

Harnessing the Potential of Fisheries in Marine States

Status and Sustainability of India's Marine Fisheries



ICAR-Central Marine Fisheries Research Institute
Kochi

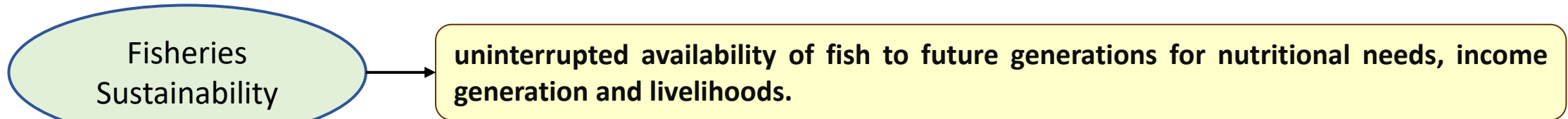


Shoba Joe Kizhakudan
Principal Scientist & Head
Finfish Fisheries Division
shoba.joe@icar.gov.in

Sustainable Development

Development which meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable development is about maximizing the ecosystem benefits but at the same time not degrading the systems to the extent that the benefits cannot be sustained.



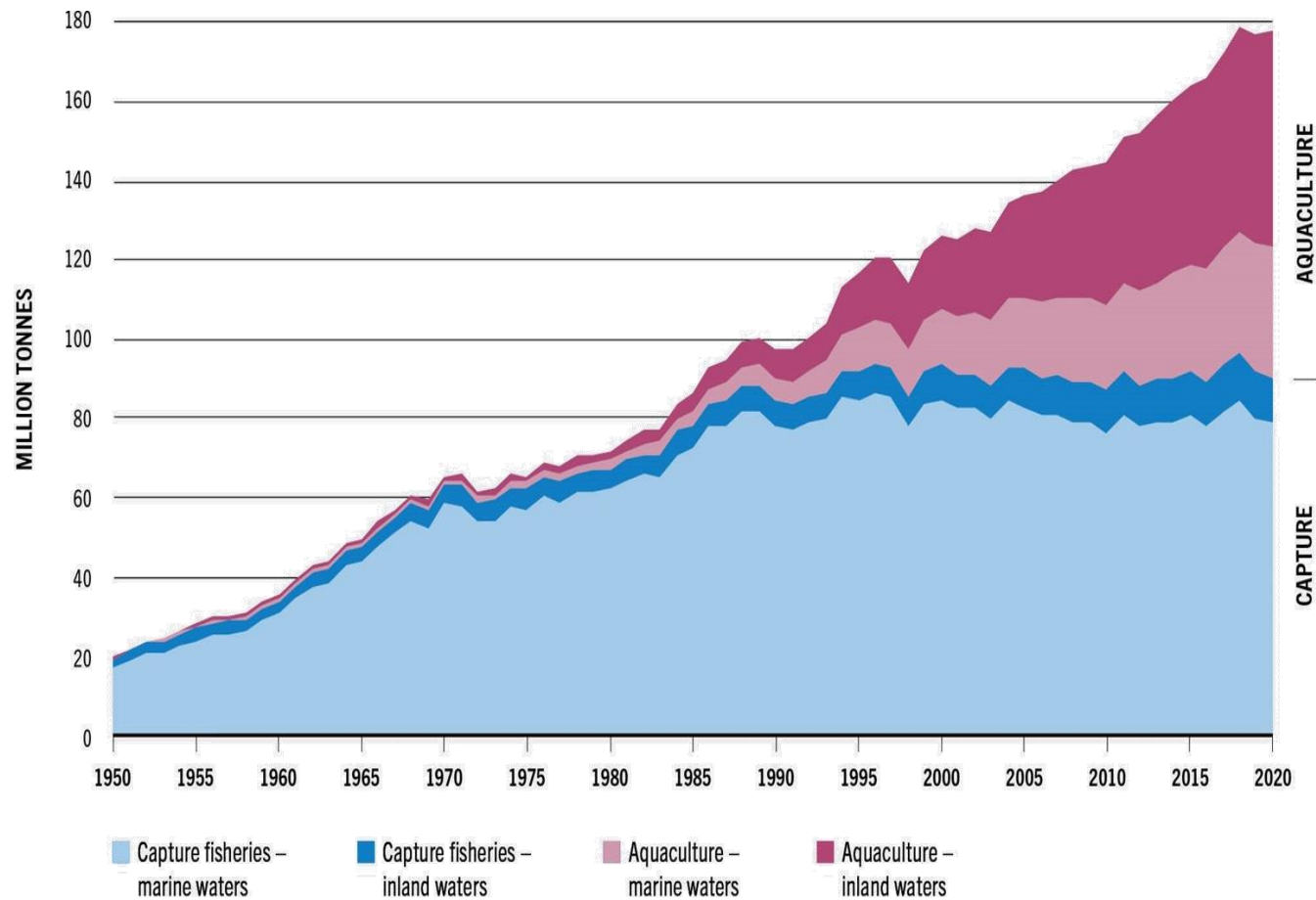
Leave enough **fish** in the ocean

Respect **habitats**

Maintain **livelihoods** of fishers



Global Fisheries



2018
84.5 million tonnes

2019
80.8 million tonnes

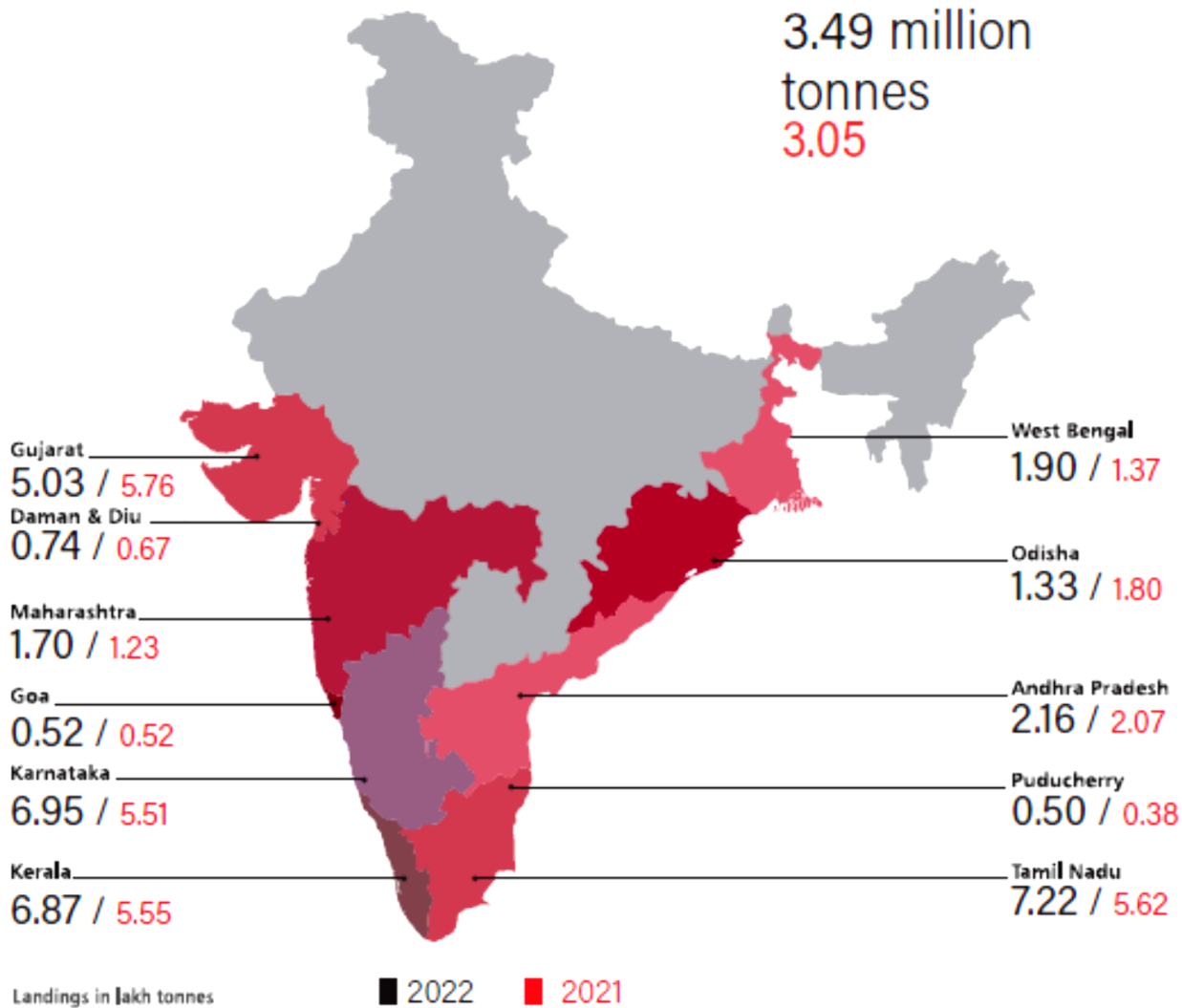
2020
78.8 million tonnes

Indicator 14.4.1 - Proportion of fish stocks within biologically sustainable levels

Fish stocks within biologically sustainable levels contributed to 82.5 percent of the global marine fish landings in 2019, up from 66.7 percent in 2015.

