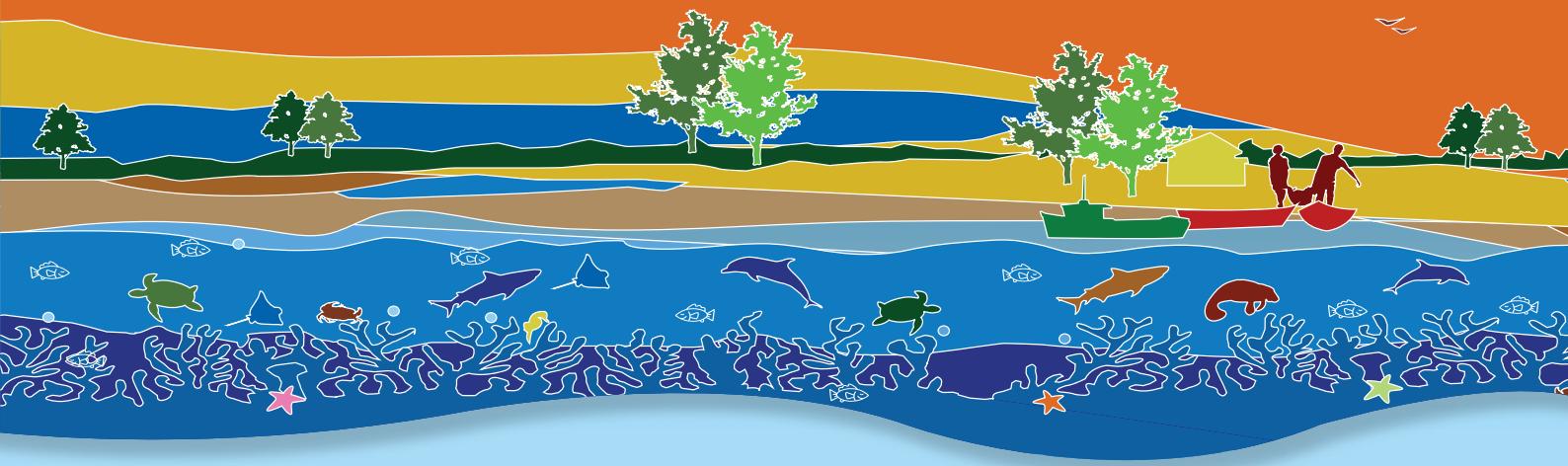




Food and Agriculture  
Organization of the  
United Nations



# **Consolidated Report of the State-level Stakeholder Consultations in India to Facilitate Preparation of the Second Phase of the Bay of Bengal Large Marine Ecosystem Project**

**TCP/IND/3706**





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# Consolidated Report of the State-level Stakeholder Consultations in India to Facilitate Preparation of the Second Phase of the Bay of Bengal Large Marine Ecosystem Project

**TCP/IND/3706**



Bay of Bengal Programme  
Inter-Governmental Organisation  
91, Saint Mary's Road, Abhiramapuram  
Chennai 600 018, Tamil Nadu, India

## **Preparation of this Document**

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*Report prepared by*  
**Yugraj Singh Yadava**  
**E Vivekanandan**  
**Rajdeep Mukherjee**

*Photographs*  
**Yugraj Singh Yadava**  
**S Jayaraj**  
**Sujit Choudhury**

*Layout, design and graphics*  
**S Jayaraj**  
**M Krishna Mohan**

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- Department of Fisheries (formerly Department of Animal Husbandry, Dairying and Fisheries), Ministry of Agriculture and Farmers Welfare, Government of India.
- Ministry of Environment, Forest and Climate Change, Government of India.
- Fishery Survey of India, Department of Fisheries Ministry of Agriculture and Farmers Welfare, Government of India.
- Central Inland Fisheries Research Institute, Indian Council of Agricultural Research.
- Central Marine Fisheries Research Institute, Indian Council of Agricultural Research.
- Central Institute of Fisheries Technology, Indian Council of Agricultural Research.
- Departments of Fisheries of coastal States and Union Territories.
- Department of Environment of coastal States and Union Territories.
- Fishermen Organisations, NGOs and CBOs of respective coastal States and Union Territories.

\*\*\*

## Executive Summary

The planning for the second phase of the Bay of Bengal Large Marine Ecosystem (BOBLME) Project is currently under progress. The objective of the second phase is to implement the Strategic Action Plan (SAP) developed in the first phase of the Project (2009-15).

- To support preparation of the Full Size Project (FSP) Document for implementation of BOBLME Phase 2 (SAP Phase), four one-day stakeholder consultations covering the East Coast States and Union Territories (UTs) in India were conducted: Tamil Nadu & Puducherry (22 February 2019); Andaman & Nicobar Islands (25 February 2019); Andhra Pradesh (01 March 2019) and Odisha and West Bengal (04 March 2019).
- The overarching objectives of the consultations were: (1) to identify local priorities within the SAP and PFD Framework; (2) to garner specific inputs on thematic areas of the SAP; (3) to explore the scope of collaboration & coordination for implementation of SAP; and (4) to scope the possibility of co-finance for implementation of SAP.
- In total, 125 participant-days of output were generated during the four Consultations, with fair representation from primary, secondary and tertiary stakeholders.
- The output was grouped into two thematic areas: (1) Existing implementation mechanism and options for improvement (through support from BOBLME SAP); and (2) Scope of collaboration & coordination (of national programmes with BOBLME SAP).
- The accompanying word-clouds (1 & 2) show the key suggestions on these two areas that emerged during the Consultations.
- In summary, the desired role for BOBLME SAP is that of a knowledge platform to bring the stakeholders together, shaping opinion and policies towards better implementation and better policy measures.
- The scope of collaboration lies in capacity building of stakeholders, knowledge exchange and exposure, development of management plan, etc.
- The output of the State-level Consultations would be placed before a national level consultation for finalization.



1. Key areas identified for implementation & options for improvement

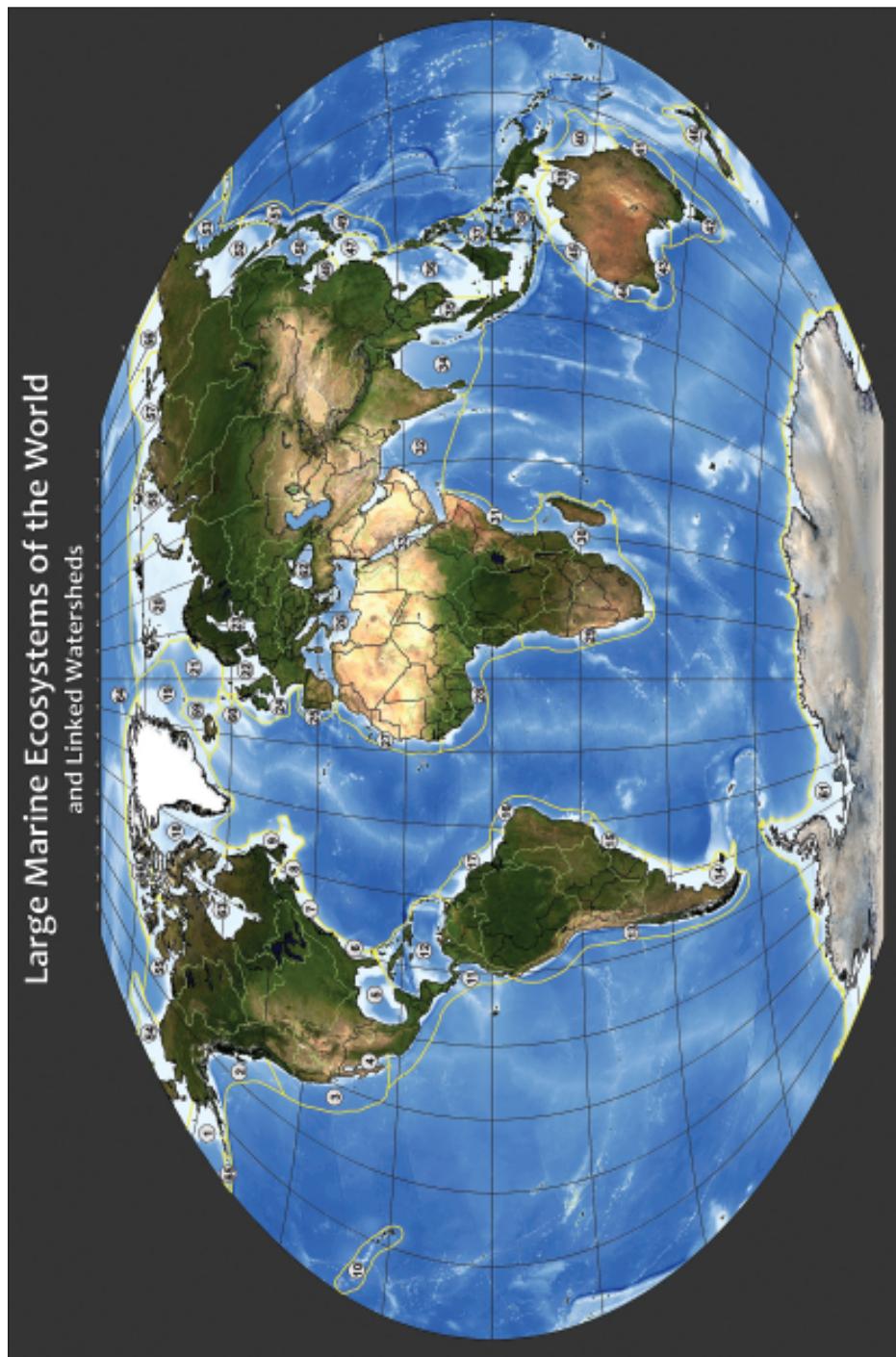


2. Scope of collaboration and cooperation

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LARGE MARINE ECOSYSTEMS are areas of the ocean characterized by distinct bathymetry, hydrography, productivity and trophic interactions. They annually produce 80 percent of the world's fish catch. They are national and regional focal areas of a global effort to reduce the degradation of linked watersheds, marine resources, and coastal environments from pollution, habitat loss, and over-fishing. For More Information Visit: <http://www.lme.noaa.gov>

## **1.0 Background**

Bay of Bengal (BoB) is one of the Large Marine Ecosystems (LME) in the world. Over 400 million people in the BoB area are dependent on the coastal and marine resources for their food, livelihood and security. At the same time, it has also been recognised as one of the degraded habitats with a high risk level that calls for the need to address some serious issues. Eight countries (Indonesia, Malaysia, Myanmar, Bangladesh, India, Sri Lanka, Maldives and Thailand) situated around the BoB have joined hands to address the issues, jointly and in collaboration with partners and have developed the Bay of Bengal Large Marine Ecosystem (BOBLME) Project supported by the Global Environment Facility (GEF) and other agencies and implemented by the Food and Agriculture Organization of the United Nations (FAO). The Phase 1 of the BOBLME Project was operated from 2009 to 2015 with the aim "*To improve the lives of the coastal populations through better regional management of the Bay of Bengal environment and its fisheries.*" The two major outputs of Phase 1 were the (i) Transboundary Diagnostic Analysis (TDA) and the (ii) Strategic Action Programme (SAP).

The BOBLME Phase 2 (SAP implementation phase) has been planned jointly with the above-mentioned eight countries and the partners with funding support from GEF. A Programme Framework Document (PFD) has been designed based on priority areas identified under each SAP theme. The Project Preparatory Grant (PPG) phase will support key information gathering and stakeholder consultations (SCs) at the national level for preparation of the Full-Size Project (FSP) for endorsement by GEF and to solicit additional funding from other donors.

To support preparation of the FSP for implementation of BOBLME Phase 2 (SAP Phase), a Letter of Agreement (LoA) was signed between the Food and Agriculture Organization of the United Nations (FAO) and the Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO). The major task under the LoA was to organise four SCs covering the east coast States and Union Territories (UTs) in India.

The purpose of the consultations was to provide State-level inputs to the FSP. Under the LoA, the BOBP-IGO agreed to carry out the following tasks:

1. Planning preparation, including reference material and invitation for stakeholder consultations to be conducted at Kolkata, Visakhapatnam, Chennai and Port Blair.
2. Conduct four stakeholder consultations as per clear agenda and facilitation as per agenda.
3. Preparation of detailed report of each consultation and a consolidated report of the overall outcome.

## **2.0 Purpose of the Stakeholder Consultations**

In line with the LoA, the overarching objectives of the Consultations are:

1. Identifying local priorities within the SAP and PFD Framework;
2. Garnering specific inputs on thematic areas of the SAP;
3. Exploring the scope of collaboration & coordination for implementation of SAP; and
4. Scoping the possibility of co-finance for implementation of SAP.

### 3.0 Approach

For the purpose of a comprehensive geographical and socio-ecological coverage, four locations, Chennai (covering Tamil Nadu and the UT of Puducherry), Port Blair, Vishakhapatnam (for Andhra Pradesh) and Kolkata (covering West Bengal and Odisha) were identified to carry out the four SCs, covering the east coast of India bordering BOBLME (**Fig.1**). Details on the location and dates of the Consultations are as follows:

#	Location	Venue	Date	Geographical Coverage
1	Chennai	The Raintree Hotel	22.02.2019	Tamil Nadu and Puducherry
2	Port Blair	Fishery Survey of India	25.02.2019	Andaman & Nicobar Islands
3	Visakhapatnam	Hotel Daspalla	01.03.2019	Andhra Pradesh
4	Kolkata	CIFRI, Barrackpore	04.03.2019	Odisha and West Bengal

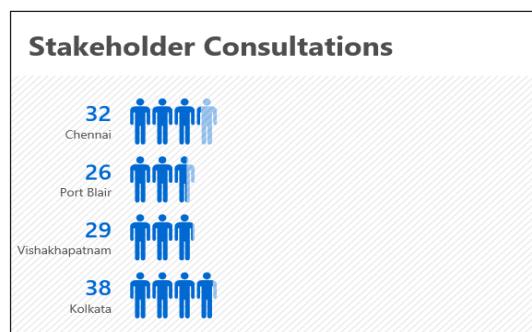
The brochure, background information, agenda (common for all the four SCs - **Annex 1**) and the List of Participants were prepared in consultation with FAO-India. The participants identified for the SCs were a mix of key stakeholders, namely, Central Government comprising Department of Fisheries, Ministry of Agriculture and Farmers Welfare and Ministry of Environment, Forest and Climate Change; State and UT



**Fig.1: Location of the Stakeholder Consultations**

Governments (Departments of Fisheries and Environment); Research and Development Institutions (R&D) and non-state actors including Non-governmental Organisations (NGOs), Community-based Organisations (CBOs), experts and investors. The Lists of participants for each SC are given in **Annexes 2 – 5**. The number and composition of participants are given below:

Stakeholder	Composition
Government (C&S)	26%
R&D Agencies	28%
Academia	10%
NGOs and CSOs	24%
Fishers	7%
Experts	5%



The approach to the Consultation was as follows:

1. Garner specific inputs on thematic areas of the SAP, namely marine living resources, critical habitats, water quality and socio-economics;
2. Explore the scope of collaboration & coordination for implementation of SAP; and
3. Scope the possibility of co-finance for implementation of SAP.

