Environmental Defense Fund

BOBP

Environmental Defense India Foundation

National Workshop on

Strengthening the Science – Management Interface

Embedding Evidence and Technology in Marine Fisheries Governance

09–10 September 2025 | Taj Vivanta, Chennai

In Collaboration with

CMFRI

INCOIS
ESSO- Indian National Centre for Ocean Information Services

Institute for Ocean Management, Anna University

1. Introduction

Effective fisheries management is essential for ensuring the sustainability of marine resources and the livelihoods of millions in India's coastal states. However, policy decisions in this sector have traditionally relied more on administrative prudence and historical practice than on scientific evidence. While this approach provides a degree of stability, it often overlooks opportunities in innovation, adaptive response, and resource optimization.

A sustained and structured interface between science and management remains absent. Current interactions are often informal, reactive, or event-driven, and scientific data is rarely presented in formats suitable for decision-making. In many instances, scientific assessments are used retrospectively to validate decisions already made on the basis of precaution or political exigency, rather than to guide them proactively.

To address these systemic challenges, the Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO) and Environmental Defense Fund (EDF), along with its Indian affiliate - Environmental Defense India Foundation (EDIF), are convening a national workshop.

This two-day event aims to catalyze a formal, recurring platform for interaction between scientists and fisheries managers across India.

The workshop will

- Showcase promising technological tools for fisheries governance and discuss lessons from successes and failures
- Develop a roadmap for embedding evidence and science more systematically in marine fisheries governance.

The workshop will build on

- BOBP's regional experience in fostering cooperative fisheries governance, capacity building, and participatory management across South Asia
- EDIF/EDF's ongoing work in Tamil Nadu and Maharashtra
- EDIF/EDF's global expertise in embedding technology into fisheries management.

This initiative aligns with India's **National Policy on Marine Fisheries (2017)**, which calls for strengthening the science-policy interface, implementing a national fisheries data acquisition plan, and leveraging IT and space technology. It also echoes **Article 12 of the FAO Code of Conduct for Responsible Fisheries (CCRF)**, which underscores the role of research in achieving responsible fisheries.

2. About the Workshop

Purpose

To catalyze structured dialogue and ongoing collaboration between scientists and fisheries managers, leveraging new technologies and co-produced knowledge to promote adaptive, evidence-based decision-making in marine fisheries governance

Objectives

- Demonstrate how evidence has improved management outcomes and where its neglect led to failures.
- Build the capacity of scientists and managers to interpret, communicate, and use policy-relevant evidence.
- Explore manager readiness and interest in adopting decision-support tools and technologies.
- Design a roadmap and initiate institutional mechanisms for continuous science–management exchange.

Expected Outcomes

- Identification of priority technologies and capacity gaps
- Strengthened professional networks and partnerships
- A formal MoU between EDF/EDIF and BOBP-IGO
- Joint declaration or workplan for follow-up actions
- Comprehensive workshop proceedings including the roadmap for embedding evidence in routine decision-making

Participants

- One Senior fisheries officers from each of the coastal states (Headquarters – Marine fisheries) (6 Nos)
- District-level fisheries officers from all coastal districts of Tamil Nadu and Maharashtra (20 Nos).
- Scientists from ICAR Fisheries institutions (CIFE, CMFRI, CIFT) (12 Nos)
- Faculty from fisheries colleges/universities in Tamil Nadu and Maharashtra (5 Nos)
- Industry representatives (e.g., private companies, tech start ups) (5 Nos)
- Invited experts and Organizers (20 Nos)

3. Methodology

The two-day interactive workshop will comprise of panel discussions, technology demos, open forums, and working groups. The breakout sessions will have creative engagements viz., Role-Reversal exercise and Live Visual Mapping.

The workshop would follow a purposefully sequenced methodology that would blend diagnostics, demonstration, dialogue, and design. The participants would not only get to share perspectives but also contribute to co-developing actionable solutions.

