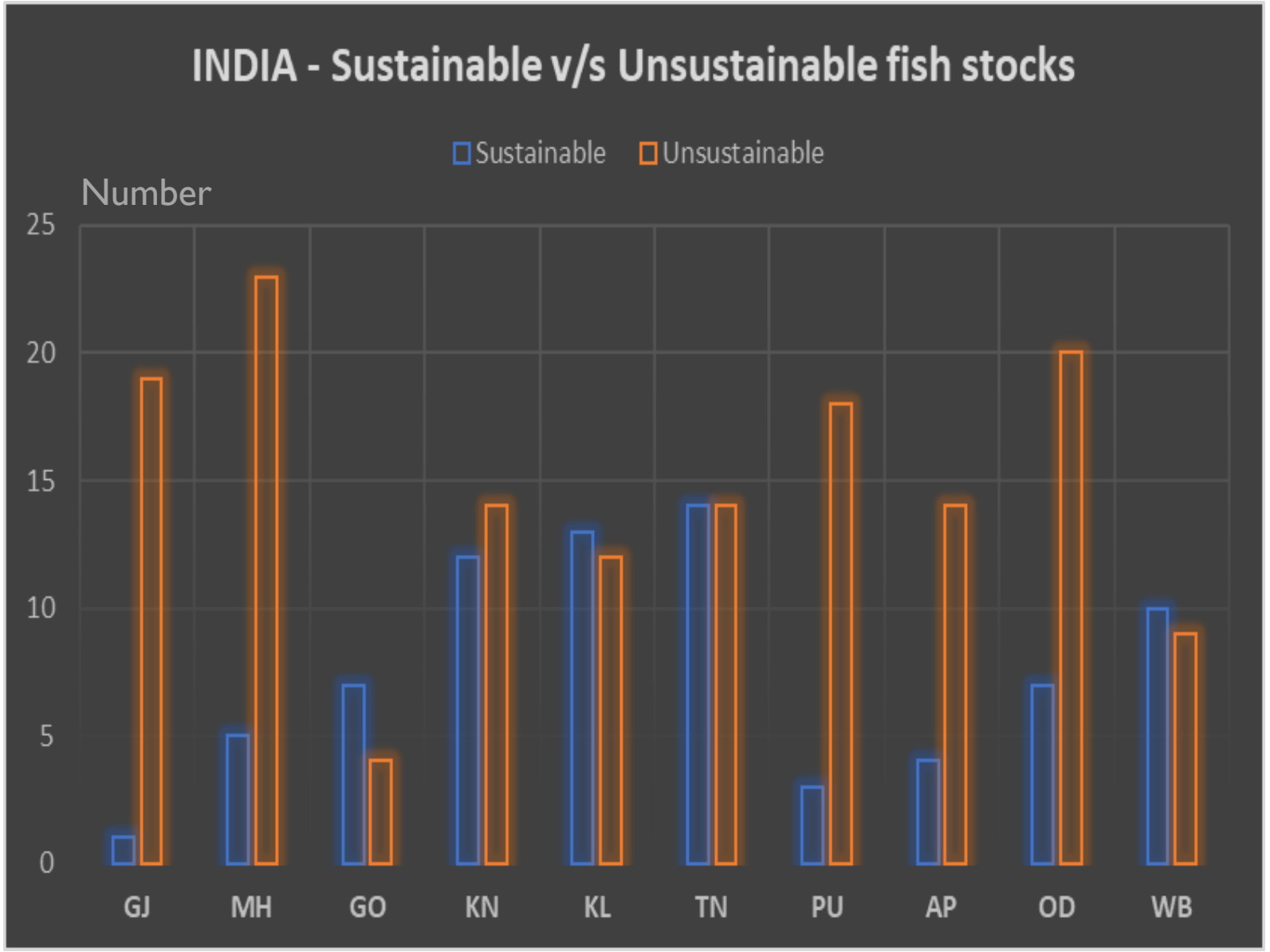
- Mechanised
- Motorised
- Non-motorised



SOURCE: NMFDC | CMFRI

WHY MANAGE FISHERIES?

- Fisheries management is the activity of protecting fishery resources so that sustainable exploitation is possible, drawing on fisheries science, and including the precautionary principle.