The structure of the SCs was designed as (i) technical presentation on BOBLME Phase 1 and the SAP in the context of India; (ii) Discussion with the participants about their views; (iii) Group discussions on local-specific intervention priorities and possibilities of cooperation/co-finance; and (iv) plenary discussions to accrue recommendations.

The SCs were mainly conducted in English, with adequate arrangements for translation in respective local languages, namely, Tamil, Hindi, Telugu, Bangla and Odia, wherever necessary.

### **Common Agenda followed for the Stakeholder Consultations**

#	Time	Activity
1.	0930 - 1000	Registration
2.	1000 - 1030	Inauguration
3.	1030 - 1045	<i>Group Photo/Refreshment</i>
4.	1045 - 1115	Brief of BOBLME Phase 1 and SAP (Indian Context)
5.	1115 - 1145	Proposed areas of intervention during BOBLME Phase 2 (SAP Implementation)
6.	1145 - 1220	Presentation by the Governmental Agencies
7.	1220 - 1245	Discussion on the Presentations
8.	1245 - 1400	<i>Lunch</i>
9.	1400 - 1530	Group Discussions: Local-specific intervention priorities and possibilities of cooperation/co-finance on the four thematic areas of BOBLME SAP
10.	1530 - 1545	<i>Refreshment</i>
11.	1545 - 1645	Group Presentations & Discussions
12.	1645 - 1700	Concluding Session

### **4.0 Technical Presentations in the Consultation**

The first presentation was on BOBLME Phase 1 activities and the SAP. The participants were informed that Phase 1 focussed on:

1. Increasing capacity in natural resources management;
2. Increasing knowledge about the ecosystem;
3. Developing indicators for tracking changes; and
4. Starting to improve ecosystem health through transboundary demonstration activities.

The TDA identified issues such as overexploitation of fish stocks, habitat degradation and pollution, which were then considered as the major threats to the BOBLME ecosystem. The key achievements in Phase 1 were use of science for fisheries management; improving ecosystem and environment health and; capacity development for improved governance and they were elaborated in the presentation. The participants were also informed of the vision of SAP, which is as follows:

***'A healthy ecosystem and sustainable use of marine living resources for the benefit of the people and countries of the Bay of Bengal LME'.***

The SAP identified the following goals:

- (i) Fisheries and other living marine resources have been developed and are managed sustainably;
- (ii) Vulnerable and critical habitats are developed, conserved and maintained;
- (iii) Coastal and marine pollution and water quality are controlled to meet agreed standards for human and ecosystem health; and
- (iv) Social and economic constraints are addressed, leading to increased resilience and empowerment of coastal people.

The second presentation was on proposed areas of intervention during BOBLME Phase 2, which comprise the following five components:

1. Component 1: Sustainable management of fisheries;
2. Component 2: Restoration and conservation of critical marine habitats and protection of biodiversity;
3. Component 3: Management of coastal and marine pollution to improve ecosystem health;
4. Component 4: Improved livelihoods and enhanced resilience of the BOBLME; and
5. Component 5: Regional mechanism for coordination, monitoring and assessment.

The expected outcomes from each component were explained at the SCs. The details of the proposed activities under the Project Preparatory Grant (PPG) were also explained.

The two presentations are given in ***Annexes 6 & 7***.

## **5.0 Group Discussions: Results**

Group discussions were held on local-specific intervention priorities and possibilities of cooperation/co-finance on the four thematic areas of BOBLME-SAP. The participants were divided into two groups, one on 'Fisheries' and the other on 'Environment'. The format for group discussion is given on page 10.

The location-specific intervention priorities for each State/UT, as suggested by the participants at the SCs, are given in ***Annex 8***

The following salient outputs emerged from the group discussions:

Group	Theme	Topics	Expected Outputs		
			Policies/ Programme in place	Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME-SAP
<b>I</b>	<b>Fisheries</b>	<b>Marine Living Resources</b>			
		1. Ecosystem Approach to Fisheries Management			
		2. Illegal, Unreported and Unregulated (IUU) Fishing			
		<b>Socio-economic Considerations</b>			
		1. Vulnerability Reduction to Natural Hazards and Climate Change			
		2. Livelihoods Enhancement and Diversification			
		<b>Water Quality</b>			
		1. Promotion of Cleaner Fishing Harbour			
<b>II</b>	<b>Environment</b>	<b>Critical Habitats</b>			
		1. Contributions of Marine Protected Areas (MPA) / Marine Managed Areas (MMA) to Biodiversity Conservation and Blue Carbon.			
		2. Strengthening Management Effectiveness of MPAs/MMAs			
		3. Regional Consensus on Reduction of Threats to Marine Biodiversity			
		<b>Water Quality</b>			
		1. Reduced Impact on Coastal and Marine Waters from Land-based Pollution			
		2. Promotion of Cleaner Fishing Harbour			

## **5.1 Policies/Programmes in place in India**

### **Fisheries**

- Marine Fishing Regulation Act of coastal States and UTs.
- Various Central Acts, including the Territorial Waters, Continental Shelf, Exclusive Economic zone and other Maritime Zones Act, 1976, Indian Coast Guard Act, 1978, Coastal Aquaculture Authority Act, 2005, etc.
- National Policy on Marine Fisheries (NPMF), 2017.
- Most of the coastal States lack fisheries policy. The policy is under preparation in some States.

### **Environment**

- Environment (Protection) Act, 1986.
- The Forest (Conservation) Act, 1980.
- The Wild Life (Protection) Act, 1972.
- Water (Prevention and Control of Pollution) Act, 1974.
- The Indian Forest Act, 1927.
- National Environment Policy, 2006.
- National Biodiversity Act, 2002.

## **5.2 Marine Living Resources**

### **Existing implementation mechanism and options for improvement**

- Improved implementation, coordination and reporting mechanisms in areas such as fisheries Monitoring, Control & Surveillance (MCS); mesh size regulation; inclusion of Endangered, Threatened or Protected (ETP) species in legislation; sustainable exploitation of hilsa fisheries resources, including implementation of the Hilsa Conservation Act in West Bengal and formulation of similar act for Odisha; resource assessment; provision of bio-metric id card and formulation of State/UT - specific marine fisheries policies.
- Addressing IUU fishing through the existing legislation and revision of the legislation wherever required.
- Assistance to fishers during spatial and temporal closure of fishing. Assistance to be also provided where Marine Protected Areas (MPAs) have been set up.
- Existing zonation of fishing areas in territorial waters to be reviewed keeping in view the need to provide a larger space for traditional and artisanal fishing.
- Capacity building of stakeholders at all levels.

### **Scope of collaboration & coordination**

- BOBLME assistance is required in identifying gaps in existing legal & policy framework and thereafter towards policy formulation and mechanisms for implementation.
- Capacity building at different levels, in particular in EAFM policy formulation and implementation, prevention of IUU fishing, improvements in data collection and analysis and facilitating exposure visits outside India.
- Regional co-operation & co-ordination on shared resources and formulation of Regional Plan of Action on IUU Fishing, hilsa, sharks, etc.
- Sharing of lessons learned from elsewhere in the region and outside towards empowerment of fishers for taking up additional livelihoods.

- Facilitating coordination among national & international bodies and networking of stakeholders for learning of lessons and cross-fertilization of ideas.

### **5.3 Coastal Critical Habitats**

#### ***Existing implementation mechanism and options for improvement***

- Assistance to fishers during spatial and temporal closure of fishing, including such assistance to be provided where MPAs have been set up.
- Capacity building of stakeholders at all levels.
- Addressing IUU fishing through the existing legislation and revision of the legislation wherever required.
- Improved implementation, coordination and reporting mechanisms in areas such as MCS, mesh size regulation, inclusion of ETP species in legislation, resource assessment. Issue of bio-metric identification card and formulation of State/UT-specific fisheries policies.
- Existing zonation of fishing areas in territorial waters to be reviewed keeping in view the need to provide a larger space for traditional and artisanal fishing.

#### ***Scope of collaboration & coordination***

- Promoting multi-stakeholder consultations and knowledge sharing within and outside the region.
- Restoration of habitats, including provision of environmental flows for conservation of estuaries and backwaters and resource mapping using participatory approach.
- Facilitating co-management approach for critically vulnerable coastal areas and conservation of species such as sea horses, dolphins and turtles and adopting transboundary conservation policy.
- Capacity building of stakeholders at all levels including those engaged in enforcement and ICT Mediated Community Management model for conservation & implementation of policies and awareness building programmes.
- Assistance in identification of indicators for effective management and development of pilot management plans to serve as models and in review of existing acts and policies to make them contemporary.

### **5.4 Water Quality**

#### ***Existing implementation mechanism and options for improvement***

- The Solid Waste Management Rules, 2016 enacted under the Environment (Protection) Act of 1986 requires full implementation to safeguard the coastal areas and the coastal and marine waters. Creation of awareness and monitoring through youth will be helpful in implementation of the said rules.
- The Fish Landing Centres (FLCs) and Fishing Harbours (FHs) require improvement in their hygiene and sanitation conditions, including formulation of Standard Operating Practices (SOPs) and construction standards. The role of the Department of Fisheries is critical in this regard and there is also a need to strengthen the Central Institute of Coastal Engineering for Fishery.
- There is a need for improvement in post-harvest technology and management so that pollution from offal and waste is minimized.
- There is an urgent need to identify the sources of land-based pollutants, establish Sewage Treatment Plants (STPs) in adequate numbers, especially in

eco-sensitive areas and reduce and regulate the use of plastics. Strengthen the Coastal Ocean Monitoring and Prediction System (COMAPS).

- As the jurisdiction of the oceans is divided between the coastal States and the Union Government, there is a strong need for coordination between different Ministries/Departments/Agencies.

#### **Scope of collaboration & coordination**

- Capacity building for fishers and harbour managers through demonstration, exposure visits and preparation of Standard Operating Procedures (SOPs) for harbour management.
- Guidelines on planning of Fish Landing Centres (FLCs) and Fishing Harbours (FHs) and updating BOBP Harbour Guideline.
- Introduction of innovative methodologies such as score cards to monitor pollution.
- Pilot projects on solid waste management.
- Facilitating involvement of youth in monitoring and restoration activities.

#### **5.5 Socio-economics and Livelihoods**

##### **Existing implementation mechanism and options for improvement**

- Assistance in preparation of plans to address coastal vulnerability, especially in ICZM Projects under implementation in some States/UTs.
- Developing livelihood options for women and youth. Promotion of sport fishing, including Catch, Photograph and Reporting (CPR) practices.
- Assistance in improvement of 'Early Warning Systems' and dissemination of information to fishers.
- Assistance in preparation and implementation of plans to safeguard the coastal villages against sea-level rise and other vagaries of nature.
- Facilitating implementation of the provisions contained in the VG-SSF and CCRF.

#### **Scope of collaboration & coordination**

- Studies on hazards and climate change at sectoral level and bringing together scientists, fishery managers and other stakeholders at national level.
- Pilot project on livelihood options, including value addition and post-harvest, eco-tourism, etc. and facilitating in dissemination and acquisition of technology.
- Sharing of best practices from the region.
- Awareness and capacity building at all levels.
- Fostering connectivity between stakeholders.
- Policy on fishers and their socio-economic status.

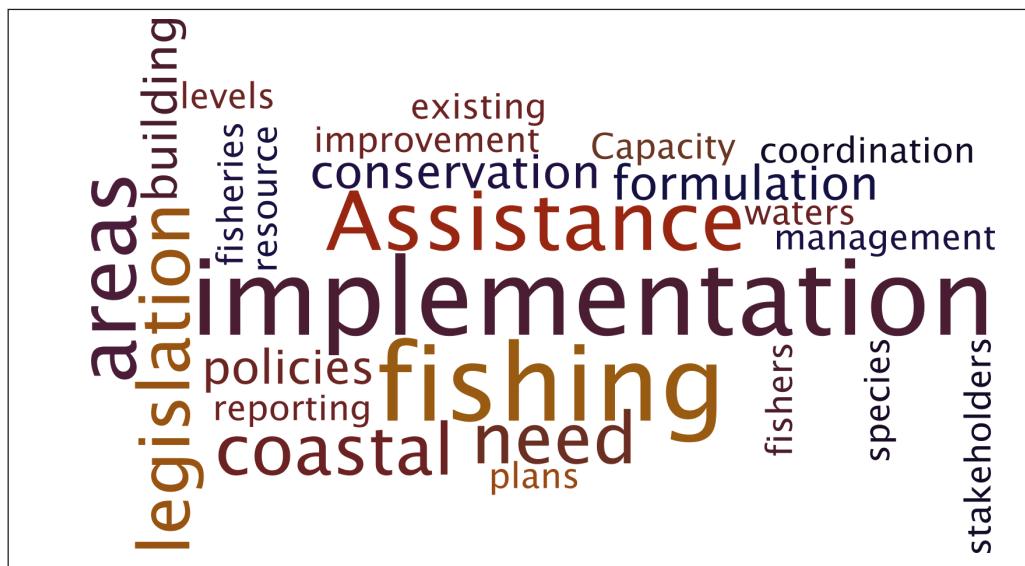
#### **5.6 Regional Coordination**

- Under all the four themes the stakeholders desired many activities with regional dimension after regional coordination implementation mechanism is finalized under the Project.

## **6.0 Way Forward**

The key messages emerged from the State-level Stakeholder Consultations are summarized in the following graphics. These key messages will be presented at the national-level stakeholder consultation.

From the analysis, it shows that the BOBLME SAP can play an important role in conservation of resources, better policy formulation and implementation and coordination. The project is envisioned by the stakeholder as a knowledge platform, which can bring together all the stakeholder and provide policy guidance, support implementation and harness capacity – human and institutional. The scope of collaboration between the national programmes and the BOBLME SAP activities also lies in the same transact. National Programmes can benefit from knowledge exchange and exposure while contributing to development of management plan, capacity building, etc.



