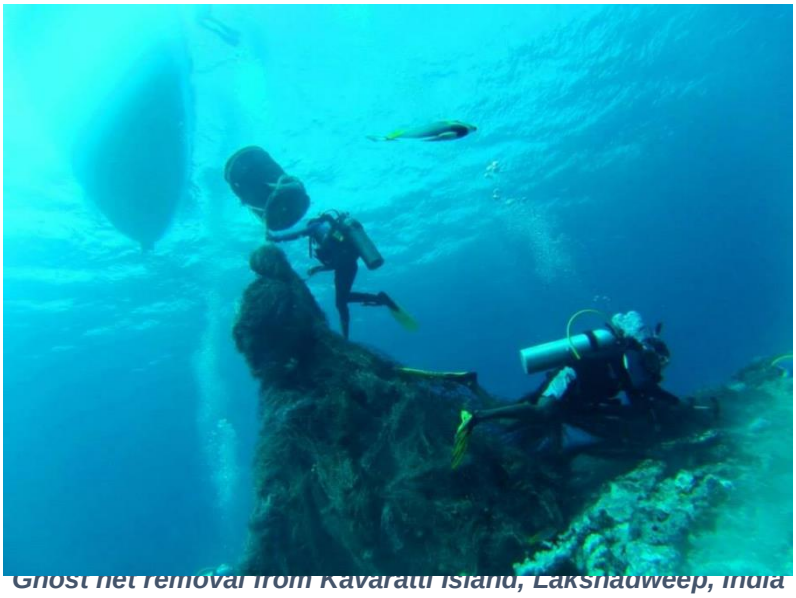
सत्यमेव जयते

NATIONAL ACTION PLAN

ON MARINE PLASTIC LITTER FROM SEA-BASED SOURCES

INDIA



Ghost net removal from Kavaratti Island, Lakshadweep, India

2024-2026

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Prepared with support and guidance from IMO/FAO-Norway GloLitter Partnerships Project

Acronyms

ALDFG	Abandoned, Lost or otherwise Discarded Fishing Gear
CIFNET	Central Institute of Fisheries Nautical and Engineering Training
CIFT	Central Institute of Fisheries Technology
CMFRI	Central Marine Fisheries Research Institute
DGS	Directorate General of Shipping
DoF	Department of Fisheries
EEZ	Exclusive Economic Zone
EPR	Extended Producer Responsibility
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organization of the United Nations
FSI	Fishery Survey of India
GLoLitter	GloLitter Partnerships Project
ICAR	Indian Council of Agricultural Research
IMO	International Maritime Organization
IOTC	Indian Ocean Tuna Commission
IORA	Indian Ocean Rim Association
IPFC	Indo-Pacific Fisheries Commission
IUU	Illegal, Unreported and Unregulated Fishing
IWAI	Inland Waterways Authority of India
LC	London Convention
LDC	Least Developed Country
LP	London Protocol
LPC	Lead Partnering Country
MARPOL	International Convention for the Prevention of Pollution from Ships
MFAH&D	Ministry of Fisheries, Animal Husbandry and Dairying
MMD	Marine Mercantile Department
MoEF&CC	Ministry of Environment, Forest & Climate Change
MoES	Ministry of Earth Sciences
MPEDA	Marine Products Export Development Authority
MPL	Marine Plastic Litter
NAP	National Action Plan
NCCR	National Centre for Coastal Research
NCERT	National Council of Educational Research and Training
NGO	Non-Governmental Organisation
NORAD	Norwegian Agency for Development Cooperation
NTF	National Task Force
PET	Polyethylene terephthalate
PRF	Port Reception Facility
RFMO	Regional Fisheries Management Organisation
SACEP	South Asia Cooperative Environment Programme
SBMPL	Sea-based Marine Plastic Litter
SIFFS	South Indian Federation of Fishermen Societies
SIDS	Small Island Developing State
SUP	Single Use Plastic
TERI	The Energy and Resources Institute
UNCLOS	United Nations Convention on the Law on the Sea
UN SDG	United Nations Sustainable Development Goal
UT	Union Territory

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India's National Action Plan on Marine Plastic Litter

1. Introduction

India has rich biodiversity of terrestrial and marine organisms. India's marine ecosystem is home to the richest and most diverse faunal and floral communities and Indian coastal waters are extremely diverse attributing to the geomorphologic and climatic variations along the coasts. The coastal and marine habitats include nearshore gulf waters, creeks, tidal flats, mud flats, coastal dunes, deltaic plains, estuaries, lagoons, marshes, wetlands, mangroves, seaweed and seagrass beds and coral reefs. However, like other areas of world oceans, biodiversity of marine habitats is under threat in Indian seas, mainly as a result of habitat loss, over harvesting, introduced species, pollution and global climate change.