4. Summary Agenda

Day 1

Pre-lunch

1. **Inauguration**: Context Setting; Objectives & Methodology Overview
2. **Evidence for Governance**: Science and Technology Solutions Currently in Practice
   - National Institutes: INCOIS, CMFRI, CIFT, NCCR
   - Case studies - Lessons from success and failure (BOBP & EDIF)
3. **Profiling perceptions** on readiness and relevance of technologies
4. **Introduction** to the Group Exercise

Post lunch

1. **Role Reversal**: Scientists make management decisions; managers provide evidence / frame research requests—then critique each other.
2. **Live Visual Mapping**: Real-time creation of a "Science–Policy Ecosystem Map" identifying flows and institutional bottlenecks.
3. **Open forum**: Group reflection on institutional barriers, bottlenecks in evidence use and opportunities for collaboration

Day 2

Pre-lunch

1. **Recap** and synthesis of Day 1
2. **Emerging Concepts** and Technologies in Fisheries Governance
   - Catch documentation & Near-Realtime Stock Assessment (BOBP)
   - FISHE, SmartPass, FVON (EDF)
   - Traceability; Catch Documentation; Underwater Domain Awareness – (Threshold / Odakku / MRC)
3. **Panel Discussion**

Post-lunch

1. **Thematic Working Groups**
   - Co-developing roadmap for science-management interface
   - Group presentations: Action plans and commitments
2. **Closing session**
   - Summary, next steps
   - MoU signing
   - Commitments from participants

Detailed Programme (Provisional)

Day 1: Setting the Context and Building Shared Understanding

Time	Activity	Responsibility
08:45 – 09:30	Registration	**BOBP**
09:30 – 10:15	**Session 1: Inaugural Session** **Facilitator: D. Vijai**, *Senior Manager, Climate Resilient Fisheries, EDIF*	
09:30 – 09:40	Welcome Address & Context Setting	**Dr. P. Krishnan** *Director, BOBP-IGO*
09:40 – 09:50	Opening remarks: Vision and Commitment from EDIF	**Dr. Hisham Mundol** *Chief Adviser, EDF-India & Director, EDIF*
09:50 – 10:00	Guest of Honour	**Dr. N. Felix** *Vice Chancellor, Tamil Nadu Dr. J. Jayalalithaa Fisheries University*
10:00 – 10:15	Chief Guest	**Dr.N.Subbaiyan**, IAS *Secretary, Animal Husbandry, Dairying, Fisheries and Fishermen Welfare, Tamil Nadu*
10:15 – 10:50	**Group Photo / Tea Break**	
10:50 – 13:00	**Session 2: Evidence for Governance: Science & Technology Solutions Currently in Practice** **Facilitator: Dr. R. Venkatesan**, *Professor of Practice, IOM Anna University & Adjunct Professor, University of Massachusetts Dartmuth, USA & IIT Mandi* *This session introduces participants to the various scientific inputs and technological solutions which have been developed and piloted by the national research organizations in India and currently accessed/ used/ adopted by the fisheries managers for governance. Participants will understand practical use-cases, challenges, and potential for improvements.*	
1100 – 1115	Scientific evidence for Fisheries Management	**Dr. J. Jayasankar** *Head, FRAEED, ICAR-CMFRI*
1115 – 1130	Guidance on Fishing Technology (Gear and Craft modifications)	**Dr. M.V. Baiju** *Naval Architect, ICAR-CIFT*
1130 – 1145	Ocean Information Services for Fishers	**Dr. Dhanya Mohan Lal** *Scientist, MoES-INCOIS*
1145 – 1200	Advisories for Disaster and Safety of Fishers-Pilot projects	**Dr. S.K. Dash** *Scientist F, MoES-NCCR*
1200 – 1230	Lessons from success and failure: Case studies	**BOBP & EDF**

Time	Activity	Responsibility
1230 – 1245	Slido Poll: Profiling perceptions on readiness and relevance of technologies	**BOBP & EDF**
1245 – 1300	Introduction to Group Exercises	**BOBP-IGO**
13:00 – 14:15	**Lunch Break & Tech Walk** ***Tech Demo Booths*** *Leading Institutions and Tech solution providers display their tools and solutions in designated booths where the participants walk through and interact for details / partnerships / collaborations*	
14:15 – 17:30	**Session 3: Mutual Empathy and Problem Mapping** **Coordination: BOBP/EDF & Facilitators** *This session is meant to build mutual understanding between scientists and fisheries managers by reflecting on real-world constraints, communication gaps, and institutional bottlenecks in applying scientific evidence to fisheries policy. Participants will work in mixed-role groups to explore their lived experiences—where science has succeeded or failed in influencing decisions—and identify systemic barriers to collaboration.* ***Through structured breakout discussions, participants will surface both operational frustrations and shared aspirations.***	
14:15 – 15:30	**Group Work 1: Role-Reversal Exercise** *Mixed-role groups explore experiences, challenges, and gaps in science–policy collaboration. Managers and scientists switch roles to better understand expectations.*	
15:30 – 15:45	**Tea Break**	
15:45 – 16:45	**Group Work 2: Live Visual Mapping** *Facilitators compile group insights into a Science–Policy Ecosystem Map.*	
16:45 – 17:15	**Open Forum** *Group reflection on institutional barriers, bottlenecks in evidence use and opportunities for collaboration Group reflection on institutional barriers and bottlenecks in evidence use.*	
17:15 – 17:30	**Announcements for Day 2**	
18:30 – 20:30	**Cultural Evening and Networking Dinner**	