### **1. Key areas identified for implementation & options for improvement**



### **2. Scope of collaboration and cooperation**

\*\*\*

**Photo documentary of participants and activities during the four Consultations**



*Participants at the Consultation held in Chennai, Tamil Nadu, 22 February 2019*



*Chennai consultation in progress*



*Participants at the Consultation held in Port Blair, Andaman & Nicobar Islands, 25 February 2019*



*Port Blair consultation in progress*

*Participants at the Consultation held in Visakhapatnam, Andhra Pradesh, 01 March 2019*





*Visakhapatnam consultation in progress*



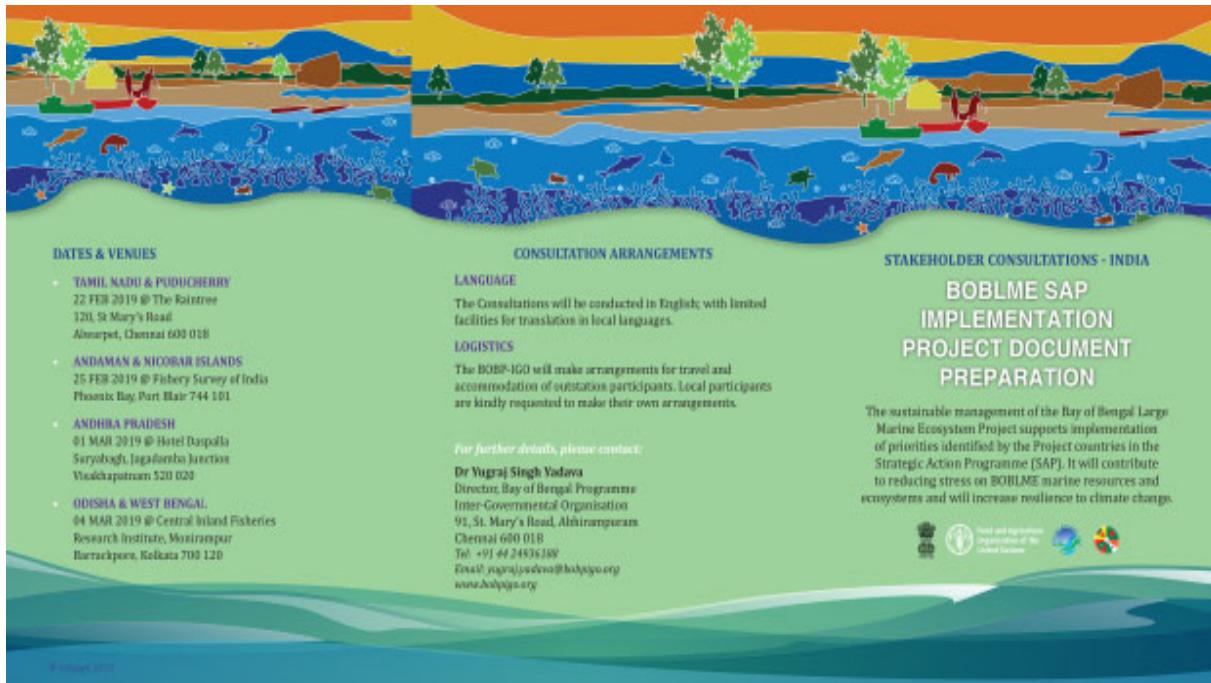
*Participants at the Consultation held in Barrackpore, West Bengal, 04 March 2019*



*Barrackpore consultation in progress*

## Annex 1

### Prospectus & Agenda of the Stakeholder Consultations



**Annex 2**

**Stakeholder Consultations on BOBLME SAP Implementation Project Document  
Preparation: Tamil Nadu & Puducherry**

**22 February 2019, Chennai, Tamil Nadu**

**List of Participants**

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
<b>Government of India</b>			
1.	<b>Sanjay Pandey</b> 	Assistant Commissioner ( <i>Fisheries</i> ) Department of Animal Husbandry Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare Room No. 337, Krishi Bhawan New Delhi – 110 001	Tel: + 91 11 23070370 Mobile: + 91 8683 34244 Email: <i>sajay_rpandey@yahoo.co.in</i>
<b>Fishery Survey of India</b>			
2.	<b>L Ramalingam</b> 	Deputy Director General ( <i>Fy.</i> ) Director General ( <i>IC</i> ) Fishery Survey of India New Fishing Jetty Sassoon Dock, Colaba Mumbai – 400 005 Maharashtra	Tel: + 91 22 22151866 Mobile: + 91 94449 85624 Email: <i>ramalingam.1961@yahoo.com</i>
3.	<b>A Tiburtius</b> 	Senior Fisheries Scientist Chennai Base of Fishery Survey of India Fishery Harbour Complex Royapuram, Chennai – 600 013 Tamil Nadu	Tel: + 91 44 25976053 Mobile: + 91 99691 51162 Email: <i>tibusfi@yahoo.co.in</i>
<b>Zoological Survey of India</b>			
4.	<b>Ch Satyanarayana</b> 	Scientist C Zoological Survey of India Ministry of Environment, Forest and Climate Change Marine Biology Regional Centre 130, Santhome High Road Chennai – 600 028, Tamil Nadu	Mobile: + 91 94333 25559 Email: <i>coralsatya@gmail.com</i>
<b>National Centre for Sustainable Coastal Management</b>			
5.	<b>Deepak Samuel</b> 	Scientist - D National Centre for Sustainable Coastal Management Ministry of Environment, Forest and Climate Change Anna University Campus Chennai – 600 025, Tamil Nadu	Tel: + 91 44 22200900 Mobile: + 91 98848 79534 Email: <i>deepak@ncscm.res.in</i>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
6.	<b>Dipnarayan Ganguly</b> 	<i>Scientist</i> National Centre for Sustainable Coastal Management Ministry of Environment, Forest and Climate Change Anna University Campus Chennai – 600 025, Tamil Nadu	Mobile: + 91 98403 30227 Email: <a href="mailto:dipnarayan@ncscm.org">dipnarayan@ncscm.org</a>
<b>National Centre for Coastal Research</b>			
7.	<b>Karri Ramu</b> 	<i>Scientist E</i> National Centre for Coastal Research Ministry of Earth Sciences 2nd Floor, NIOT Campus Velachery - Tambaram Main Rd Chennai – 600 100, Tamil Nadu	Mobile: + 91 94447 21294 Email: <a href="mailto:ramu@nccr.gov.in">ramu@nccr.gov.in</a>
<b>Department of Fisheries - Tamil Nadu</b>			
8.	<b>M V Prabhavathi</b> 	<i>Deputy Director of Fisheries</i> Integrated Office Complex for Animal Husbandry and Fisheries Nandanam Chennai – 600 035 Tamil Nadu	Tel: + 91 44 24321927 Mobile: + 91 94433 93723 Email: <a href="mailto:jdrfisheries2@gmail.com">jdrfisheries2@gmail.com</a>
9.	<b>G Annie Selva Sonia</b> 	<i>Assistant Director of Fisheries</i> Integrated Office Complex for Animal Husbandry and Fisheries Nandanam Chennai – 600 035 Tamil Nadu	Email: <a href="mailto:anniesolomon@gmail.com">anniesolomon@gmail.com</a>
<b>Department of Fisheries - Puducherry</b>			
10.	<b>R Kaviyarasan</b> 	<i>Deputy Director of Fisheries</i> Department of Fisheries & Fishermen Welfare 6, Beach Road Karaikal – 609 602 Puducherry	Tel: + 91 4368222616 Mobile: + 91 989435 37752 Email: <a href="mailto:kaviyarasan15372@gmail.com">kaviyarasan15372@gmail.com</a>
11.	<b>G Rajendiran</b> 	<i>Assistant Director of Fisheries</i> Department of Fisheries & Fishermen Welfare Botanical Garden Premises Puducherry – 605 001	Tel: + 91 413 2228761 Mobile: + 91 92445 55503 Email: <a href="mailto:jayaadhi@gmail.com">jayaadhi@gmail.com</a>
<b>Department of Science, Technology and Environment - Puducherry</b>			
12.	<b>S Devaanandan</b> 	<i>Assistant Environmental Engineer</i> Department of Science, Technology & Environment 3 <sup>rd</sup> Floor, Anna Nagar, Nellithope Puducherry – 605 005	Tel: + 91 413 2201256 Mobile: + 91 96008 29117 Email: <a href="mailto:dev.27anand@gmail.com">dev.27anand@gmail.com</a>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
<b>ICAR-Central Marine Fisheries Research Institute</b>			
13.	<b>P Laxmi Latha</b> 	<i>Principal Scientist</i> Madras Research Centre of CMFRI CIBA Campus, 4 <sup>th</sup> Floor No 75, Santhome High Road R A Puram, Chennai – 600 028 Tamil Nadu	Mobile: + 91 94464 73096 Email: laxmil@yahoo.com
<b>ICAR-Central Institute of Fisheries Technology</b>			
14.	<b>Madhu V R</b> 	<i>Principal Scientist</i> Central Institute for Fisheries Technology (CIFT) Willingdon Island Kochi – 682 029 Kerala	Tel: + 91 484 2412300 Mobile: +91 80894 39629 Email: madh.vr@icar.gov.in
<b>CSOs/NGOs/Experts/Fisher Representatives</b>			
15.	<b>N Parasuraman</b> 	<i>Personal Secretary to Chairman</i> M S Swaminathan Research Foundation 3 <sup>rd</sup> Cross Street, Taramani Chennai – 600 013 Tamil Nadu	Tel: + 91 22541229 Mobile: + 91 94440 24037 Email: raman@mssrf.res.in
16.	<b>S Velvizhi</b> 	<i>Principal Scientist</i> M S Swaminathan Research Foundation, Fish for All Research & Training Centre, Poompuhar, Kaveripattinam, Sirkazhi Taluk Nagapattinam – 609 105, Tamil Nadu	Mobile: + 91 94432 61799 Email: velvizhi@mssrf.res.in
17.	<b>Manas Roshan</b> 	<i>Programme Officer</i> International Collective in Support of Fishworkers (ICSF) Trust 22, First Floor, Venkatrathinam Nagar Adyar, Chennai – 600 020 Tamil Nadu	Tel: + 91 44 24451217 Mobile: + 91 9582006232 Email: manas.icsf@gmail.com
18.	<b>V Vivekanandan</b> 	<i>Secretary</i> Fisheries Management Resources Centre (fishMARC) N C Hospital Road, Thycaud Trivandrum – 695 014 Kerala	Mobile: + 91 96770 34670 Email: vivek@siffs.org
19.	<b>J K Patterson Edward</b> 	<i>Director</i> Suganthi Devadason Marine Research Institute 44 Beach Road Tuticorin – 628 001 Tamil Nadu	Tel: + 91 461 2323007 Mobile: + 91 94433 37172 Email: edwardjkpatterson@sdmri.in

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
20.	<b>Probir Banerjee</b> 	<i>President</i> PondyCAN 14, Marawadi Street Kuruchikuppam – 605 012 Puducherry	Mobile: + 91 98946 33929 Email: <a href="mailto:probirkbanerjee@gmail.com">probirkbanerjee@gmail.com</a>
21.	<b>M Muthuvel</b> 	<i>Proprietor</i> Auro Fish 47, Pachivazhiamman Kovil Street Vaithikuppam – 605 012 Puducherry	Mobile: + 91 9786147288 Email: <a href="mailto:muthutuna@gmail.com">muthutuna@gmail.com</a>
22.	<b>B Muthukumar</b> 	<i>Secretary</i> Chennai Gillnet Longline Tuna Boat Owner Royapuram Fishing Harbour Chennai – 600 013 Tamil Nadu	Mobile: + 91 9003151619 Email: <a href="mailto:bmuthukumaran@yahoo.co.in">bmuthukumaran@yahoo.co.in</a>
<b>Food &amp; Agriculture Organization of the United Nations</b>			
23.	<b>C M Muralidharan</b> 	<i>FAO Consultant</i> Bay of Bengal Large Marine Ecosystem Programme Flat No 13, 26, Asian Bharati Apts Bhavet Avenue, Kottur Chennai – 600 085, Tamil Nadu	Mobile; + 91 9840859888 Email: <a href="mailto:cmmuralidharan@gmail.com">cmmuralidharan@gmail.com</a>
<b>Bay of Bengal Programme Inter-Governmental Organisation</b>			
24.	<b>Y S Yadava</b> 	<i>Director &amp; Project Manager</i> World Bank Ocean Partnership for Sustainable Fisheries and Biodiversity Conservation – Bay of Bengal Project Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018, Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:yugraj.yadava@bobpigo.org">yugraj.yadava@bobpigo.org</a>
25.	<b>E Vivekanandan</b> 	<i>Consultant</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:e.vivekanandan@hotmail.com">e.vivekanandan@hotmail.com</a>
26.	<b>V Venkatesan</b> 	<i>Consultant</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:venkat15541@gmail.com">venkat15541@gmail.com</a>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
27.	<b>Rajdeep Mukherjee</b> 	<i>Policy Analyst</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:rmukherjee@bobpigo.org">rmukherjee@bobpigo.org</a>
28.	<b>S Jayaraj</b> 	<i>Publication Officer</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:s.jayaraj@bobpigo.org">s.jayaraj@bobpigo.org</a>
29.	<b>P Umakandan</b> 	<i>Consultant</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:pumakandan@bobpigo.org">pumakandan@bobpigo.org</a>
30.	<b>V Sreenivasan</b> 	<i>Administrative Officer</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:v.sreenivasan@bobpigo.org">v.sreenivasan@bobpigo.org</a>
31.	<b>Cheryl Verghese</b> 	<i>Secretary</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:v.cheryl@bobpigo.org">v.cheryl@bobpigo.org</a>
32.	<b>M Krishna Mohan</b> 	<i>Secretary</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:krishnamohan@bobpigo.org">krishnamohan@bobpigo.org</a>