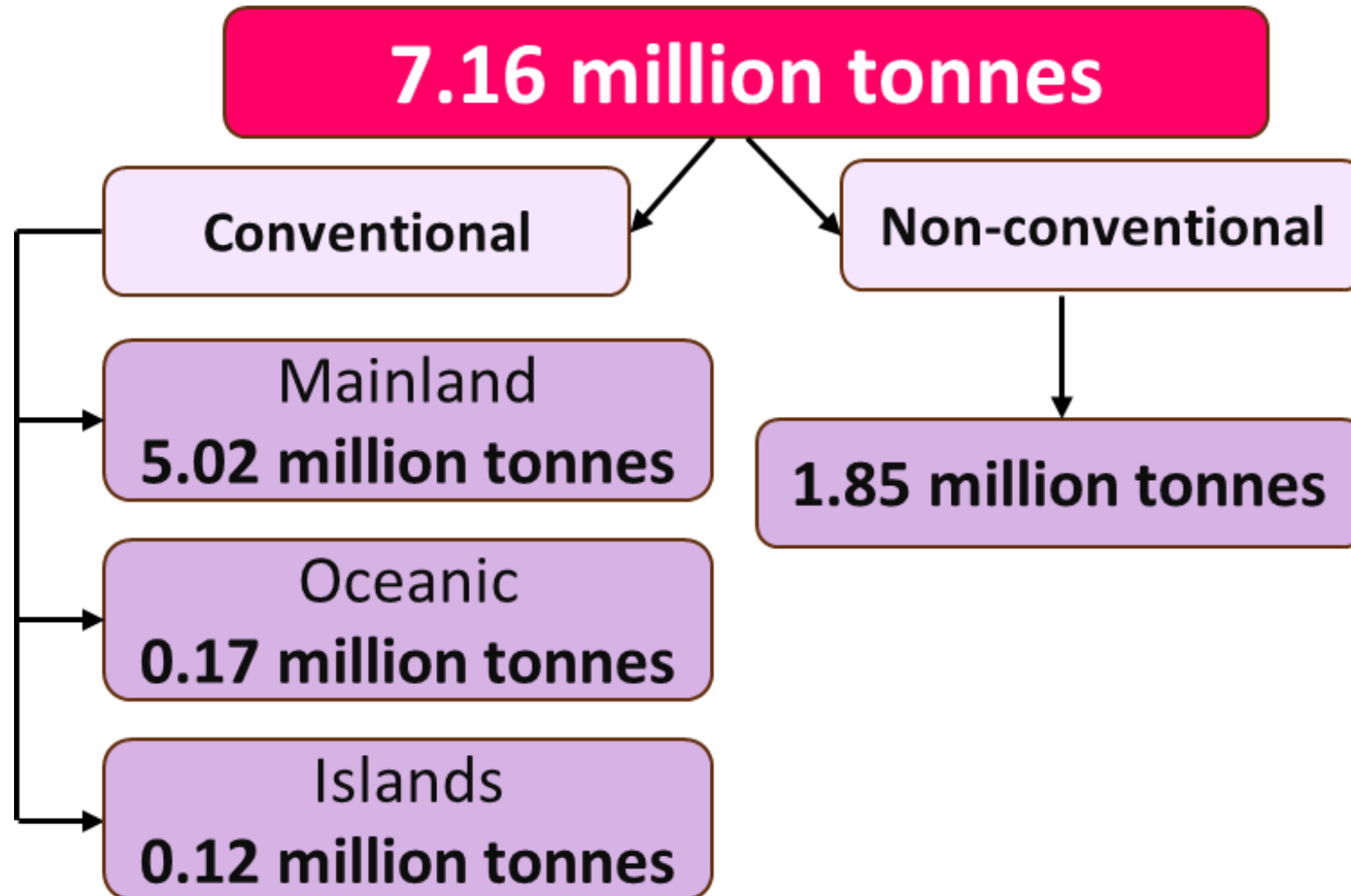
Source: FAO, 2022: *The State of World Fisheries and Aquaculture 2022*