Marine pollution by plastic litter constitutes a major threat to the marine environment, biota and human health. It has been well documented in literature that numerous seabirds, turtles, fishes and whale species suffer and die either from entanglement of fishing gear or ingestion of plastic particles mistaken for food. Entanglement of organisms, especially in net fragment litter or 'ghost fishing gear' can cause starvation, suffocation, laceration, infection, reduced reproductive success and mortality. Further, floating litter (floatsam) acts as a vector for the spread of harmful alien species.

There are numerous sources of marine plastic litter (MPL), with much of it originating on land, through overuse of plastics and improper waste disposal. In addition, sea-based activities like mechanical navigation, fishing, etc., also contribute to marine plastic pollution. Abandoned, lost or otherwise discarded fishing gear (ALDFG) including nets, lines, etc., also contribute to marine plastic pollution.

2. International Conventions

India became a party to the United Nations Convention on the Law on the Sea (UNCLOS) in 1995. Article 192 of the United Nations Convention on the Law on the Sea (UNCLOS) specifies that "States have the obligation to protect and preserve the marine environment", while Article 194 mentions "States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose, the best practicable means at their disposal and in accordance with their capabilities".

UN Sustainable Development Goal (UN SDG) 14.1 states "By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine litter and nutrient pollution". It is, therefore, important that urgent action is needed to contain the marine pollution by marine litter, especially by plastics, to achieve these SDGs.

India is a signatory to International Convention for the Prevention of Pollution from Ships (MARPOL). India ratified MARPOL Annex V on 31 December 1998 and it entered into force on 11 September 2003. The MARPOL Convention has six annexes (I to VI) and it deals with prevention of pollution from ships by (I) Oil, (II) Noxious liquid substances, (III) Dangerous goods in packaged form, (IV) Sewage, (V) Garbage and (VI) Air pollution from ships, respectively.

Discarding or disposal of all plastics (including from fishing operations/gears) is completely prohibited under MARPOL Annex V. To strengthen the work on these matters, and improve implementation, IMO adopted an Action Plan to Address Marine Plastic Litter from Ships, in 2018. In 2021, IMO adopted a Strategy on Marine Plastic Litter.
Annexure V, 'Garbage' includes 11 items viz., Plastics, Food wastes, Domestic wastes, cooking oil, Incinerator ashes, Operational wastes, Animal carcasses, Fishing gear, E-waste, Cargo residues (non-HME and HME - Harmful to Marine Environment).

The Government of India has been actively participating in the Intergovernmental Negotiating Committee (INC) established to develop an international legally binding instrument on plastic pollution, including in the marine environment.

In order to reduce marine plastic litter entering the marine environment from all ships, including fishing vessels, and ultimately to achieve zero plastic waste discharges to sea from ships by 2025, India aims to strengthen the international framework and compliance with the relevant IMO instruments.

The GloLitter Partnerships project is aimed to support developing countries, including Small Island Developing States (SIDS) and Least Developed Countries (LDCs), in identifying opportunities for prevention and reduction of Sea-based Marine Plastic Litter (SBMPL) from shipping and fisheries sectors. This project is initially funded by Government of Norway, represented by the Norwegian Agency for Development Cooperation (NORAD) and implemented by the International Maritime Organization (IMO) in cooperation with the Food and Agriculture Organization of the United Nations (FAO).