**Annex 3**

**Stakeholder Consultations on BOBLME SAP Implementation Project Document Preparation: Andaman & Nicobar Islands**

**25 February 2019, Port Blair, Andaman & Nicobar Islands**

**List of Participants**

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
<b>Government of India</b>			
1.	<b>Sanjay Pandey</b> 	Assistant Commissioner ( <i>Fisheries</i> ) Department of Animal Husbandry Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare Room No. 337, Krishi Bhawan New Delhi – 110 001	Tel: + 91 11 23070370 Mobile: + 91 8683 34244 Email: <i>sajay_rpandey@yahoo.co.in</i>
<b>Fishery Survey of India</b>			
2.	<b>L Ramalingam</b> 	Deputy Director General ( <i>Fy.</i> ) Director General ( <i>IC</i> ) Fishery Survey of India New Fishing Jetty Sassoon Dock, Colaba Mumbai – 400 005 Maharashtra	Tel: + 91 22 22151866 Mobile: + 91 94449 85624 Email: <i>ramalingam.1961@yahoo.com</i>
3.	<b>Siju P Varghese</b> 	Senior Scientific Assistant Fishery Survey of India Opp PMB Building Near Phoenix Bay Jetty Port Blair Andaman & Nicobar Islands	Mobile: + 91 77364 37772 Email: <i>varghesefsi@hotmail.com</i>
4.	<b>Dewanand Eknath Uikey</b> 	Senior Scientific Assistant Fishery Survey of India Opp PMB Building Near Phoenix Bay Jetty Port Blair Andaman & Nicobar Islands	Mobile: + 91 97571 05280 Email: <i>dewanandfsi@gmail.com</i>
5.	<b>Nashad M</b> 	Senior Scientific Assistant Fishery Survey of India Opp PMB Building Near Phoenix Bay Jetty Port Blair Andaman & Nicobar Islands	Mobile: + 91 95319 11844 Email: <i>nashadfsi@gmail.com</i>
6.	<b>Pratyush Das</b> 	Jr. Fishing Gear Technologist Fishery Survey of India Opp PMB Building Near Phoenix Bay Jetty Port Blair Andaman & Nicobar Islands	Mobile: + 91 96795 34088 Email: <i>pratyush84@gmail.com</i>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
7.	<b>Balai Choudhury</b> 	<i>Lower Division Clerk</i> Fishery Survey of India Opp PMB Building Near Phoenix Bay Jetty Port Blair Andaman & Nicobar Islands	Mobile: + 91 99336 51936 Email: <a href="mailto:balaichoudhury@gmail.com">balaichoudhury@gmail.com</a>
<b>Zoological Survey of India</b>			
8.	<b>Bineesh K K</b> 	<i>Scientist – D</i> Zoological Survey of India Andaman & Nicobar Regiment Centre Port Blair Andaman & Nicobar Islands	Mobile: + 91 99467 70190 Email: <a href="mailto:kkbineesh@gmail.com">kkbineesh@gmail.com</a>
<b>Department of Fisheries, Government of UT of Andaman &amp; Nicobar Islands</b>			
9.	<b>Samir Krishna Talukdar</b> 	<i>Assistant Director of Fisheries</i> Department of Fisheries Mohanpura Port Blair Andaman & Nicobar Islands	Tel: + 91 3192 232770 Mobile: + 91 94742 41101 Email: <a href="mailto:samirktalukdar@gmail.com">samirktalukdar@gmail.com</a>
<b>CSOs/NGOs/Experts/Fisher Representatives</b>			
10.	<b>Sibnarayan Dam Roy</b> 	<i>Principal Scientist &amp; Former Director</i> ICAR-Central Island Agriculture Research Institute (CIARI) Port Blair Andaman & Nicobar Islands	Mobile: + 91 83480 01000 Email: <a href="mailto:sibnarayan@gmail.com">sibnarayan@gmail.com</a>
11.	<b>K Dharanirajan</b> 	<i>Assistant Professor</i> Department of Coastal Disaster Management Pondicherry University Brookshabed Campus Port Blair Andaman & Nicobar Islands	Email: <a href="mailto:dharanirajan@gmail.com">dharanirajan@gmail.com</a>
12.	<b>S Venu</b> 	<i>Assistant Professor</i> Department of Ocean Studies & Marine Biology Pondicherry University Campus Brookshabad Port Blair Andaman & Nicobar Islands	Tel: + 91 3192 262315 Mobile: + 99332 56866 Email: <a href="mailto:s.venu1974@gmail.com">s.venu1974@gmail.com</a>
13.	<b>Tanmay Wagh</b> 	<i>Senior Research Assistant</i> Andaman Nicobar Environment Team North Wandoor Port Blair Andaman & Nicobar Islands	Mobile: + 91 95319 08964 Email: <a href="mailto:twagh97@gmail.com">twagh97@gmail.com</a>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
14.	<b>Kartik Shanker</b> 	<i>Associate Professor</i> Centre for Ecological Sciences Indian Institute of Science Bangalore – 560 012 Karnataka	Mobile: + 91 99455 65935 Email: <a href="mailto:kshanker@gmail.com">kshanker@gmail.com</a>
15.	<b>Manas Roshan</b> 	<i>Programme Officer</i> International Collective in Support of Fishworkers (ICSF) Trust 22, First Floor, Venkatrathinam Nagar Adyar, Chennai – 600 020 Tamil Nadu	Tel: + 91 44 24451217 Mobile: + 91 95820 06232 Email: <a href="mailto:manas.icsf@gmail.com">manas.icsf@gmail.com</a>
16.	<b>Prasoon Ghosh</b> 	<i>Project Scientist</i> National Institute of Ocean Technology Dolyganj Port Blair Andaman & Nicobar Islands	Mobile: + 91 89022 09402
17.	<b>B Hema Raju</b> 	<i>General Secretary</i> Fishermen Welfare Association Port Blair Andaman & Nicobar Islands	Mobile: + 91 96795 02221
18.	<b>Mohamed H Jadwet</b> 	<i>President</i> Andaman Chamber of Commerce & Industry C/o Jadwet Trading Company Mohanpura, Port Blair Andaman & Nicobar Islands	Mobile: + 91 94342 80314 Email: <a href="mailto:mhjadwet@hotmail.com">mhjadwet@hotmail.com</a>
19.	<b>Abdul Majeed</b> 	<i>Secretary</i> Island Fisheries Coop Society Ltd. Port Blair Andaman & Nicobar Islands	Mobile: + 91 95318 74098
20.	<b>Zeenat Jadwet</b> 	<i>Partner</i> C/o Jadwet Trading Company Mohanpura Port Blair Andaman & Nicobar Islands	Tel: + 91 31922 32271
21.	<b>P Mohd Haneefa</b> 	<i>PRIs Member</i> Mannarghat Port Blair Andaman & Nicobar Islands	

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
22.	<b>B Arulseelvan</b> 	<i>Manager</i> Monsoon Fisheries Dhanikhari, Sippighat Post Port Blair Andaman & Nicobar Islands	Mobile: + 91 94760 04133 Email: <a href="mailto:arulseelanb@gmail.com">arulseelanb@gmail.com</a>
<b>Food &amp; Agriculture Organization of the United Nations</b>			
23.	<b>C M Muralidharan</b> 	<i>FAO Consultant</i> Bay of Bengal Large Marine Ecosystem Programme Flat No 13, 26 Asian Bharati Apts Bhavet Avenue, Kottur Chennai – 600 085, Tamil Nadu	Mobile; + 91 9840859888 Email: <a href="mailto:cmmuralidharan@gmail.com">cmmuralidharan@gmail.com</a>
<b>Bay of Bengal Programme Inter-Governmental Organisation</b>			
24.	<b>Y S Yadava</b> 	<i>Director &amp; Project Manager</i> World Bank Ocean Partnership for Sustainable Fisheries and Biodiversity Conservation – Bay of Bengal Project Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018, Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:yugraj.yadava@bobpigo.org">yugraj.yadava@bobpigo.org</a>
25.	<b>E Vivekanandan</b> 	<i>Consultant</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:e.vivekanandan@hotmail.com">e.vivekanandan@hotmail.com</a>
26.	<b>S Jayaraj</b> 	<i>Publication Officer</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:s.jayaraj@bobpigo.org">s.jayaraj@bobpigo.org</a>

**Annex 4**

**Stakeholder Consultations on BOBLME SAP Implementation Project Document  
Preparation: Andhra Pradesh**

**1 March 2019, Visakhapatnam, Andhra Pradesh**

**List of Participants**

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
<b>Government of India</b>			
1.	<b>I A Siddiqui</b> 	Assistant Commissioner ( <i>Fisheries</i> ) Department of Fisheries Ministry of Agriculture and Farmers Welfare Room No.- 479A, Krishi Bhavan New Delhi – 110 001	Tel: + 91 11 23097014 Fax: + 91 11 23070370 Mobile: + 91 9868553660 Email: ia.siddiqui@gov.in
<b>Fishery Survey of India</b>			
2.	<b>L Ramalingam</b> 	Deputy Director General ( <i>Fy.</i> ) Director General ( <i>IC</i> ) Fishery Survey of India New Fishing Jetty Sassoon Dock, Colaba Mumbai – 400 005 Maharashtra	Tel: + 91 22 22151866 Fax: + 91 22 22188221 Mobile: + 91 9444985624 Email: ramalingam.1961@yahoo.com
3.	<b>Annada Bhushan Kar</b> 	<i>Fisheries Scientist</i> Fishery Survey of India Beach Road Visakhapatnam – 530 001 Andhra Pradesh	Tel: + 91 8912502105 Mobile: + 91 8500864185 Email: akar51@yahoo.com
4.	<b>S K Pattnayak</b> 	Senior Scientific Assistant Fishery Survey of India Beach Road Visakhapatnam – 530 001 Andhra Pradesh	Tel: + 91 891 2502105 Mobile: + 91 8106162330 Email: sunubeta@gmail.com
5.	<b>K Silambarasan</b> 	Senior Scientific Assistant Fishery Survey of India Beach Road Visakhapatnam – 530 001 Andhra Pradesh	Mobile: + 91 9487521262 Email: silambuplankcon@hotmail.com
<b>Department of Fisheries, Government of Andhra Pradesh</b>			
6.	<b>T Sumalatha</b> 	Assistant Director of Fisheries O/o J D Fisheries Atchutapuram Visakhapatnam Andhra Pradesh	Mobile: + 91 9885863475 Email: tsumalatha68@gmail.com

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
7.	<b>K Sravani Kumari</b> 	<i>Fisheries Development Officer</i> O/o Fisheries Development Officer Atchutapuram Visakhapatnam Andhra Pradesh	Mobile: + 91 9573187941
8.	<b>P Srinivasa Rao</b> 	<i>Fisheries Development Officer</i> O/o Fisheries Development Officer Bheemili, Kotturu Bheemunipatnam Mandal Andhra Pradesh	Mobile: + 91 8143916878 Email: <a href="mailto:psraofdo2009@gmail.com">psraofdo2009@gmail.com</a>
<b><i>Andhra Pradesh Pollution Control Board, Government of Andhra Pradesh</i></b>			
9.	<b>R Lakshmi Narayana</b> 	<i>Environmental Engineer</i> A P Pollution Control Board Marripalem Visakhapatnam Andhra Pradesh	Mobile: + 91 98667 76722 Email: <a href="mailto:rovspappab@gmail.com">rovspappab@gmail.com</a>
<b><i>ICAR-Central Marine Fisheries Research Institute</i></b>			
10.	<b>Shubhadeep Ghosh</b> 	<i>Principal Scientist</i> Visakhapatnam RC of CMFRI Pandurangapuram Ocean View layout Visakhapatnam – 530 003 Andhra Pradesh	Tel: + 91 891 2543793 Fax: + 91 891 2543154 Mobile: + 91 9494572980 Email: <a href="mailto:subhadeep_1977@yahoo.com">subhadeep_1977@yahoo.com</a>
11.	<b>Muktha Menon</b> 	<i>Scientist</i> Visakhapatnam RC of CMFRI Pandurangapuram Ocean View layout Visakhapatnam – 530 003 Andhra Pradesh	Mobile: + 91 9553980916 Email: <a href="mailto:muktha.menon@icar.gov.in">muktha.menon@icar.gov.in</a>
12.	<b>Manas H M</b> 	<i>Scientist</i> Visakhapatnam RC of CMFRI Pandurangapuram Ocean View layout Visakhapatnam – 530 003 Andhra Pradesh	Tel: + 91 891 2543793 Mobile: + 91 8017770330 Email: <a href="mailto:manas.hm@icar.gov.in">manas.hm@icar.gov.in</a>
<b><i>ICAR-Central Institute of Fisheries Technology</i></b>			
13.	<b>Raghu Prakash</b> 	<i>Principal Scientist</i> Visakhapatnam Research Centre of CIFT Ocean View Layout Pandurangapuram Andhra University Post Visakhapatnam – 530 003 Andhra Pradesh	Tel: + 91 891 2567856 Mobile: + 91 9440608980 Email: <a href="mailto:drraghuprakash@hotmail.com">drraghuprakash@hotmail.com</a>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
<b>CSIR-National Institute of Oceanography</b>			
14.	<b>GPS Murthy</b> 	Senior Principal Scientist & Scientist-in-Charge Regional Centre, Visakhapatnam 176, Lawson's Bay Colony Visakhapatnam-530017 Andhra Pradesh	Tel: +91 891 2501730 Email: gpmurty@nio.org
<b>CSOs/NGOs/Experts/Fisher Representatives</b>			
15.	<b>G Gopalalakrishnan Murthy</b> 	Executive Director Academy of Gandhian Studies 18-3-61/3, Santhi Nagar, Khadi Colony K.T. Nagar Tirupathi – 517 501 Andhra Pradesh	Mobile: + 91 9849491225 Email: agr.tirupathi@gmail.com
16.	<b>G Prithviraj</b> 	Director Priyansh Fisheries Pvt Ltd 50-96-4/5, Seethammadhara North Extension Visakhapatnam – 530 013 Andhra Pradesh	Mobile: + 91 9490109396 Email: prithvirajg@gmail.com
17.	<b>Ravishankar Thupalli</b> 	Individual Consultant & State Project Co-ordinator UNDP GEF EGREE Project 206, Madhura Apartment Veterinary Hospital Road Kakinada – 533 004 Andhra Pradesh	Mobile: + 91 9441143019 Email: rthupalli@hotmail.com
18.	<b>P C Appa Rao</b> 	President Andhra Pradesh Mechanized Boats Association Fishing Harbour Visakhapatnam – 530 001 Andhra Pradesh	Tel: + 91 891 502522 Mobile: + 91 9290091248 Email: pcalao1@gmail.com
19.	<b>Surapathi Narasinga Rao</b> 	Secretary Andhra Pradesh Mechanized Boats Association 203, Pravilika Residency Meherapeta Visakhapatnam – 530 001 Andhra Pradesh	Mobile: + 91 9440326726 Email: surapathi.nara@gmail.com
20.	<b>Arjilli Dasu</b> 	Executive Secretary District Fishermens Youth Welfare Association 14-8-27/1A, Bhanojithota B C Road Gajuwaka Visakhapatnam – 530 026 Andhra Pradesh	Tel: + 91 891 2701228 Mobile: + 91 9849807388

