

GOVERNMENT OF INDIA
Ministry of Fisheries, Animal Husbandry & Dairying
Contribution on
Sustainable Fisheries Management in the face of Climate Change

**Experience and direction in the implementation of the agreement on Straddling
Fish Stocks and Highly Migratory Fish Stocks, (UNFSA)**

India stands out as one of the leading fish-producing nations globally, boasting an extensive coastline stretching over 8000 kilometers and abundant inland water bodies. In the fiscal year 2022-23, its total fish production reached 17.5 million metric tons,

of marine fishery resources of Indian EEZ is estimated at 5.31 million tones indicating scope for further developi

several sanctuaries and national parks which support climate change A&M in addition to providing other ecosystem services.

Integrated resources Management: India balances ecosystem and socio-economic factors in fisheries management, promoting sustainable fishing practices, habitat protection and biodiversity conservation to ensure long-term resilience and sustainability in its fisheries sector.

Capacity Building: Through various Government Institutes and non-profit organizations, various capacity-building programmes are arranged, empowering fishers, communities, and fisheries managers to adapt to climate change through sustainable practices, alternative livelihoods, and disaster preparedness, enhancing resilience and adaptive capacity.

Policy Support: India's fisheries policies integrate climate change considerations, promoting sustainable practices and conservation measures such as sustainable aquaculture and marine protected areas. The National Policy on Marine Fisheries, 2017 emphasizes targeted research, timely implementation of adaptation measures, and promoting green fisheries to reduce greenhouse gas emissions from fishing activities. This policy advocates a participatory, adaptive, and precautionary fisheries management system.

International Collaboration: India collaborates with RFMOs (e.g., IOTC, SIOFA, CCAMLR) intergovernmental organisations (BOBP-IGO), international organisations, research institutions, and neighboring countries to address trans-boundary issues including climate-resilient fisheries management, fostering knowledge exchange and joint efforts to mitigate climate change impacts etc.

3) Accounting for cumulative impacts

a. Understanding Cumulative Impacts:

Comprehensive Assessments: India conducts comprehensive assessments to understand the cumulative impacts of climate change and other stressors on fisheries. These assessments blend scientific research, stakeholder input, and traditional knowledge to measure the combined effects on fish stocks and marine ecosystems. Under the NICRA project, climate change impact on marine and freshwater fishes were studied and catch prediction for the period 2020-2100 were undertaken under different Representative Concentration Pathways (RCP) scenarios (CMFRI, 2019).

Interdisciplinary Research: Interdisciplinary research programs combine natural and social sciences to explore the interactions between climate change, habitat degradation, pollution, and fishing pressure. By analyzing these interactions, India gains insights into the cumulative impacts on fisheries and develops targeted management strategies.

establishing protected areas and no take zones. These measures aim to conserve fish stocks and preserve vital habitats.

5) Socio-economic and cultural participation in sustainable fisheries management in the context of climate change risk

Socio- economic Participation:

Livelihood Support: In response to climate change, India recognizes the vital socio-economic role of fisheries for coastal communities and fishermen. Sustainable management efforts prioritize supporting livelihoods, creating alternative income opportunities, and establishing social safety nets to lessen the impact of climate change on vulnerable communities. Offering compensatory packages to fishermen during annual fishing bans is a crucial step in this direction. Fishermen Welfare Boards and similar institutions in various State Governments are tasked with compensating fishermen for income loss due to these management measures.

Another notable example of such initiatives is the "Punargeham" program, implemented by the State Government of Kerala, which addresses climate change-induced displacement of fishing communities in coastal areas. Similarly, the State Government of Odisha provides livelihood support to marine fishermen during fishing bans for olive Ridley turtle conservation (in addition to 61 days annual fishing ban), furthering efforts in this direction. These programs highlight India's commitment to supporting coastal communities and fishermen amidst the challenges posed by climate change.

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Cultural Practices: India recognizes the importance of integrating cultural practices into sustainable fisheries management. Rituals, customs, and community