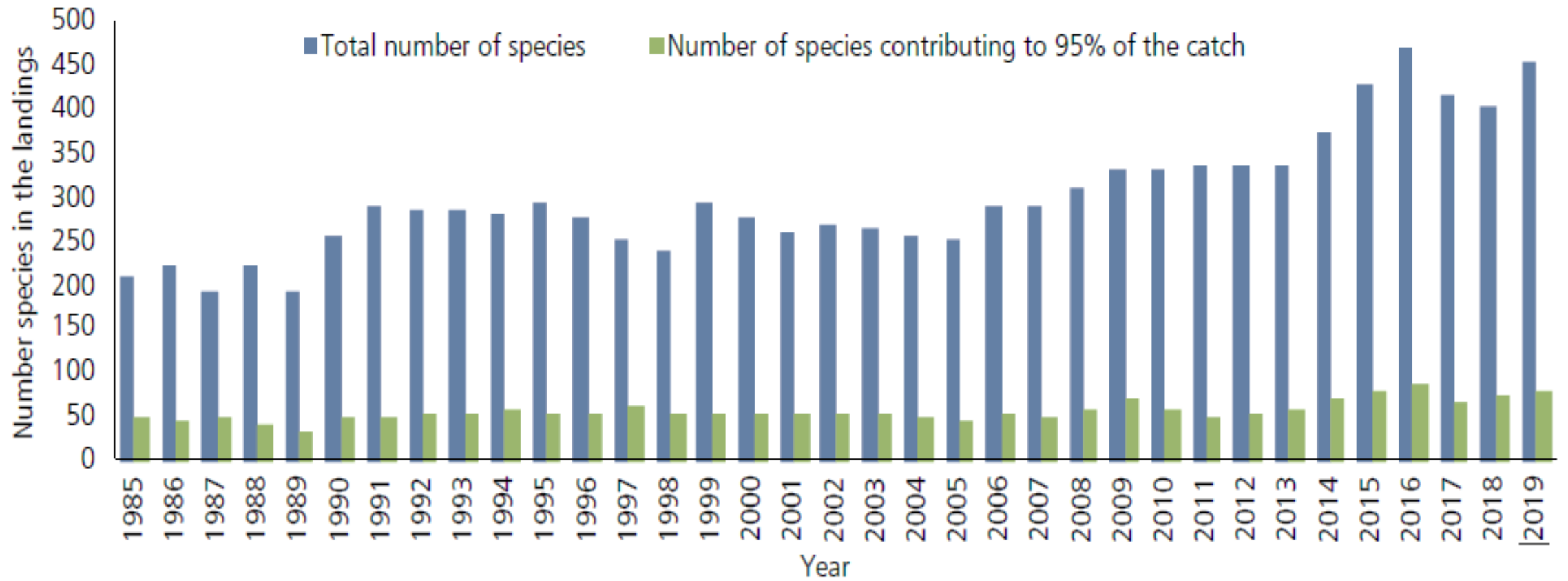
Marine Fish Landings in India-2022



- Estimated marine fish landings in mainland India in 2022 increased by 14.53% from 2021 and by 28.02% from COVID year of 2020.
- However, it was 2% less than the landings in the pre-COVID year of 2019.

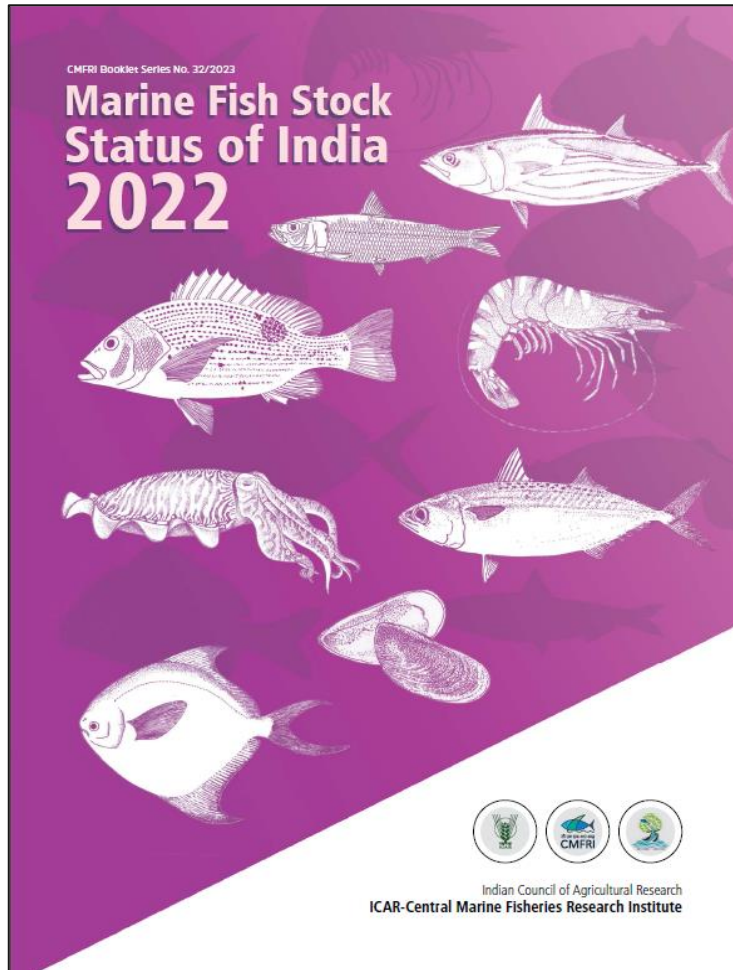
Potential Yield Estimate from Indian EEZ (2018)