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
21.	<b>K Srinivas Kumar</b> 	<i>Coordinator</i> Vikasa NGO 10-31-88/1, Opp. Sun School Bheemunipatnam Andhra Pradesh	Mobile: + 91 9494329124 Email: <a href="mailto:vikasamail@vikasaindia.in">vikasamail@vikasaindia.in</a>
22.	<b>P Usha</b> 	<i>Social Development Specialist</i> Center for Environment and Development LBS Nagar, Pipula Road Vijayawada Andhra Pradesh	Mobile: + 91 9705528498 Email: <a href="mailto:ushaundp@gmail.com">ushaundp@gmail.com</a>
23.	<b>Kasi Ramarao</b> 	<i>Fishermen</i> D No 5-4-149 17 <sup>th</sup> Ward, Jalari Peta Visakhapatnam Andhra Pradesh	Mobile: + 91 9502103209
24.	<b>T Jothi</b> 	<i>CBO</i> D No 5-4-143 17 <sup>th</sup> Ward, Jalari Peta Visakhapatnam Andhra Pradesh	Mobile: + 91 9246327761
25.	<b>V Prasad</b> 	<i>Treasurer</i> A P Mechanised Fishing Boat D No 17-11-6, Near Collector Office Visakhapatnam – 530 001 Andhra Pradesh	Mobile: + 91 9848643317
<b>Food &amp; Agriculture Organization of United Nations</b>			
26.	<b>Tomio Shichiri</b> 	<i>FAO Representative India</i> 55, Lodhi Rd, Lodhi Gardens Lodhi Estate New Delhi – 110 003	
27.	<b>C M Muralidharan</b> 	<i>FAO Consultant</i> Bay of Bengal Large Marine Ecosystem Programme Flat No 13, 26 Asian Bharati Apts Bhavet Avenue, Kottur Chennai – 600 085 Tamil Nadu	Mobile: + 91 9840859888 Email: <a href="mailto:cmmuralidharan@gmail.com">cmmuralidharan@gmail.com</a>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
<b>Bay of Bengal Programme Inter-Governmental Organisation</b>			
28.	<b>Y S Yadava</b> 	<i>Director &amp; Project Manager</i> World Bank Ocean Partnership for Sustainable Fisheries and Biodiversity Conservation – Bay of Bengal Project Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018, Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:yugraj.yadava@bobpigo.org">yugraj.yadava@bobpigo.org</a>
29.	<b>Rajdeep Mukherjee</b> 	<i>Policy Analyst</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:rmukherjee@bobpigo.org">rmukherjee@bobpigo.org</a>

**Annex 5**

**Stakeholder Consultations on BOBLME SAP Implementation Project Document Preparation: Odisha & West Bengal**

**04 March 2019, Barrackpore, Kolkata**

**List of Participants**

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
<b>Government of India</b>			
1.	<b>I A Siddiqui</b> 	Assistant Commissioner ( <i>Fisheries</i> ) Department of Animal Husbandry Dairying & Fisheries Ministry of Agriculture and Farmers Welfare Room No.- 479A, Krishi Bhavan New Delhi – 110 001	Tel: + 91 11 23097014 Fax: + 91 11 23070370 Mobile: + 91 9868553660 Email: ia.siddiqui@gov.in
<b>Fishery Survey of India</b>			
2.	<b>L Ramalingam</b> 	Deputy Director General ( <i>Fy.</i> ) Director General ( <i>IC</i> ) Fishery Survey of India New Fishing Jetty Sassoon Dock, Colaba Mumbai – 400 005, Maharashtra	Tel: + 91 22 22151866 Fax: + 91 22 22188221 Mobile: + 91 9444985624 Email: ramalingam.1961@yahoo.com
3.	<b>Annada Bhushan Kar</b> 	<i>Fisheries Scientist</i> Fishery Survey of India Beach Road Visakhapatnam – 530 001 Andhra Pradesh	Tel: + 91 8912502105 Mobile: + 91 8500864185 Email: akar51@yahoo.com
<b>Indian National Center for Ocean Information Services</b>			
4.	<b>Sourav Maity</b> 	Scientist ESSO - Indian National Centre for Ocean Information Services Ocean Valley Pragathi Nagar (BO) Near ALEAP Nizampet (SO) OPP:JNTU Road Hyderabad –500 090, Telangana	Tel: + 91 40 23886131 Mobile: + 91 8885016910
<b>Department of Fisheries, Government of Odisha</b>			
5.	<b>Surendra Kumar Ghadei</b> 	<i>District Fisheries Officer</i> AT Bhanjapur Baripada Post Mayurbhanj District Odisha	Mobile: + 91 9438375794 Email: mayurbhanjfisheries@gmail.com

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
<b>Department of Sundarbans Affairs, Government of West Bengal</b>			
6.	<b>Sanjay Saha</b> 	<i>Junior Project Officer</i> 82 A, Bakar Mahal Sadar Bazar, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 9007160431 Email: <a href="mailto:sahasanjay009@gmail.com">sahasanjay009@gmail.com</a>
<b>ICAR-Central Inland Fisheries Research Institute</b>			
7.	<b>Basanta Kumar Das</b> 	<i>Director</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 8420229567 Email: <a href="mailto:director.cifri@gmail.com">director.cifri@gmail.com</a>
8.	<b>Ranjan Kumar Manna</b> 	<i>Principal Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Tel: + 91 33 25920177 Mobile: + 91 9432114825 Email: <a href="mailto:rkmanna@yahoo.com">rkmanna@yahoo.com</a>
9.	<b>Bijay Kumar Behera</b> 	<i>Principal Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 9163209580 Email: <a href="mailto:beherabk18@yahoo.co.in">beherabk18@yahoo.co.in</a>
10.	<b>Arun Pandit</b> 	<i>Principal Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Tel: + 91 33 25921190 Mobile: + 91 9903136521 Email: <a href="mailto:arunpandit74@gmail.com">arunpandit74@gmail.com</a>
11.	<b>Archana Kanti Das</b> 	<i>Principal Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Tel: + 91 33 25921190 Mobile: + 91 9163775800 Email: <a href="mailto:archandas@yahoo.com">archandas@yahoo.com</a>
12.	<b>Himanshu Sekhar Swain</b> 	<i>Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 7077655889 Email: <a href="mailto:himanshufishco@gmail.com">himanshufishco@gmail.com</a>
13.	<b>Sukanya Som</b> 	<i>Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120, West Bengal	Mobile: + 91 8750198196 Email: <a href="mailto:suknehs@gmail.com">suknehs@gmail.com</a>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
14.	<b>Pranaya Kumar Paraida</b> 	<i>Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 8481094143 Email: <a href="mailto:pranayaparida@gmail.com">pranayaparida@gmail.com</a>
15.	<b>Amiya Kumar Sahoo</b> 	<i>Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 9674301441 Email: <a href="mailto:amiya7@gmail.com">amiya7@gmail.com</a>
16.	<b>V Santhana Kumar</b> 	<i>Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 9769278816 Email: <a href="mailto:sankumar1693@gmail.com">sankumar1693@gmail.com</a>
17.	<b>Piyashi Debroy</b> 	<i>Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 9892619978 Email: <a href="mailto:piyashi.debroy@gmail.com">piyashi.debroy@gmail.com</a>
18.	<b>Manoharmayum Shaya Devi</b> 	<i>Scientist</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 8767736321 Email: <a href="mailto:shayamanohar21@gmail.com">shayamanohar21@gmail.com</a>
19.	<b>C M Roshith</b> 	<i>Scientist</i> Riverine Ecology and Fisheries Division ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120, West Bengal	Mobile: + 91 8420902509 Email: <a href="mailto:roshithcmcifri@gmail.com">roshithcmcifri@gmail.com</a>
20.	<b>Thangjam Nirupada Chanu</b> 	<i>Scientist</i> Riverine Ecology and Fisheries Division ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120, West Bengal	Tel: + 91 33 25921190 Mobile: + 91 7044343191 Email: <a href="mailto:nirupada@gmail.com">nirupada@gmail.com</a>
21.	<b>Sanjeev Sen Ghudei</b> 	<i>Young Professional – 1</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120, West Bengal	Mobile: +91 8249057291 Email: <a href="mailto:sensanjeev752@gmail.com">sensanjeev752@gmail.com</a>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
22.	<b>Atanu Das</b> 	<i>Technical Officer</i> ICAR- Central Inland Fisheries Research Institute Manirampore, Barrackpore Kolkata – 700 120 West Bengal	Mobile: + 91 9674799878 Email: <a href="mailto:alanudas1962@gmail.com">alanudas1962@gmail.com</a>
<b>ICAR-Central Marine Fisheries Research Institute</b>			
23.	<b>Gyanranjan Dash</b> 	<i>Scientist</i> In-Charge of Digha Research Centre of CMFRI 14, Mile, Near BenFish Ramnagar – 721 441 West Bengal	Tel: + 91 3220 264050 Fax: + 91 3220 264040 Mobile: + 91 7405360923 Email: <a href="mailto:gyanranjandashcmfri@gmail.com">gyanranjandashcmfri@gmail.com</a>
24.	<b>Subal Kumar Roul</b> 	<i>Scientist &amp; Scientist-in-Charge</i> Puri Field Centre ICAR-Central Marine Fisheries Research Institute Inside District Fisheries Campus Puri – 752 002, Odisha	Tel: + 91 6752 222625 Fax: + 91 6752 297944 Mobile: + 91 9699417678
<b>Central Institute of Fisheries Technology</b>			
25.	<b>U Sreedhar</b> 	<i>Principal Scientist</i> ICAR-CIFT Ocean View Layout, Pandurangapuram Visakhapatnam – 530 003 Andhra Pradesh	Tel: + 91 891 2567856 Fax: + 91 891 2567040 Mobile: + 91 9966427608 Email: <a href="mailto:sreedharcift@gmail.com">sreedharcift@gmail.com</a>
<b>CSOs/NGOs/Experts/Fisher Representatives</b>			
26.	<b>B C Jha</b> 	<i>Former Head</i> Reservoir & Wetland Mailryee Aparment, B T Road Talpukur, Barrackpore Kolkata – 700 123 West Bengal	Mobile: + 91 9903115775 Email: <a href="mailto:jhabc1961@gmail.com">jhabc1961@gmail.com</a>
27.	<b>Pooja Moitra</b> 	<i>Programme Officer</i> Research and Documentation Food Sovereignty Network South Asia 195, Jodhpur Park Kolkata – 700 068 West Bengal	Tel: + 91 33 24732740 Mobile: + 91 8617299908 Email: <a href="mailto:poojaimse@gmail.com">poojaimse@gmail.com</a>
28.	<b>Milan Das</b> 	<i>General Secretary</i> Dakshinbanga Matsyajibi Forum Ramrampur (Halderpara) South 24 Parganas – 743 331 West Bengal	Mobile: + 91 9800266265 Email: <a href="mailto:mdas1640@gmail.com">mdas1640@gmail.com</a>
29.	<b>Manas Roshan</b> 	<i>Programme Officer</i> International Collective in Support of Fishworkers (ICSF) Trust 22, First Floor, Venkatrathinam Nagar Adyar, Chennai – 600 020 Tamil Nadu	Tel: + 91 44 24451217 Mobile: + 91 9582006232 Email: <a href="mailto:manas.icsf@gmail.com">manas.icsf@gmail.com</a>

#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
30.	<b>Mangaraj Panda</b> 	<i>Secretary</i> United Artist' Association Raula Street Ganjam District – 761 026 Odisha	Tel: + 91 65811254314 Mobile: + 91 9437064314 Email: uaaorissa@gmail.com
31.	<b>Pradip Kumar Chatterjee</b> 	<i>Convener</i> National Platform for Small-Scale Fish Workers (Inland) 20/4, Sil Lane Kolkata – 700 015 West Bengal	Tel: + 91 33 23283989 Mobile: + 91 9874432773
32.	<b>Mukul Kumar Das</b> 	<i>Fisherman</i> Vill + Post Dhablat Shibpur P.S – Gangasagar Coastal South 24 Parganas – 743 373 West Bengal	Mobile: + 91 8343076158 Email: mukuldas275@gmail.com
33.	<b>Souvik Nath</b> 	<i>Fisherman</i> Vill + Post – Sagar Krishna Nagar P S Sagar South 24 Parganas – 743 373 West Bengal	Mobile: + 91 7602509347 Email: souvikknath001998@gmail.com
34.	<b>Soumitra Nath</b> 	<i>Fisherman</i> Vill + Post Sagar Krishna Nagar P S Sagar South 24 Parganas – 743 373 West Bengal	Mobile: + 91 7063501412 Email: mathsoumitra0098@gmail.com

#### **Food & Agriculture Organization of United Nations**

35.	<b>C M Muralidharan</b> 	<i>FAO Consultant</i> Bay of Bengal Large Marine Ecosystem Programme Flat No 13, 26 Asian Bharati Apts Bhavet Avenue, Kottur Chennai – 600 085 Tamil Nadu	Mobile: + 91 9840859888 Email: cmmuralidharan@gmail.com
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#### **Bay of Bengal Programme Inter-Governmental Organisation**

36.	<b>Y S Yadava</b> 	<i>Director &amp; Project Manager</i> World Bank Ocean Partnership for Sustainable Fisheries and Biodiversity Conservation – Bay of Bengal Project Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018, Tamil Nadu	Tel: + 91 44 24936188 Email: yugraj.yadava@bobpigo.org
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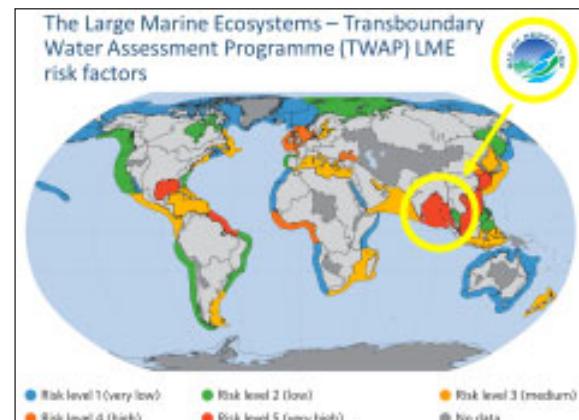
#	NAME	POSITION & ADDRESS	TEL, MOBILE, EMAIL
37.	<b>E Vivekanandan</b> 	<i>Consultant</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:e.vivekanandan@hotmail.com">e.vivekanandan@hotmail.com</a>
38.	<b>Rajdeep Mukherjee</b> 	<i>Policy Analyst</i> Bay of Bengal Programme Inter - Governmental Organisation 91, St Mary's Road, Abhiramapuram Chennai – 600 018 Tamil Nadu	Tel: + 91 44 24936188 Email: <a href="mailto:rmukherjee@bobpigo.org">rmukherjee@bobpigo.org</a>

## **Technical presentation 1: Brief of BOBLME Phase 1 and SAP (Indian Context)**

**C M Muralidharan**  
FAO Consultant



**The Bay of Bengal Large Marine Ecosystem Project**  
**Phase 1 and SAP outcome**



**Some features of BOBLME (as on 2015)**

- The Bay of Bengal number of countries- 8
- Combined coastal population- 185 million
- Number of fishers - 3.7 million
- Number of boats-415 000
- Annual catch- 6 million tonnes /US\$ 4 billion
- Marine and coastal ecosystem (marketable) services in the BOBLME are estimated to be worth over -US\$ 72 billion a year
  - Aquaculture US\$ 9.4 billion
  - Fisheries US\$ 32.4 billion
  - Tourism US\$ 18.7 billion
  - Others US\$ 11.79



**BOBLME Phase 1 focused on the followings**

- Increasing capacity in natural resources management;
- Increasing knowledge about the ecosystem;
- Developing indicators for tracking changes; and
- Starting to improve ecosystem health through transboundary demonstration activities.