Government of India (GoI), through Department of Fisheries (DoF), Ministry of Fisheries, Animal Husbandry & Dairying (MFAHD), as the lead agency, is participating in the IMO-FAO GloLitter Partnerships project as one of the Lead Partnering Countries (LPC) with the aim of prevention and reduction of Marine Plastic Litter (MPL), in particular, sea-based MPL (SBMPL), and to reverse the negative environmental impacts of marine plastic pollution.

3. National Task Force

In order to facilitate the partnership with GloLitter and to achieve the goal / implementation of the international regulatory framework and best practices for significant reduction of SBMPL at the national level, the DoF, MFAHD, Government of India, constituted a National Task Force (NTF) as detailed below.

- Joint Secretary (Marine Fisheries), DoF and GLP National Focal Point - Chairperson
- Director General, Fishery Survey of India (GLP Lead Agency) - Member Convener
- Representative of Directorate General of Shipping - Member
- Representative of Ministry of Environment, Forest & Climate Change - Member
- Representative of Marine Products Export Development Authority (MPEDA), Kochi -Member

- Director, Central Marine Fisheries Research Institute (CMFRI), Kochi or his representative- Member
- Director, Central Institute of Fisheries Technology (CIFT), Kochi or his representative-Member
- Representatives of Maritimes States and Union Territories (UTs)
- Fisheries Development Commissioner/ Deputy Commissioner/ Assistant Commissioner (in-charge of Marine Fisheries), DoF – Member

This NTF is proposed to be made a permanent body with FSI leading the implementation of the project. Infrastructure development, personnel requirements, necessary trainings, etc., in FSI 6 bases and Headquarters and the various Departments / Institutes will be undertaken for implementation of the project, as per requirements.

3.1. Country Context

India is one of the oldest civilizations in the world with a diverse and rich cultural heritage. India's population is about 1.393 billion (as of 01 July 2021), inhabiting in 28 states and 8 Union Territories of the country. As the 7th largest country in the world, India stands apart from the rest of Asia, marked off as it is, by mountains and the seas, which give the country a distinct geographical entity.

Bounded by the Great Himalayas in the north, it stretches southwards and at the Tropic of Cancer, tapers off into the Indian Ocean between the Bay of Bengal and Andaman Sea on the east and the Arabian Sea on the west. Lying entirely in the northern hemisphere, India extends between latitudes 6° 4' and 37° 6' North, longitudes 68° 7' and 97° 25' East, and measures about 3,463 km from north to south between the extreme latitudes and about 2,933 km from east to west between the extreme longitudes. It has a land frontier of about 15,200 km.

The total length of the coastline of the mainland, Lakshadweep Islands and Andaman & Nicobar Islands is 7,516.6 km (https://www.india.gov.in/india-glance/profile). The Exclusive Economic Zone (EEZ) of India has an area of 2.02 million km^2 within a limit of 200 Nautical Miles (NM) from the coastline.

3.2. Governance System

India is a Democratic Republic with a Parliamentary form of government and is federal in structure. Both Parliament at Central level and Legislative Assemblies at State level have powers to enact laws, pertaining to the subjects concerned. It has legislative, executive and judicial systems.

With regard to protection of marine environment, by legislation of acts, rules, guidelines, etc., India aims for elimination of single-use plastic, as well for management of waste in general, and management and control of litter from the sea by selected sectors of the industry.

3.3. Studies on MPL

Many significant studies have been undertaken by Government sectors, research institutes, university research centres and some NGOs on marine plastic pollution. However, precise comprehensive data is not available on the extent of marine pollution due to plastics in Indian seas, their sources, seasonal variation, transport pathways, ill effects and mitigation in India.

Information on MPL from India are available from various studies and a review of literature on the same as modified from Owens *et al.* (2022) and other studies is furnished under:

Studies on debris in India began with evidence in the early 1980s from Caranzalem beach, Goa, on plastic pellets (also known as nurdles) ranging in density from 50–300 pieces/m^2 (Nigam, 1982). Dharani *et. al*. (2003) shared evidence from Great Nicobar Island of the accumulation of substantial shoreline debris of transboundary origin. In the Alang-Sosiya shipyard in Gujarat state, researchers found plastics represented 81.43 mg/kg in sediment samples (Reddy *et. al*., 2006). Research of five sites in Karnataka state revealed plastic abundance with a range from 6.9 to 37.9 g/m^2 by weight (Sridhar *et. al*., 2007). Ganesapandian *et. al*. (2011), collecting debris over two years from beaches on the Gulf of Mannar, most frequently found plastic (48%), polystyrene (18%), and cloth (15%), attributing the litter to fishing, tourism, and sewage. Kaladharan*et. al*. (2012), sampled beaches, trawling hauls, and water over two years, at eight sites, in six Indian states and found “considerable quantities” of plastic ropes, PET bottles, sachets, milk covers and thin carry bags on beaches (0.145–9.8 g/m^2) and fishing grounds (32–85 g/haul). Jayasiri *et. al*. (2013) studied four beaches in Mumbai over eleven months, most frequently finding plastic, with a mean abundance of 7.49 g/m^2 and 68.83 items/m^2 in sediment samples and of 3.24 g/m^2 and 11.6 items/m^2 for visible debris. Sampling monthly over two years from 2010–2012 at four sites in Karnataka, Sulochanan *et al.* (2014) most frequently found nylon and plastic ropes. The mean density of reported debris was 233.86 g/m^2 and 24.3 items/m^2 (Thanneerbhavi), 141.7 g/m^2 and 19.46 items/m^2 (Panambur), and 420.11 g/m^2 and 20.73 items/m^2 (Chithrapur). Working on Marina beach, Chennai, Kumar *et. al.* (2016) found 6872 individual pieces (129.7 kg) most of which was plastic (44.9%). Kaladharan *et. al*. (2017) studied the status and composition of beach litter from 254 selected beaches along nine maritime states of Peninsular coasts of India as well as the Union Territories of Andaman and Lakshadweep Islands and reported that the mean national beach litter in India amounts to 45.86 g/m^2. Evaluating microplastics in Vembanad Lake, Kerala, Sruthy and Ramasamy (2017) discovered microplastics in all of their sediment samples, calculating a mean abundance of 252.80 particles/m^2. Karthik*et al*. (2018), sampling microplastics at twenty-five sandy beaches across Tamil Nadu, found that high tide line microplastic mean abundance was 1323 ± 1228 mg/m^2 compared to 178 ± 261 mg/m^2 at the low tide line; microplastics were found at highest density at beaches next to rivers, indicating land-based sources. Assessing macro and micro debris on Nallathanni Island, Gulf of Mannar, Krishnakumar *et. al*. (2018) found plastic made up 73.2–100% of their samples.

Assessing 21 islands of the Gulf of Mannar, Edward *et al*. (2020) revealed that, majority of the waste was abandoned fishing nets (43.17%), damaging corals. Working along the length of the Ganga, Napper *et al.* (2021) found 140 microplastic particles in 20 samples of ten sites, noting concentration was higher during pre-monsoon and fibres were most prominent. The researchers estimated that the Ganga, the Brahmaputra and the Meghna rivers may collectively release 1–3 billion particles into the Bay of Bengal daily. Abundance of microplastics was analysed in the commercial table salt and the table salt from salt pans in

Tamil Nadu coast (Nithin *et al.* 2021). Microplastic contamination was more in salt pans (3.67 ± 1.54 to 21.33 ± 1.53 nos./10 g of salt) than in commercial salt (4.67 ± 1.15 to 16.33 ± 1.53 nos./10 g of salt) indicating that both are prone for microplastic contamination. Sivadas *et. al.* (2021) suggested potential plastic accumulation zones in the Indian seas, based on published literature on oceanographical features in northern Indian Ocean (Arabian Sea and Bay of Bengal) including coastal / protected habitats. Nithin *et. al*. (2022) reported that microplastics concentration ranged from 1.15 ± 0.01 to 5.14 ± 0.04 items/m^3 in surface water and 24.8 ± 0.75 to 43.4 ± 0.98 particles/kg dry weight, in sediments in Vellar estuary, southeast coast of India. The microplastics largely comprised of fiber (~80%) and others (fragment, film, pellet and glitter). Owens *et al*. (2022) reported collection of 33,474 individual pieces of debris weighing a total of 599.15 kg during ten collection drives in eight beaches and two riversides in three states and two Union Territories, 83.0% of which was plastic by count and 57.3% by weight. Combating marine plastic litter (MPL) is crucial, and bioplastics offer a promising solution. Researchers have developed films from eco-friendly corn and fish scale powders, presenting a viable alternative to conventional plastics. These films exhibit impressive physical and chemical properties, readily breaking down in compost (Surya *et al*., 2022).