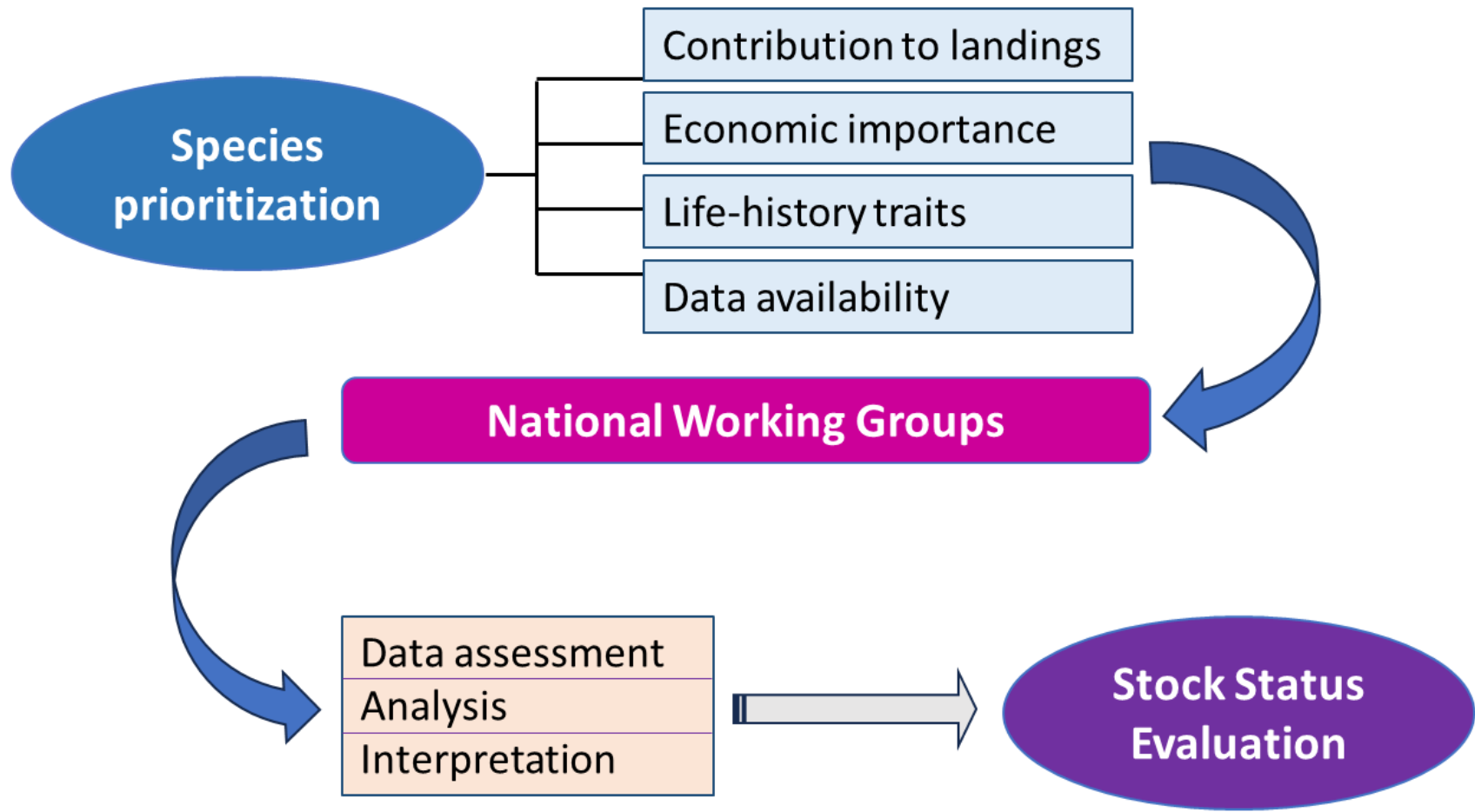


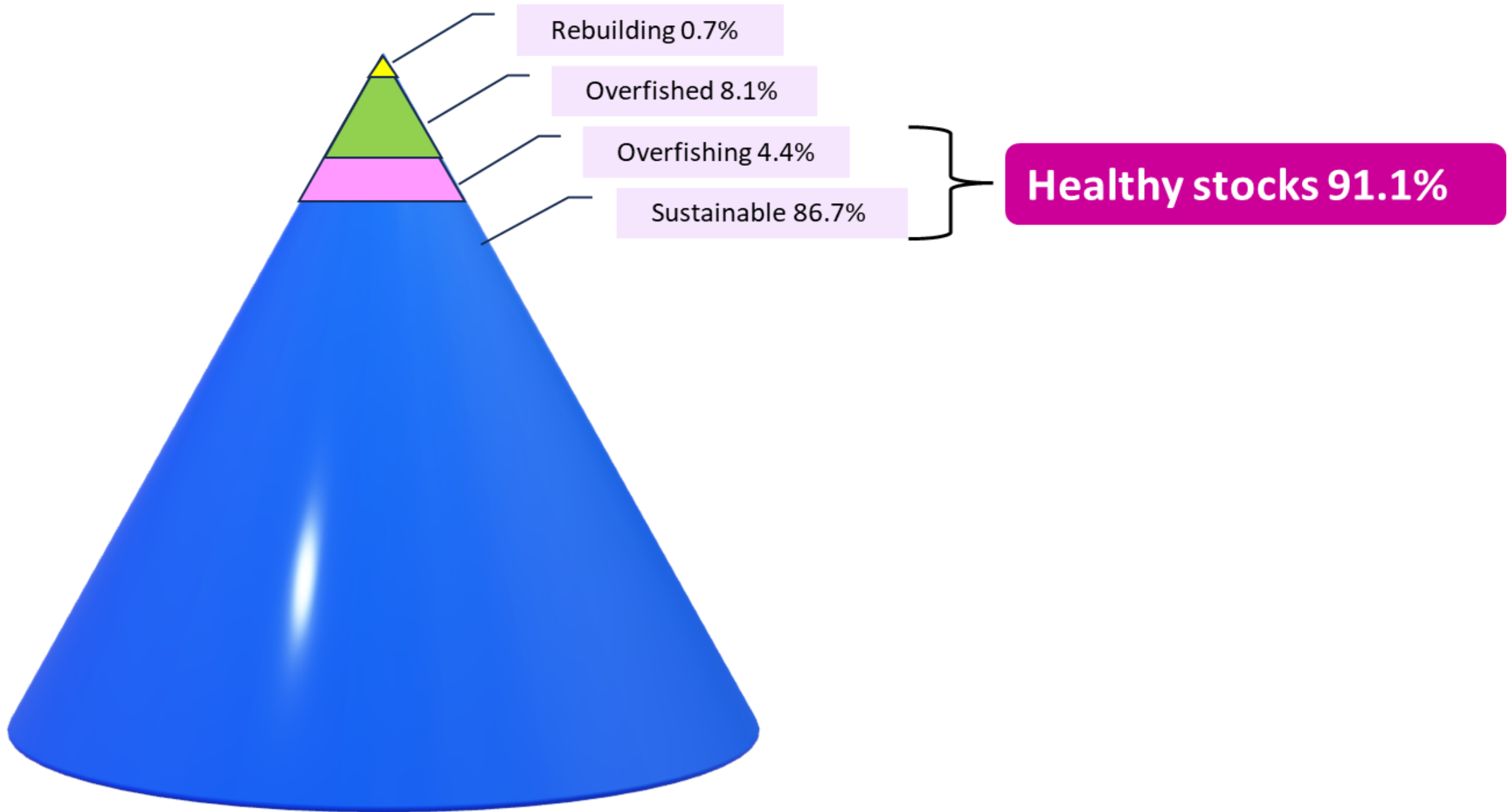
The number of species recorded in the landings from 1985 to 2019 (35 years).

Source: CMFRI Annual Report 2021



- Recent overview of the health of marine fish stocks of India under current fishing scenario and management regime
- 70 species; 135 stocks (equivalent to regional management units)
- Length-based microanalytical models
- Primary inputs: species-specific data on growth, mortality, recruitment and age
- Supplementary inputs: species-specific data on maturity, juvenile abundance, spawning stock biomass