**Two major outputs**

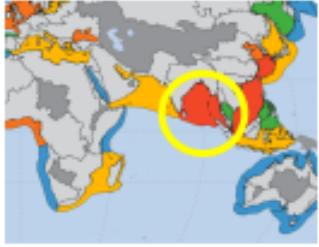
**A Transboundary Diagnostic Analysis – TDA**

- Review and analysis of the major transboundary issues and their causes

**A Strategic Action Programme – SAP**

- A [strategic action] plan for addressing the major transboundary issues and their causes

**Bay of Bengal Large Marine Ecosystem**



The TDA identified the following three major threats:

- Over-exploitation of fish stocks
- Habitat degradation
- Pollution

**BOBLME Phase 1 Key Achievements - India**



**Science for Fisheries Management (1/2)**

- Hilsa (ilish) stock assessment, resource status analysis and management recommendations (CIFRI, India; Bangladesh; Myanmar)
- Indian mackerel genetic stock structure analysis and fisheries biology (all countries; lead by CMFRI and NBGFR, India)
- Draft National Plan of Action (NPOA) for sharks and rays (with BOBP-IGO)
- Development of Draft RPOA Sharks (for BOBLME)

**BOBLME Phase 1 Key Achievements - India**



**Science for Fisheries Management (2/2)**

- Study on conservation and management of sea cucumber and seahorse (with CMFRI)
- Assessing performance of fisheries management (with SAUP UBC)
- Review of impacts of Illegal, Unregulated and Unreported (IUU) fishing (all countries)

**BOBLME Phase 1 Key Achievements - India**



**Science for Ecosystem and Environment (1/2)**

- Exploratory ecosystem model for the Bay of Bengal (with CMFRI)
- Ecosystem characterization for the Bay of Bengal and the west coast of India (with NIO)
- Economic valuation of Ecosystem Services of BOBLME
- Marine Protected Area atlas and database for the Bay of Bengal (with WorldFish)

**BOBLME Phase 1 Key Achievements - India**



**Science for Ecosystem and Environment (2/2)**

- Review of Coastal Pollution Loading and Water Quality Criteria for the Bay of Bengal coast of India (with NCSCM)
- Nutrient loading and eutrophication study for the western part of the Bay of Bengal (with SACEP)
- Chilika Lake ecosystem health report card (with CDA, NCSCM, and UNEP)
- Real time data provision on ocean acidification through deployment of sensor on existing data buoy (with NIOT and NOAA)

**BOBLME Phase 1 Key Achievements - India**



**Capacity development and improved governance**

- Capacity development on Ecosystem Approach to Fisheries Management (EAFM) with partners
- Gulf of Mannar dialogue between India and Sri Lanka (with BOBP-IGO)
- Mainstreaming Ocean Research for Ocean and Resource Management - MORFORM (with FSI)
- National Consultation on Andaman Sea Studies and Island Sustainability (with FSI)
- Initiatives on Integrated Coastal Resource Management in Puducherry (with FSI and CSE)

**BOBLME Phase 1 Key Achievements - India**



- Capacity development and improved governance
  - Science communication training (with IUCN-MFF and MBAI)
  - Empowerment of fisher community members (with ICSE) with focus on EAFM
  - Promotion of small scale fisheries guidelines (VG-SSF)
  - Training on Code of Conduct for Responsible Fisheries (with BOBP-IGO)
- Participation in regional reviews, studies, workshops and trainings

**BOBLME STRATEGIC ACTION PROGRAMME (SAP)**




## Overall Strategic Action Programmes (SAP) Vision:

***"A healthy ecosystem and sustainable use of marine living resources for the benefit of the people and countries of the Bay of Bengal LME"***



Theme 1: Marine living resources	Theme 2: Critical habitats	Theme 3: Water quality	Theme 4: Social and economic considerations
ECOSYSTEM QUALITY OBJECTIVE	ECOSYSTEM QUALITY OBJECTIVE	ECOSYSTEM QUALITY OBJECTIVE	ECOSYSTEM QUALITY OBJECTIVE
Fisheries and other living marine resources have been developed and are managed sustainably	Vulnerable and critical habitats are developed, conserved and maintained	Coastal and marine pollution and water quality are controlled to meet agreed standards for human and ecosystem health	Social and economic constraints are addressed, leading to increased resilience and empowerment of coastal people
OBJECTIVES	OBJECTIVES	OBJECTIVES	OBJECTIVES
<ul style="list-style-type: none"> <li>1. Develop fishery resources for present and posterity</li> <li>2. Develop and maintain species composition and biodiversity of fishery and non-fishery resources</li> <li>3. Develop marine ecosystem for sustained biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>1. Protect, manage and restore mangrove and seagrass habitats to increase its coverage and improve biodiversity</li> <li>2. Sustainably manage existing coral reef ecosystems, habitats and associated biodiversity, and prevent destructive activities</li> </ul>	<ul style="list-style-type: none"> <li>1. Restrict the discharge of untreated sewage, waste water, solid waste and litter into rivers, coastal and marine waters</li> <li>2. Balance use of nutrients to reduce and control nutrient loading into coastal waters</li> </ul>	<ul style="list-style-type: none"> <li>1. Reduce vulnerability to natural hazards, climate variability and climate change, and increase climate resilience</li> <li>2. Improve the living and working conditions of coastal fishing communities</li> <li>3. Empower coastal people to participate in and benefit from sustainable development practice</li> </ul>

### Theme 1: Marine living resources



#### ECOSYSTEM QUALITY OBJECTIVE

Fisheries and other living marine resources have been developed and are managed sustainably

#### OBJECTIVES

- Develop fishery resources for present and posterity
- Develop and maintain species composition and biodiversity of fishery and non-fishery resources
- Develop marine ecosystem for sustained biodiversity

### Theme 2: Critical habitats



#### ECOSYSTEM QUALITY OBJECTIVE

Vulnerable and critical habitats are developed, conserved and maintained

#### OBJECTIVES

- Protect, manage and restore mangrove and seagrass habitats to increase its coverage and improve biodiversity
- Sustainably manage existing coral reef ecosystems, habitats and associated biodiversity, and prevent destructive activities

### Theme 3: Water quality



#### ECOSYSTEM QUALITY OBJECTIVE

Coastal and marine pollution and water quality are controlled to meet agreed standards for human and ecosystem health

#### OBJECTIVES

- Restrict the discharge of untreated sewage, waste water, solid waste and litter into rivers, coastal and marine waters
- Balance use of nutrients to reduce and control nutrient loading into coastal waters

### Theme 4: Social and economic considerations



#### ECOSYSTEM QUALITY OBJECTIVE :

Social and economic constraints are addressed, leading to increased resilience and empowerment of coastal people

#### OBJECTIVES

- Reduce vulnerability to natural hazards, climate variability and climate change, and increase climate resilience
- Improve the living and working conditions of coastal fishing communities
- Empower coastal people to participate in and benefit from sustainable development practice

Thank You



[www.boblme.org](http://www.boblme.org)

## **Technical presentation 2: Proposed areas of intervention during BOBLME Phase 2 (SAP Implementation)**

**Y S Yadava**  
BOBP-IGO

### **Proposed areas of intervention during BOBLME Phase 2 (SAP Implementation)**

Presentation prepared for the Stakeholder Consultations on BOBLME SAP Implementation Project Document Preparation

#### **The Bay of Bengal Large Marine Ecosystem Programme (BOBLME) – Phase 2**



### **Regional and National partners of BOBLME Phase 2**

#### **Regional executing partners**

- BOBP-IGO
- SEAFDEC
- IUCN/MFF
- UN Environment (e.g. COBSEA, GPA)
- UNIDO
- APFIC

#### **National executing partners**

- Ministries of Fisheries and Agriculture, Ministries of Environment, and other national agencies.

#### **Other stakeholders**

- Civil Society Organizations
- Private sector

### **The BOBLME Programme Framework Document (PFD) is designed to implement the SAP**

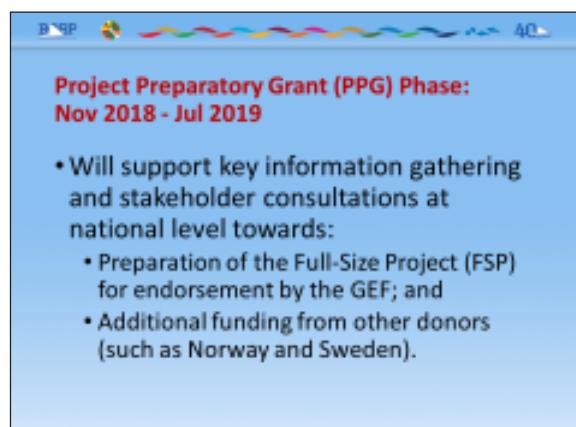
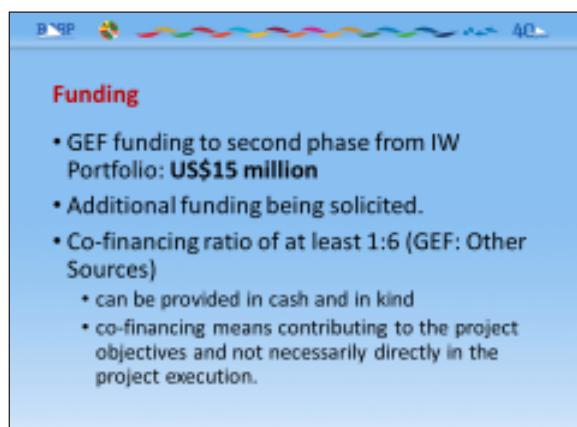
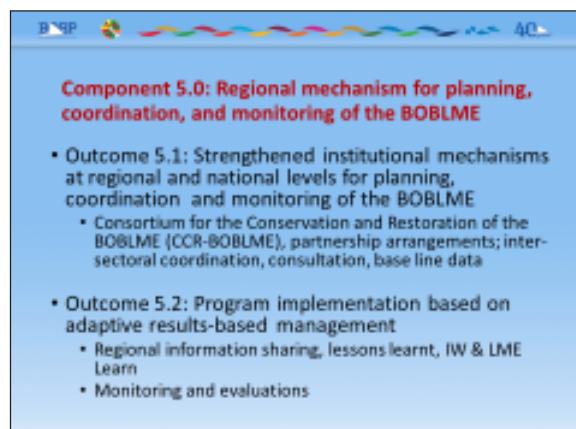
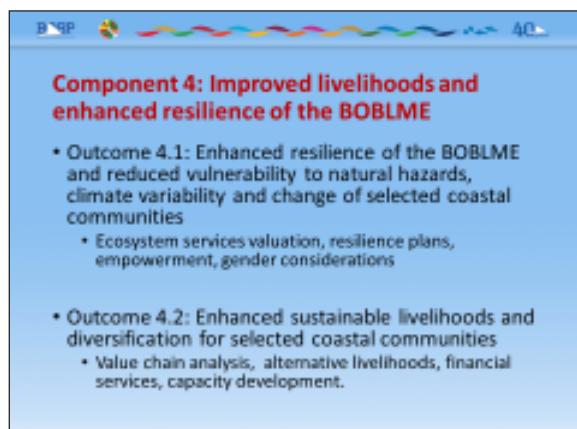
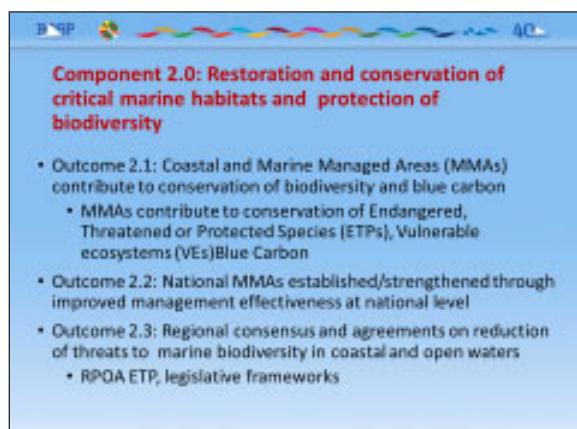
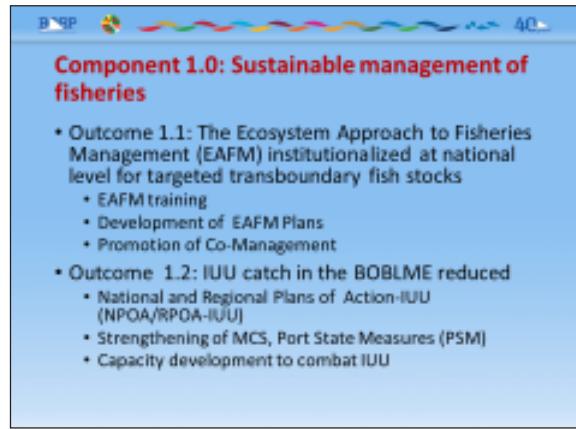
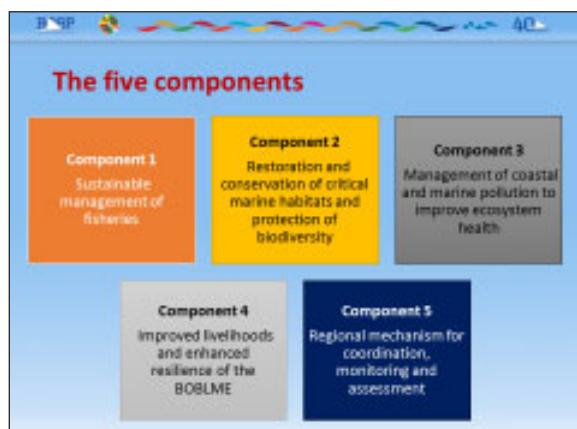
- It is based on the priority areas identified under each SAP theme
- Importantly, it will work at both national and decentralized levels, with a regional component
- Further, it will allow flexibility on identification of activities to be undertaken at national/local-levels.  
Examples:
  - Local demonstrations/pilots for action on the ground as a basis for national/local impacts
  - Processes to inform national policy for more effective management coupled with regional cooperation and consensus building.

### **How the Programme Framework will function**

- The main umbrella programme and its resourcing is identified in the PFD.
- Projects will be developed within this framework, using the available resources.
- Additional "child" projects could be added to the Programme at a later stage, if resourcing and co-financing is identified/available – Examples:
  - STAR by GEF (Biodiversity/Climate Change)
  - Loan from Funding Agencies (World Bank, NDB, ADB projects)
  - Donor/NGO/philanthropic organizations

### **From SAP to PFD**

- SAP has four thematic areas (Marine living resources, Critical habitats, Water quality, Social and economic considerations).
- In the PFD, Regional Coordination is also added as a thematic area, highlighting its importance.
- The Thematic areas of SAP are defined as Components in the PFD for better programme planning.