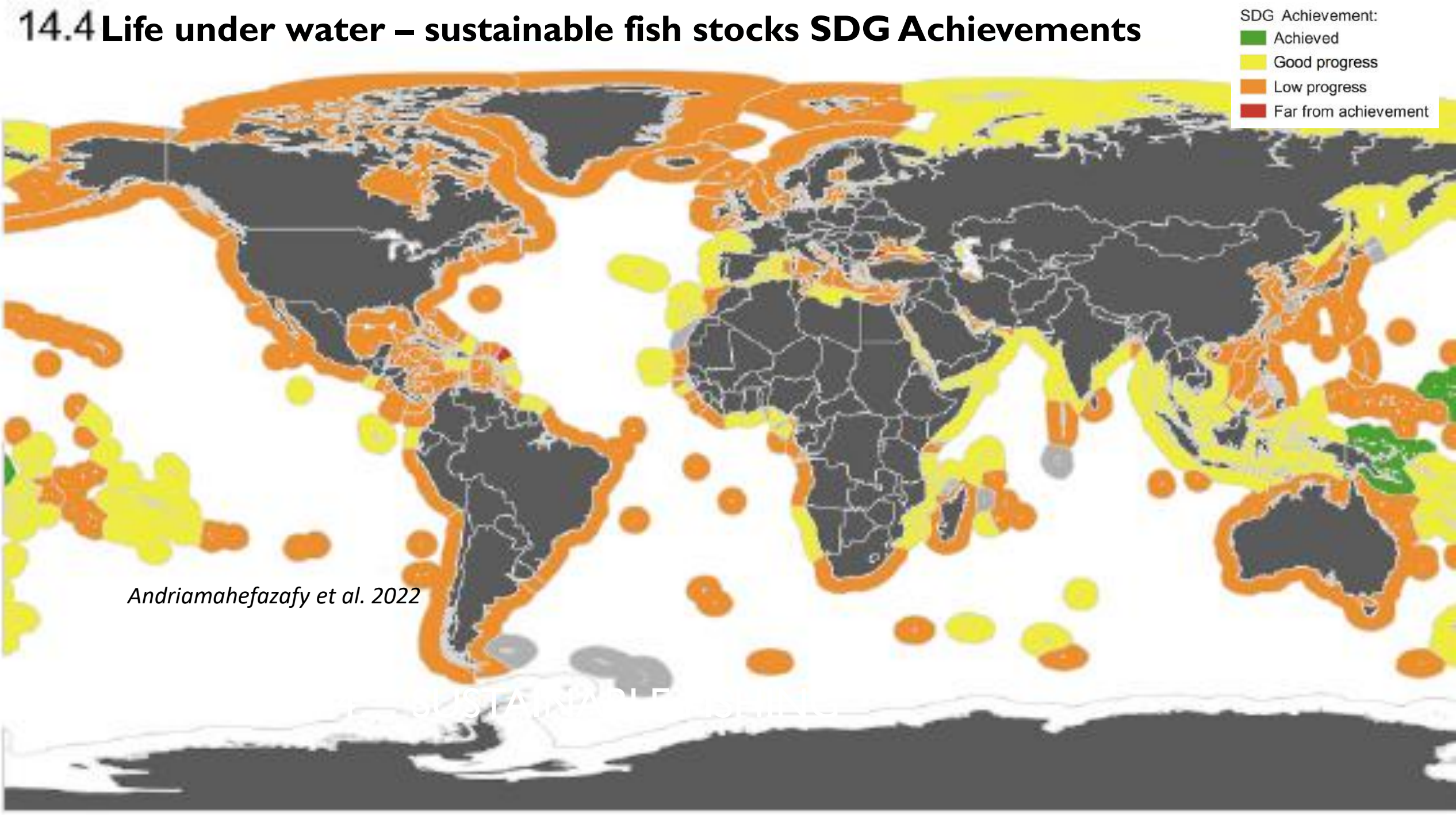
INDIA 2021 STOCK STATUS

223 MARINE FISH STOCKS

36% OVERFISHED – SIMILAR TO GLOBAL AVERAGE

Sathianandan et al 2021

14.4 Life under water – sustainable fish stocks SDG Achievements



Andriamahefazafy et al. 2022

OVERCAPACITY

- Article 6.3 of FAO Code of Conduct for Responsible Fisheries (**CCRF**) recommended that "*states should prevent overfishing capacity and should implement management measures to ensure that fishing effort is commensurate with the productive capacity of the fishery resources, and their sustainable utilization*".
- The CMFRI has studied the issue of **overcapacity of fishing fleets** on an all-India basis and revealed that there is considerable amount of overcapitalisation in the fishing fleets.

Boats docked in Malpe Fishing Harbour, Karnataka

PERCENTAGE OVERCAPACITY – FISHING EFFORT

f_{MSY}

	MDTN	MTN	OBGN	MDOL	MPS	MGN	MHL	OBRS	OBHL
GJ	44	0	0	0	0	0	0	0	0
MH	50	0	0	7	0	0	0	0	0
KN	62	0	0	0	0	0	0	0	0
KL	34	0	0	0	0	0	27	43	0
TN	0	21	0	0	0	30	0	0	0
PU	62	10	0	0	0	16	0	0	0
AP	42	0	39	0	0	0	0	0	19
OD	14	0	0	0	0	0	0	0	0
WB	19	0	0	0	0	24	0	0	0