SUSTAINABLE

85.4% of assessed
finfish stocks

89.7% of assessed
shellfish stocks

OVERFISHING

5.2% of assessed
finfish stocks

2.6% of assessed
shellfish stocks

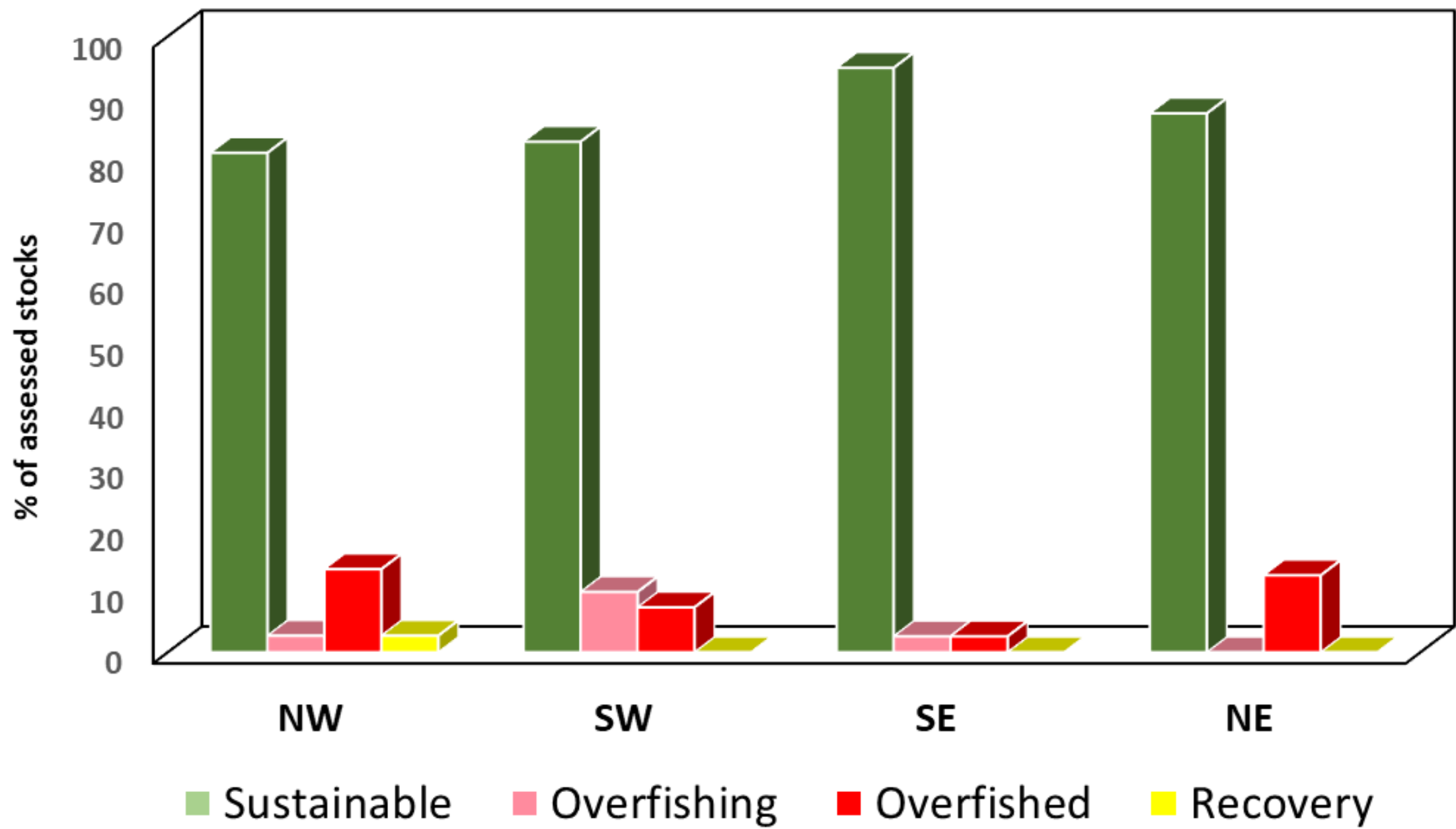
9.4% of assessed
finfish stocks

5.1% of assessed
shellfish stocks

2.6% of assessed
shellfish stocks

OVERFISHED

REBUILDING





Released by Shri Parshottam Rupala, Hon'ble Minister for Fisheries, Animal husbandry and Dairying, Govt of India, on 31 August 2023 during Sagar Parikram Yatra Phase VIII at Kanyakumari, Tamil Nadu

फाइल सं / F. No. j-16001/5/2023 Fy-(E-22713)
भारत सरकार / Government of India
मत्स्य पालन, पशुपालन और डेयरी मंत्रालय /
Ministry of Fisheries, Animal Husbandry and Dairying
मत्स्य पालन विभाग / Department of Fisheries

Krishi Bhawan
दिनांक/ Dated the 5th September 2023.

::OFFICE MEMORANDUM::

The undersigned is directed to refer to a report made by the Central Marine Fisheries Research Institute (CMFRI) vide CMFRI Booklet Series No. 32/2023, titled "Marine Fish Stock Status of India" which cites that out of the 135 fish stocks assessed by CMFRI, 91.1% were healthy, 86.7% are sustainable, 4.4% is subject to overfishing, 8.2% is being overfished and 0.7% of the stocks are rebuilding. It is also appreciated that none of the assessed fish stocks had collapsed.

2. In an order to bring the overfishing, overfished and rebuilding fish stocks into sustainable account, the recommendations made by the report is strongly advised. The recommendations made in the report is enclosed herewith.

3. Further, it is also advised that all the coastal States/UTs should make necessary provisions for implementing Square meshed 40 mm codend, creating an awareness on eco-friendly fishing methods and to adopt the Code of Conduct for Responsible Fisheries in their respective States/UTs. so as to make the fish stocks healthy and sustainable.