BSP 40

**Activities under Project Preparatory Grant (PPG) Phase: Nov 2018 - Jul 2019**

- PPG Inception Workshop (MAR 2019)
- First PSC meeting to endorse PPG work plan (MAR 2019)
- Sub-regional consultation workshops (one each with BOBP-IGO and SEAFDEC) (TBD)
- National PPG consultation workshops (at least 2 per country) (On-Going)
- State level consultations for India (On-Going).
- Regional PPG Project Document Validation Meeting (TBD)
- Second PSC meeting to endorse the project document (Before JUL 2019)
- Regional donor and partner dialogue meetings (IUCN, ADB, Sweden, Norway, USAID, SEAFDEC, BOBPIGO, COBSEA/UNEP).



# Thanks!

## Consultation-wise Results from Group Discussions

**BOBLME SAP Implementation Project Document Preparation Preparation**  
**Group Discussions: Local-specific intervention priorities and possibilities of cooperation/co-finance on the four thematic areas of BOBLME SAP**

**Tamil Nadu & Puducherry, 22 February 2019, Chennai**

Group	Themes	Topics	Policies/ Programmes in place	Existing implementation mechanism and options for improvement	Expected Outputs	Scope of collaboration & coordination for implementation of BOBLME SAP
I	<b>Fisheries</b>	<b>Marine Living Resources</b>	<ul style="list-style-type: none"> <li>National Policy on Marine Fisheries, 2017 (NPMF, 2017).</li> <li>Management program under FIMISUL-II).</li> <li>Program on co-management.</li> </ul>	<ul style="list-style-type: none"> <li>Only some aspects covered in State and National plans.</li> <li>No specific requirement in NPMF, 2017.</li> <li>Programs exist.</li> </ul>		<p>BOBLME assistance is required on:</p> <ul style="list-style-type: none"> <li>Policy formulation</li> <li>Implementation mechanism</li> <li>Building capacity at different levels of stakeholders.</li> </ul>
		<b>Socio-economic Considerations</b>	<ul style="list-style-type: none"> <li>National Disaster Management Authority (NDMA) – Only some aspects covered in State and National plans.</li> <li>No specific requirement in NPMF, 2017.</li> <li>Some programs exist.</li> </ul>	<ul style="list-style-type: none"> <li>Drills for evacuation conducted at district level.</li> <li>Safer plans required.</li> <li>Integrated Coastal Zone Management Plans (ICZMP) in some States have provisions to address coastal vulnerability.</li> </ul>	<p>Vulnerability (Hazard/Climate Change)</p> <ul style="list-style-type: none"> <li>BOBLME may commission studies on hazards and climate change at sectoral level for fisheries and bring together scientists, fishery managers and other stakeholders at national level.</li> <li>BOBLME may commission vulnerability analysis-hazard wise and context specific.</li> <li>Mainstream these studies into plans.</li> </ul>	<p>Education should be linked to jobs- Women and educated youth need livelihood options.</p> <p>NPMF, 2017 speaks about alternative livelihoods -culture fisheries, value addition, etc. In most States, there is no specific</p> <p>BOBLME Pilot Project – enhance livelihoods. Example: Conduct studies women and value addition.</p>

Group	Themes	Topics	Expected Outputs		
			Policies/ Programmes in place	Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
			policy. However, Tamil Nadu (TN) and Puducherry (PU) have included programs under FIMSUL (e.g. on aquaculture/mariculture)	--	--
	<b>Water Quality</b> 1. Promotion of Cleaner Fishing Harbour	Recommendations in NPMF, 2017. Sanitation in Fishing Harbours (FHs) and Fish Landing Centres (FLCs). Guidelines on FH Management. In TN, Local Committees formed for management of FHs.	Standards by the Marine Products Export Development Authority (MPEDA). • Export incentives for clean FHs. • Standard Operating Practices (SOPs) required. Such mechanisms established in FH at Dhamra in Odisha.	<ul style="list-style-type: none"> <li>BOBLME can build capacities of fishers, managers operating the FHs and FLCs.</li> <li>BOBP Harbour Guidelines may be revised to make them contemporary.</li> </ul>	
II	<b>Environment</b>	<b>Critical Habitats</b> 1. Contributions of Marine Protected Areas (MPA)/Marine Managed Areas (MMA) to Biodiversity Conservation and Blue Carbon.	<ul style="list-style-type: none"> <li>Environment (Protection) Act, 1986.</li> <li>CRZ Notification, 2011 &amp; 2019.</li> <li>Wild Life (Protection) Act, 1972 (WPA, 1972).</li> <li>Wetlands (Conservation and Management) Rules, 2017.</li> <li>National Bio-diversity Act, 2002.</li> <li>State Marine Fisheries Regulation Act.</li> <li>FAO 1995 Code of Conduct for Responsible Fisheries.</li> <li>Coastal Aquaculture Authority Act, 2005.</li> <li>Tamil Nadu Biodiversity Conservation and Greening Project (TBGP).</li> </ul>	<ul style="list-style-type: none"> <li>Holistic approach required for coordination of policies and Departments.</li> <li>Need elaborate and extensive discussions on options for integrating and improvement of existing policies.</li> </ul>	<ul style="list-style-type: none"> <li>Collaboration with individual experts from various fields, including local communities.</li> <li>Habitat restoration.</li> </ul>
		2. Strengthening Management Effectiveness of MPAs/MMAs.	--	<ul style="list-style-type: none"> <li>Creating coastal stewardship.</li> <li>Sensitization.</li> <li>Awareness Creation.</li> <li>Capacity Building.</li> </ul>	<ul style="list-style-type: none"> <li>State Biodiversity Board will carry out resource mapping using participatory approach.</li> <li>Co-management of critically</li> </ul>

Group Themes	Topics	Policies/ Programmes in place	Expected Outputs	
			Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
	--	--	--	vulnerable coastal area- restoration of beach and ecosystem. • Capacity Building of: <ul style="list-style-type: none"><li>- Bureaucrats, Policy Makers;</li><li>- Coastal communities – Youth;</li><li>• Involvement of National Cadet Corps, National Social Service, National Green Corps;</li><li>• Eco Development Committees (EDC);</li></ul>
6. Regional Consensus on Reduction of Threats to Marine Biodiversity	UNDP – GEF Project on Biodiversity Conservation of Gulf of Mannar	--	--	Revival of completed programs also with funding support of 'BOBLME' for sustainability (UNDP/GEF).
<b>Water Quality</b>	1. Reduced Impact on Coastal and Marine Waters from Land-based Pollution.  2. Promotion of Cleaner Fishing Harbour	CoMAPS Seawater Quality Monitoring. National Coastal Mission. ICZM Project and National Action Plan on Climate Change.  Solid Waste Management Rules, 2016 (SWM, 2016) to be implemented to safeguard coastal villages.	Decentralized treatment system. • Regulation of plastics. • Solid Waste Management Rules, 2016 (SWM, 2016) to be implemented to safeguard coastal villages. • Awareness, & Monitoring. Engagement of youth, of domestic/sewage discharge.	• Recreation/Sports Activity Involving youth in monitoring and restoration activities to be a part of cleaning activity. • Establishment Effluent Treatment Plant in FHs. • Solid Waste Management. • Control and monitoring of release --

**Andaman & Nicobar Islands, 25 February 2019, Port Blair**

Group Themes	Topics	Policies/ Programmes in place	Expected Outputs	Scope of collaboration & coordination for implementation of BOBLME SAP
			Existing implementation mechanism and options for improvement	
<b>I</b>	<b>Fisheries</b>	<b>Marine Living Resources</b> 1. Ecosystem Approach to Fisheries Management	<ul style="list-style-type: none"> <li>Implementation of EAFM in NPMF, 2017.</li> <li>No proper policy document on fishery management and EAFM.</li> <li>Potential Fishing Zone (PFZ) predictions are provided.</li> </ul>	<ul style="list-style-type: none"> <li>MPAs have been set up.</li> <li>Closed seasons implemented.</li> <li>Mesh size regulations followed.</li> <li>A&amp;N policy on fisheries is being drafted.</li> <li>Capacity building undertaken.</li> </ul>
	2. IUU Fishing		<ul style="list-style-type: none"> <li>A&amp;N Marine Fishing Regulation Act (MFRA) addresses IUU fishing. However, no specific policy on IUU in the A&amp;N Islands. Other legal instruments include: Maritime Zones of India (MZI) Act, 1981.</li> <li>Wild Life (Protection) Act, 1972</li> <li>Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).</li> <li>Convention on Migratory Species (CMS).</li> </ul>	<ul style="list-style-type: none"> <li>IUU is addressed through MFRA and for foreign fishing vessels by the MZI Act.</li> <li>Weak implementation and reporting mechanism.</li> <li>Geo fencing of FLCs.</li> <li>Strengthening of DoF Staff.</li> <li>Improvement in MCS</li> <li>Bio-metric id cards for all fishermen.</li> <li>Need better coordination.</li> </ul>
	<b>Socio-economic Considerations</b> 1. Vulnerability Reduction to Natural Hazards and Climate Change.		<ul style="list-style-type: none"> <li>Policies and Guidelines of NDMA and State Disaster Management Authority (SDMA) are in place for handling natural hazards.</li> <li>Study/data available on climate change impacts.</li> <li>Early Warning System is in place.</li> </ul>	<ul style="list-style-type: none"> <li>Technology upgradation in dissemination of early warning to fisher (NAVIC, etc.).</li> <li>Proper coordination amongst different Departments (Fisheries, Forestry, Coast Guard) to protect fishers.</li> <li>Training &amp; Awareness programmes for fishers, stakeholders.</li> <li>Best available practices to be shared with fisher members.</li> </ul>

Group	Themes	Topics	Policies/ Programmes in place	Expected Outputs	
				Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
			<ul style="list-style-type: none"> <li>PFZ information was provided earlier, now stopped.</li> </ul>	<ul style="list-style-type: none"> <li>Improved communication equipment for fishers.</li> <li>Port based tracking of fishing vessel movements.</li> </ul>	Pilot-scale models on: Eco and fishery tourism, sports fishing, fish food parks, and training & capacity building.
		2. Livelihoods Enhancement and Diversification.	<ul style="list-style-type: none"> <li>Guidelines on sports fishing in A&amp;N notified.</li> <li>NPMF, 2017 includes Catch, Photograph and Release (CPR), game fishing and Fishery Tourism.</li> </ul>	<p>Sports fishing initiated. CPR, Fishery Tourism to be promoted.</p> <ul style="list-style-type: none"> <li>Poor conditions of FLCs/FHs in terms of construction and management.</li> <li>No STP discharge facilities.</li> <li>Inadequate supply of clean water.</li> <li>Improvements in post-harvest management.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration of pilot-scale models.</li> <li>Training and exposure of stakeholders.</li> <li>Formulation of SOPs through stakeholder consultation.</li> <li>Technical help in FLCs planning.</li> </ul>
<b>II</b>	<b>Environment</b>	<b>Critical Habitats</b>	<p>1. Contributions of MPA/MMA to Biodiversity Conservation and Blue Carbon</p> <ul style="list-style-type: none"> <li>MPA set up under WPA, 1972.</li> <li>Environment (Protection) Act, 1986.</li> <li>ORZ Notification, 1991 &amp; 2019.</li> <li>International Instruments <ul style="list-style-type: none"> <li>- United Nations Convention on the Law of the Sea (UNCLOS), CITES, etc.</li> </ul> </li> </ul>	<p>No analyses on outcomes of setting up of MPAs.</p> <ul style="list-style-type: none"> <li>No awareness amongst stakeholders.</li> <li>Compliance and monitoring limited.</li> </ul>	<ul style="list-style-type: none"> <li>Technical assistance in identification of indicators for effective management.</li> <li>Facilitation in organising multi-stakeholder dialogue.</li> <li>Data and knowledge sharing.</li> </ul>
		2. Strengthening Management Effectiveness of MPAs/MMAs	Policies already in Place - Policies to promote co-management	<ul style="list-style-type: none"> <li>Engage communities to co-manage protected areas and in identification of new areas.</li> <li>Share info/data.</li> <li>Build capacity of stakeholders by providing easily accessible information.</li> </ul>	Develop 1 or 2 management Plans to serve as model for other areas.

Group	Themes	Topics	Expected Outputs		
			Policies/ Programmes in place	Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
		3. Regional Consensus on Reduction of Threats to Marine Biodiversity	- UNCLOS - CBD - CITES - Regional bodies like the Indian Ocean Tuna Commission (IOTC)	<ul style="list-style-type: none"> <li>Intervene on demand.</li> <li>Stop illegal wildlife trade or market- driven exploitation</li> <li>Surveillance by Coast Guard/ Navy against IUU.</li> </ul>	<ul style="list-style-type: none"> <li>Forum for multi-stakeholder consultations.</li> <li>Facilitate knowledge sharing.</li> </ul>
		<b>Water Quality</b> 1. Reduced Impact on Coastal and Marine Waters from Land-based Pollution	<b>Land-Based Pollution</b> Rules of Central Pollution Control Board (CPCB) to be implemented. The Port Blair Municipal Committee to ban use of plastics and also implement the ban effectively.	<ul style="list-style-type: none"> <li>Identify sources and set up sewage treatment plants.</li> <li>Regulate waste from vessels.</li> <li>Work out the carrying capacity for tourism.</li> </ul>	<p><b>Land-based pollution</b></p> <ul style="list-style-type: none"> <li>Pilot project for SWM, sustainable practices.</li> <li>Highlight innovation.</li> </ul>
		2. Promotion of Cleaner Fishing Harbour	Swachh Bharat Programmes to be implemented by DoF through schemes of National Fisheries Development Board.	Active role play by DoF to provide adequate storage facilities, waste processing and community-based monitoring.	Pilot programmes for sustainable practices in fish handling and food safety. Share best practices and implement score cards.