Sathianandan et al 2021

REGULATORY MEASURES IN PRACTICE

Input Controls	Output Controls
Vessel registration & fishing licenses	Minimum Legal Size (MLS)
Closed fishing season (fishing/trawl ban)	Protected species – ETP species - IWPA
Closed fishing areas (MPAs mainly A&NI)	
Gear specifications – size/mesh	
Control over destructive fishing practices	
Zonal – Spatial management	Quotas / TAC

Recommended

If sustainable fisheries are not practised, **livelihoods** can be affected in several interconnected ways

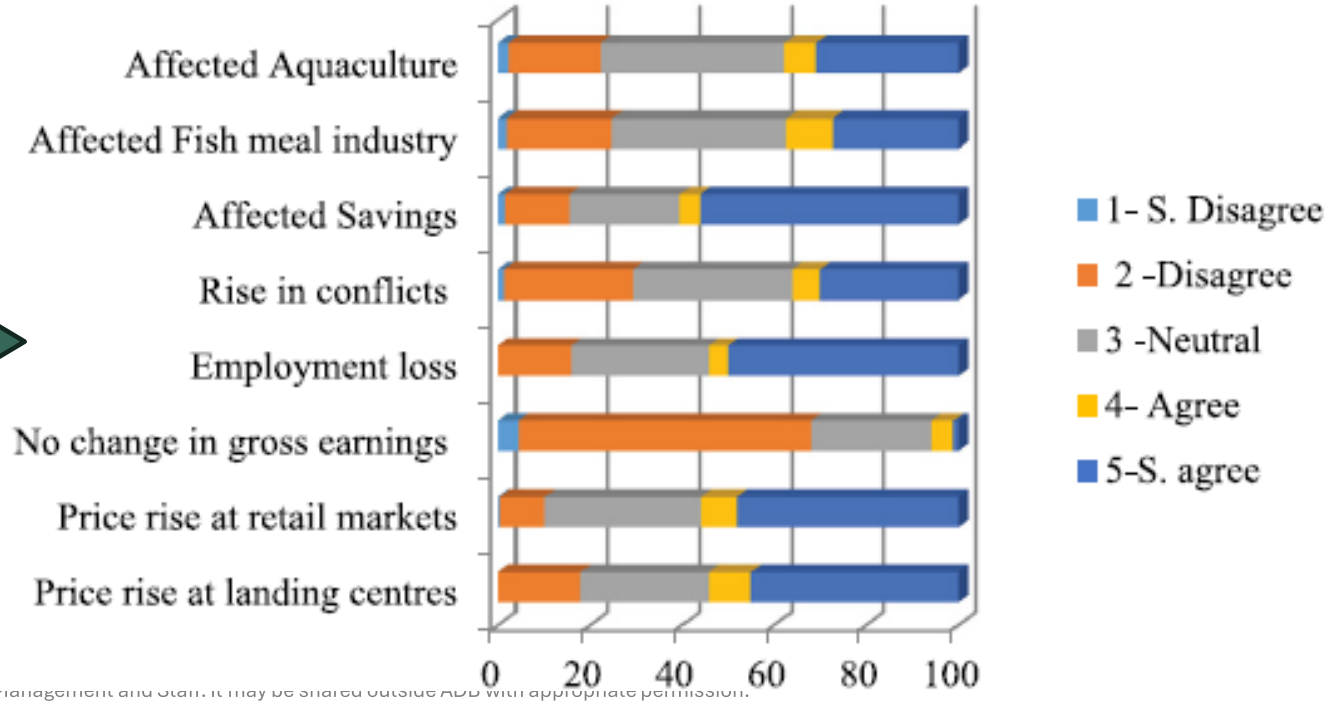
1. **Declining fish stocks → reduced income**
2. **Collapse of fishing-dependent jobs**
3. **Increased poverty and food insecurity**
4. **Shift to unsafe or illegal practices**
5. **Economic instability and migration**
6. **Market instability**

THE 2015 OIL SARDINE FISHERY DECLINE IN KERALA

IMPACTS

- Seasonal incomes for small-scale fishers dropped drastically.
- Women in fish drying, cleaning, and marketing saw reduced work.
- Many fishers migrated to Gulf countries for alternative jobs.

Perceptions of fishers on the effects of oil sardine catch decline on the economy (Aswathy et al., 2023)



ALTERNATE LIVELIHOOD OPTIONS - MARICULTURE

Mussel Farming

Women SHGs

Brackish & marine

More than 5000 t production

Oyster Farming

Women SHGs

Brackish

Live oysters

Fish Farming

Backwaters & sea

Many fish species

Practices/ Issues
Farming technologies available
Support from development agencies
Utilization by local bodies
Spread outside Kerala & Karnataka
Training programmes/ collaborations
Demand based farming
Carrying capacity issues
Seed availability/ quality

Thanks for the opportunity to present this

& for your hearing

https://youtu.be/3UbWMdpavUE