Encl: As above.


(Dr. Sanjay Pandey)
Deputy Commissioner (Fisheries)

To,

1. All the Commissioner of Fisheries/ Director of Fisheries of coastal States/UTs.
2. The Chairman, Marine Products Export Development Authority.
3. The Director, Central Marine Fisheries Research Institute, Kochi.
4. The Director General, Fishery Survey of India, Mumbai.
5. The Director, Central Institute of Fishery Technology, Kochi.

Note: The Director General, Fishery Survey of India, Mumbai is requested to make necessary arrangements for using Square meshed 40 mm codend in their trawl gears and the instructions may be complied at the earliest.

"The marine fisheries sector in India contributes significantly to the food and nutritional requirements of its people. Publication of a national status of fish stocks report offers a vehicle for elevating community understanding and stimulating discussion to ensure the sustainability and resilience of India's aquatic resources. The government's approach to documenting the status of Indian fish stocks, compiled by the Indian Council of Agricultural Research, ICAR-Central Marine Fisheries Research Institute is to be celebrated."

- Kim Friedman, FAO of the UN

"Yours is a fantastic work and it's so great to see this information institutionalised."

- Meryl J Williams, AsiaPacific-FishWatch & Ex-WorldFish

"An exemplary piece of work. Healthy fish stocks of India is great news."

- S Ayyappan, Former Secretary, DARE & DG, ICAR



The results indicated are for the 70 species and 135 stocks assessed.

Marine fish stock status is inherently dynamic and can change across assessment periods.

A healthy stock does not imply that no management measures are needed.

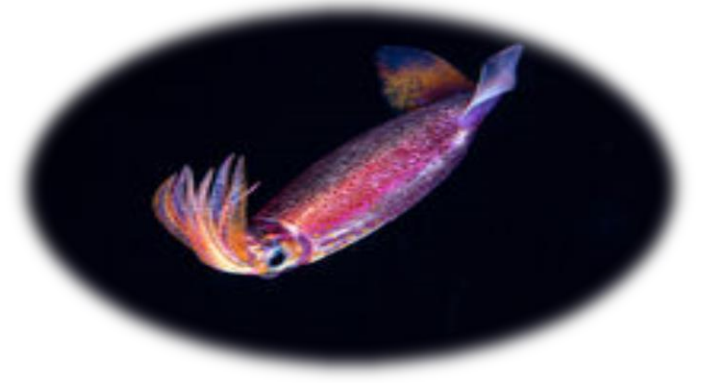
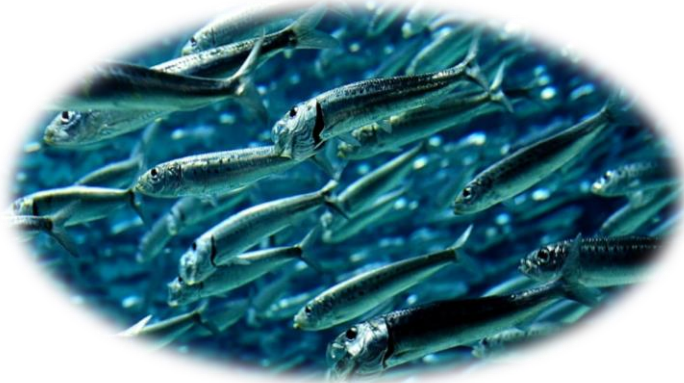
Judicious management, regular monitoring and updated stock status assessments are always necessary to ensure long-term sustainability.

Moving Forward....

- The MFSS 2022 Report is the first of an envisaged steady series.
- MFSS Reports will be published regularly at 2- to 3-year intervals to update the status of India's marine fish stocks in the backdrop of the fishing activities and management regimes in place at that time.

- Future reports will include more species relevant to India's marine fisheries from economic and ecological perspectives.
- Future reports will also seek to combine different assessment models based on resource and data type.
- Short-term forecasts using interactive models incorporating climate variables will be attempted for key resources whose fluctuations will impact the quantity, quality and value of India's marine fish production.

- Dedicated vessel-based surveys are envisaged for untapped non-conventional resources.



- Hand-in-hand collaborative research with other institutes like ICAR-CIFT and CMLRE for harvest and utilization of mesopelagic resources.
- Increased researcher-planner-stakeholder interface.



- This will help better integration of science-directed advisories into fisheries policy planning.
- This will also pave way for transitioning from a by-and-large generic fisheries management regime to one that incorporates some or several specific management tools that may be resource/gear/region/time-centric.

What is needed?

UNDERSTAND

the past - what was?

ASSESS

the present - what is?

DEFINE

the future - what will be?



Thank you