*Andhra Pradesh, 1 March 2019, Vishakapatnam*

Group Themes	Topics	Policies/ Programmes in place	Expected Outputs	Scope of collaboration & coordination for implementation of BOBLME SAP
			Existing implementation mechanism and options for improvement	
I	<b>Fisheries</b>	<b>Marine Living Resources</b> <ul style="list-style-type: none"> <li>1. Ecosystem Approach to Fisheries Management</li> </ul> <ul style="list-style-type: none"> <li>• EAFM Plans.</li> <li>• NPMF, 2017.</li> <li>• Andhra Pradesh MFR Act, 1995.</li> <li>• WPA, 1972.</li> <li>• Aqua Zonation Policy of Andhra Pradesh, 2018-19.</li> <li>• Environmental Protection Act, 1986.</li> <li>• National Biodiversity Act, 2002.</li> </ul> <b>2. Illegal, Unreported and Unregulated Fishing</b> <ul style="list-style-type: none"> <li>• IUU Fishing</li> <li>• UNCLOS, 1982</li> <li>• MZI, 1981</li> </ul>	<ul style="list-style-type: none"> <li>• Policies/programmes in force and being implemented by GOI and the State Government.</li> <li>• Territorial Waters under the jurisdiction of State Government.</li> <li>• Central Agencies viz., DoF, Coast Guard, Navy, National Agriculture Bank for Rural Development (NABARD) and MPEDA, etc. engaged in fisheries development.</li> </ul>	<ul style="list-style-type: none"> <li>• Regional Plan of Action (RPOA) on IUU Fishing, Hilsa and Sharks.</li> <li>• Regional cooperation on shared resources.</li> <li>• Capacity building.</li> <li>• Regional co-operation &amp; co-ordination</li> <li>• Exposure visit within and outside India.</li> </ul>
	<b>Socio-economic Considerations</b>	<b>1. Vulnerability Reduction to Natural Hazards and Climate Change</b> <ul style="list-style-type: none"> <li>1. Vulnerability Reduction to Natural Hazards and Climate Change</li> </ul> <b>2. Livelihoods Enhancement and Diversification</b>	<ul style="list-style-type: none"> <li>• Vulnerability reduction to natural hazards and climate change.</li> <li>• Disaster Management Act, 2005.</li> <li>• National Action Plan on Climate Change, 2008.</li> </ul>	<ul style="list-style-type: none"> <li>--</li> <li>--</li> <li>--</li> </ul>
	<b>Water Quality</b>	<b>1. Promotion of Cleaner Fishing Harbour</b>	<ul style="list-style-type: none"> <li>The Blue Revolution Scheme of the GoI provides assistance in many areas, including provision of sea safety equipment, tuna long-lining, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness and skill Development.</li> <li>• Transfer of technology and best practices.</li> <li>• Value chain &amp; post-harvest</li> </ul>
			--	--

Group	Themes	Topics	Expected Outputs		
			Policies/ Programmes in place	Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
II	Environment	Critical Habitats 1. Contributions of Marine MPA/MMA to Biodiversity Conservation and Blue Carbon.	<ul style="list-style-type: none"> <li>• WPA, 1972.</li> <li>• Indian Forests Act, 1927</li> <li>• Environment (Protection) Act, 1986.</li> <li>• National Biodiversity Act, 2002</li> <li>• CRZ Notification, 1991 * 2019.</li> <li>• MFRA, 1995.</li> <li>• Coastal Aquaculture Authority Act, 2005.</li> <li>• ILO CI188.</li> </ul>	<ul style="list-style-type: none"> <li>• WPA, 1972 Act needs to focus on marine resources, especially threatened species.</li> <li>• In Corringa Wildlife Sanctuary (WLS), community institutions to be strengthened</li> <li>• In Krishna WLS encroachment to be controlled, provisions of channels and awareness creation.</li> <li>• Protection of Pulicat Lake by opening of sea mouth in both the Tamil Nadu and Andhra Pradesh sections of the Lake.</li> <li>• Coordination among DoF, Forest and other Departments.</li> <li>• Pulicat Lake Development Authority may be considered for setting up.</li> <li>• Community Institutions need to be strengthened.</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation mechanisms of various Central and State Acts, Rules and Regulations to be thoroughly reviewed and revisions, if required to be suggested.</li> <li>• To provide suitable advice on conservation of species such as sea horses, dolphins, turtles.</li> <li>• Mechanisms for involvement of service sectors, such as Tourism, Ports and Shipping, Oil &amp; Gas.</li> <li>• Best practices on ecotourism, additional livelihoods, post-harvest practices, etc.</li> </ul>
		2. Strengthening Management Effectiveness of MPAs/MMAs	--	<ul style="list-style-type: none"> <li>• Strengthening of the Protected Areas and Eco-Sensitive Zones such as 1. Krishna, 2.Coringa, 3.Pulicat, 4.Noupada, Telimelapuram.</li> <li>• Strengthening of EDC/VSS/BMC</li> <li>• Restoration and Management of resources, creation of awareness and sensitization approaches.</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthening of staff of enforcement institutions</li> <li>• Decentralization of regulatory &amp; enforcement mechanisms.</li> <li>• More powers to Grama Sabhas for monitoring at ground level.</li> <li>• Periodical review of regulation bodies.</li> <li>• Eco-friendly livelihood</li> </ul>

Group	Themes	Topics	Policies/ Programmes in place	Expected Outputs	
				Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
				<ul style="list-style-type: none"> <li>• Strengthening gender environmental linked livelihoods.</li> <li>• Awareness from school level.</li> <li>• Incentives for supporting institutions</li> <li>• Strengthening existing agencies.</li> </ul>	
3. Regional Consensus on Reduction of Threats to Marine Biodiversity	--		--	Species Conservation	
<b>Water Quality</b>	--		<ul style="list-style-type: none"> <li>• Quantification of sewage pollution &amp; establishment of STP at least in eco sensitive areas.</li> <li>• Inter Departmental Coordination essential.</li> <li>• Ensure adequate manpower for effective monitoring</li> </ul>	<p>Measures for addressing :</p> <ul style="list-style-type: none"> <li>• Marine water pollution</li> <li>• Fish wastage</li> <li>• Safe disposal of non-degradable products</li> <li>• Ensure adequate manpower for</li> </ul>	
2. Promotion of Cleaner Fishing Harbour	--		--	<ul style="list-style-type: none"> <li>• To assist in establishment of Model Fishing Harbour.</li> <li>• Best practices for maintaining hygiene &amp; sanitation in FHs &amp; FLCs.</li> <li>• Oil work &amp; chemicals dumping to be controlled and engine repair works at FH/FLC to be prohibited.</li> </ul>	

Group	Themes	Topics	Policies/ Programmes in place	Expected Outputs	
				Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
I	Fisheries	<b>Marine Living Resources</b> 1. Ecosystem Approach to Fisheries Management	<ul style="list-style-type: none"> <li>NPMF, 2017.</li> <li>Aqua Zonation Act, 2017.</li> <li>Marine Fishing Regulation Act for Odisha and West Bengal.</li> <li>Wild Life (Protection) Act, 172,</li> <li>National Biodiversity Act, 2002.</li> <li>Coastal Aquaculture Authority Act, 2005.</li> <li>Blue Revolution Schemes.</li> <li>Code of Conduct for Responsible Fisheries.</li> <li>Hilsa conservation in coordination with neighbouring States &amp; countries.</li> <li>Implementation of livelihood rights of fishermen.</li> </ul>	<ul style="list-style-type: none"> <li>To review the support given to fishermen during 'Seasonal Ban on Fishing'. It should include the ban in MPAs.</li> <li>Traditional fishing area should be increased.</li> <li>Assessment of the resources</li> <li>Hilsa Notification in the MFRA and Inland Fisheries Act.</li> </ul>	<p>Ban period should follow the principle of subsidiarity. Incentives for release of ETP species.</p>
		2. Illegal, Unreported and Unregulated (IUU) Fishing	UNCLOS, 1981 Maritime Zones of India Act, 1981.	<p>Central and State Government Agencies like Indian Coast Guard, Marine Police, etc. Should protect the interest of the small-scale fishermen during ban period.</p>	<ul style="list-style-type: none"> <li>Ban on fishing in protected areas should be reviewed.</li> <li>Empowerment of fishers to take up additional livelihood during closed season</li> <li>Coordination among national &amp; international bodies.</li> </ul>
		<b>Socio-economic Considerations</b> 1. Vulnerability Reduction to Natural Hazards and Climate Change	<ul style="list-style-type: none"> <li>Vulnerability reduction to natural hazards.</li> <li>Climate change- State Climate Change Action Plan (West Bengal &amp; Odisha).</li> <li>Disaster Management Act, 2005.</li> </ul>	<ul style="list-style-type: none"> <li>Early warning system for SSF, with appropriate warning time and precise rescue system.</li> <li>Construction of new fishing boats should be banned.</li> <li>Hygienic conditions should be maintained.</li> </ul>	<ul style="list-style-type: none"> <li>Connectivity between all stakeholders.</li> <li>Capacity building.</li> </ul>

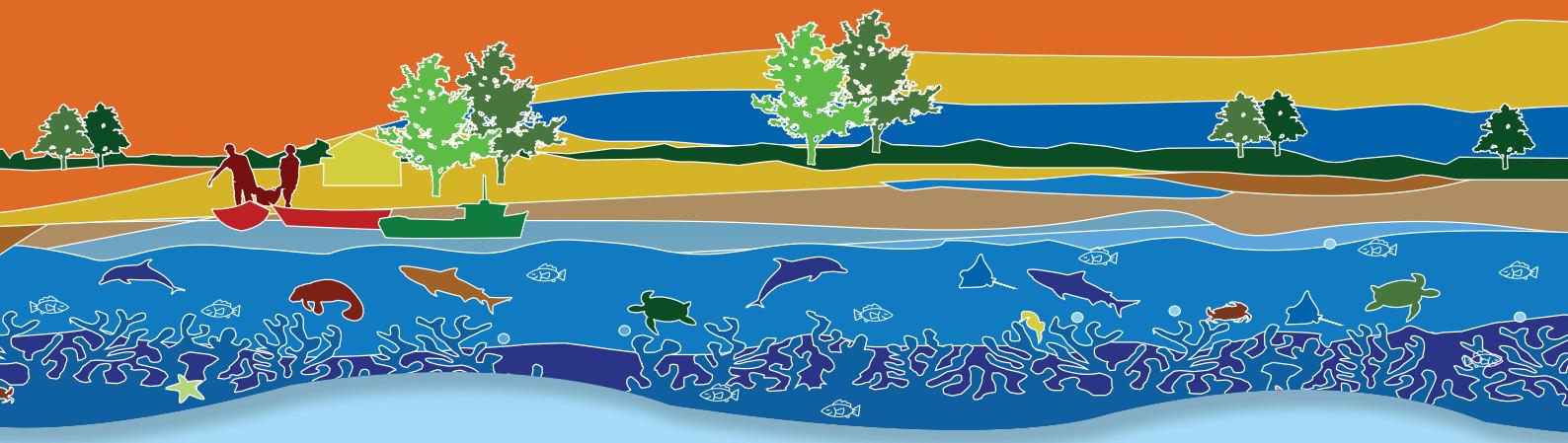
Group	Themes	Topics	Policies/ Programmes in place	Expected Outputs	
				Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
				<ul style="list-style-type: none"> <li>Compensate SSF for damages due to disasters and adverse weather events.</li> <li>Buffer zones for fishing villages for protection from sea level rise.</li> </ul>	Awareness programme. Collating available information. Stakeholder consultations.
	2. Livelihoods Enhancement and Diversification	Blue Revolution Scheme provides assistance for inputs and diversification.	NFDB, NABARD.	<ul style="list-style-type: none"> <li>Hygienic conditions at FHs/ FLCs should maintained</li> <li>Strengthening of Central Institute of Coastal Engineering for Fishery.</li> </ul>	--
	<b>Water Quality</b> 1. Promotion of Cleaner Fishing Harbour	<ul style="list-style-type: none"> <li>Environment (Protection) Act, 1986.</li> <li>Swachh Bharat programme</li> </ul>			
II	<b>Environment</b>	<b>Critical Habitats</b> 1. Contributions of Marine Protected Areas (MPA) / Marine Managed Areas (MMA) to Biodiversity Conservation and Blue Carbon.	<b>Odisha</b> <ul style="list-style-type: none"> <li>OMFRA, 1981</li> <li>WPA, 1972.</li> <li>CRZ Notification, 1991, 2019.</li> <li>ICZMP.</li> </ul> <b>West Bengal</b> <ul style="list-style-type: none"> <li>Sundarbans National parks and tiger reserve.</li> <li>Sajanakhali WLS.</li> <li>Lothian Islands.</li> <li>Holiday Islands.</li> <li>West Sundarbans WLS.</li> <li>CRZ, EEZ, Fishery Policy.</li> <li>HILSA Protection Act.</li> </ul>	<b>Odisha</b> <ul style="list-style-type: none"> <li>Awareness Program &amp; alternative livelihood for fishers.</li> <li>Chilka Fish Habitat identification.</li> <li>Assessment of Fishery resources of Odisha.</li> </ul> <b>West Bengal</b> <ul style="list-style-type: none"> <li>Policy for Estuary Management</li> <li>Policy on Fishers &amp; socio-economic status.</li> <li>Assessment of exploited fishery resource of Sunderbans.</li> </ul>	<ul style="list-style-type: none"> <li>OMFRA, 1981</li> <li>Chilka Development Authority</li> <li>Forest &amp; Dof</li> <li>Odisha Fisheries Policy not implemented</li> <li>Implementation of Hilsa Conservation Act.</li> <li>MFRA should be properly implemented.</li> <li>Sundarbans-waste water discharge, siltation and mercury pollution.</li> </ul> <ul style="list-style-type: none"> <li>Inadequate environmental flow and decrease in catchment area of Chilka.</li> <li>Wise use of the resources by different sectoral users to be assessed.</li> </ul> <ul style="list-style-type: none"> <li>Collaborative project on Mahanadi Delta habitat restoration.</li> <li>Hilsa Conservation Act of Odisha</li> <li>Water Budgeting and Habitat Act for restoration and conservation of estuaries.</li> </ul>
	2. Strengthening Management Effectiveness of MPAs/MMAs		--		

Group	Themes	Topics	Expected Outputs		
			Policies/ Programmes in place	Existing implementation mechanism and options for improvement	Scope of collaboration & coordination for implementation of BOBLME SAP
					<ul style="list-style-type: none"> <li>Hilsa Conservation &amp; Restoration in Chilka-Child Project.</li> <li>Fish catch data of Sundarbans.</li> <li>ICT Mediated Community</li> <li>Management model for conservation &amp; implementation of Policies and mesh size regulation for all fishes.</li> </ul>
3. Regional Consensus on Reduction of Threats to Marine Biodiversity	Nil	Nil	Nil	Conservation of resources.	Policy on Transboundary
					<ul style="list-style-type: none"> <li>Strengthen – COMAPS region-specific policy &amp; implementation.</li> <li>Use of ETPs to be strictly followed.</li> <li>Rewards for keeping FH/FLCs clean and implementation of ETPs.</li> <li>Strengthening of NETFISH.</li> <li>Modernization of FH/FLCs.</li> <li>Community Management for Plastic Pollution.</li> <li>Deep sea fishing in Odisha &amp; West Bengal should be encouraged.</li> <li>Zonation in territorial waters for SSF to be reviewed.</li> <li>Studies on trophic levels in West Bengal.</li> </ul>

# Notes

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*years*

**BAY OF BENGAL PROGRAMME  
INTER-GOVERNMENTAL ORGANISATION**

91, Saint Mary's Road, Abhiramapuram, Chennai - 600 018, Tamil Nadu, India.  
Tel: +91-44-24936188; E-mail: [info@bobpigo.org](mailto:info@bobpigo.org); URL: <http://www.bobpigo.org>