Day 2: Profiling Innovations and Planning Future Action

Time	Activity	Responsibility
09:00 – 09:10	Recap and Synthesis of Day 1 Summary of key insights from Day 1	**Mr. Rajdeep Mukherjee** *Policy Analyst, BOBP-IGO*
09:10 – 11:00	**Session 4: Emerging concepts and technologies in fisheries governance** **Facilitator: Dr. E. Vivekanandan,** *Sr. Scientific Consultant, BOBP-IGO* *This session introduces participants to selected cutting-edge, field-tested tools designed to strengthen evidence-based decision-making in marine fisheries. Each tool targets a different bottleneck in the science–management continuum—from lack of timely effort data to gaps in coastal ocean monitoring, to challenges in managing data-limited fisheries. Participants will gain hands-on exposure to the technologies, engage directly with the developers, and understand practical use-cases, challenges, and potential for adaptation in Indian fisheries contexts.*	
09:10 – 09:40	FISHE: A Framework for making climate- and science-informed management decisions	**Dr. Jacob Eurich** *Small-Scale Fisheries Solutions Scientist, EDF*
09:40 – 10:00	Innovations in catch documentation, resource assessment & reporting for effective fisheries governance	**Dr. P. Krishnan** *Director, BOBP-IGO*
10:00 – 10:15	SmartPass: Innovative Fishing Monitoring Using Shore-Based Cameras and Artificial Intelligence	**Dr. Karly Kelso** *Senior Director, Global Oceans Strategies, EDF*
10:15 – 10:30	Digital solutions for strengthening value chain	**Mr. B. Bharath Kumar** *CEO, Threshold Software; ZEROCODE*
10:30 – 10:45	The Fishing Vessel Ocean observing Network (FVON): A New Paradigm for Ocean Observing	**Dr. Jacob Eurich** *Small-Scale Fisheries Solutions Scientist, EDF*
10:45 – 11:00	Underwater Domain Awareness; Opportunities for Fisheries	**Dr. Arnab Das** *CEO, Marine Research Centre*
11:00 – 11:30	**Tea Break**	
11:30 – 13:00	**Panel Discussion** *Identified panellists discuss strategies for leveraging technologies and strengthening science-policy interface across various domains.* **Facilitator: Dr. P. Krishnan**, *Director, BOBP-IGO, Chennai*	
13:00 – 14:00	**Lunch**	

Time	Activity	Responsibility
14:00 – 15:15	**Session 5: Co-Creation and Planning**	
	Facilitator: Dr. P.S. Ananthan, *Principal Scientist, ICAR-CIFE, Mumbai* *Building on the diagnostics and shared understanding developed during Day 1 and merging concepts and technologies on Day 2, this session shifts from analysis to action. Participants will work in thematic working groups to co-design practical roadmaps that strengthen the science–management interface in marine fisheries governance. Drawing from the Science–Policy Ecosystem Map, survey data, and earlier discussions, each group will focus on one of four strategic areas—institutions, communication, technology, and capacity—and use structured templates to identify key problems, root causes, and feasible solutions.* *Groups will be encouraged to build on real-world examples, pilot opportunities, and institutional mandates to ensure relevance and implementability.*	
14:00 – 14:45	**Thematic Working Groups Discussion** Participants co-develop actionable roadmaps across 4 streams: 1) Science–Policy Mechanisms 2) Evidence Packaging 3) Tech Integration 4) Capacity Building	
14:45 – 15:15	**Group Presentations** Each group shares roadmap outputs and peer feedback.	
15:15 – 15:30	**Tea Break**	
15:30 – 16:15	**Session 6: Plenary: Commitments & Next Steps**	
15:30 – 16:00	**Way Forward** Discussion to converge on shared commitments	• State Governments • Research Organizations • Organizers
16:00 – 16:10	**MoU Signing** Formalize EDF/EDIF and BOBP collaboration and working arrangements with partnering states	**BOBP-IGO & EDF**
16:10 – 16:25	**Chief Guest Remarks**	**Dr. N. Ramaswami,** IAS *Secretary, Animal Husbandry, Dairy Development & Fisheries Govt. of Maharashtra*
16:25 – 16:30	**Vote of Thanks & Close of Workshop**	**D. Vijai** *Senior Manager, Climate Resilient Fisheries, EDIF*

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