Overall, plastic items constituted the major share of total debris items collected from the Indian beaches (about 60% by weight and 70% by number). Fishing related debris as reported from fishing vessels (ropes, netting, floats, buoys and monofilament fishing lines, etc.) was the most dominant component among plastic debris, followed by carry bags and sachets of soft drinks, edible oils, detergents, beverages, cases of cosmetics, toothpaste, PET bottles, ice cream containers, etc. Other components in the marine debris include metals, glass, cloth, fabric, shoes, etc.

4. Principles and approaches followed for combating MPL

The key principles being followed by India for combating marine plastic debris are

1) Prevention of items becoming debris in the first place
2) Polluter pays principle
3) Ecosystem approach
4) Public and private participation
5) Sustainable production and consumption
6) Best available knowledge and best practices

Source prevention, through a combination of measures and approaches, is widely regarded as the most effective means to reduce the impact of MPL on marine and coastal biodiversity. The following acts, rules and notifications of the country are enacted to achieve the goal of prevention of items becoming debris in the first place.

1. Water (Prevention and Control of Pollution) Act, 1974 and its amendments including that of 2011: These acts have provisions for the prevention and control of water pollution, and for maintaining or restoring the wholesomeness of water (fresh as well as sea water).

2. Ministry of Environment, Forest & Climate Change (MoEF&CC) has notified various Rules pertaining to Plastic Waste Management as detailed below.
    1) Plastic Waste Management Rules, 2016
    2) Standard Guidelines for Single-Use Plastic, 2019

3) Plastic Waste Management (Amendment) Rules, 2021
4) Plastic Waste Management (Amendment) Rules, 2022
5) Nation-wide Ban on identified Single Use Plastic Items from 1st July 2022

These rules are not specifically for marine plastic litter; however major sources of plastics are from land-based sources. Hence, there is a need to enact new legislations or amend the existing Acts, Rules to include sea-based marine plastic litter (SBMPL), in order to protect the marine environment and biodiversity from the long-term ill effects of MPL.

Plastic Waste Management Rules, 2016, and its amendments, prohibit manufacture, import, stocking, distribution, sale and use of carry bags and plastic sheets less than 50 microns in thickness in the country. There is a complete ban on sachets using plastic material used for storing, packing or selling gutkha, tobacco and pan masala.

MoEF&CC also issued "Standard Guidelines for Single-Use Plastic" on 21st January 2019 to all States/UTs and Ministries. Further, the Government of India has initiated several programmes such as "*Swachh Bharat Abhiyan*", "National Mission for Clean Ganga and Smart Cities Mission" in order to develop clean and sustainable environment which contribute towards the Marine Litter Policy.

Plastic Waste Management Amendment Rules, 2021, also prohibit manufacture, import, stocking, distribution, sale and use of plastic carry bags having thickness less than 75 microns with effect from 30th September, 2021, and having thickness less than 120 microns with effect from the 31st December, 2022.

MoEF&CC also notified the Guidelines on Extended Producer Responsibility (EPR) on plastic packaging as Plastic Waste Management Amendment Rules, 2022 on 16th February, 2022. As per the regulations, EPR, the responsibility for the environmentally sound management of the product until the end of its life lies with the producer. The Guidelines provide a framework to strengthen the circular economy of plastic packaging waste, promote development of new alternatives to plastic packaging and provide next steps for moving towards sustainable plastic packaging by businesses.

Under the Shipping sector, the following steps have been taken by India for prevention and control of pollution arising from ships in the sea:

To prevent ships contravening the regulatory requirements for operational necessity, Section 356 I in the Merchant Shipping Act, 1958 enables ports to provide reception facilities in order to receive ship generated wastes.

The Directorate General of Shipping (DGS), being custodian of the Merchant Shipping Act, 1958, as a proactive measure, has developed a centralized online portal called "Swachh Sagar" (meaning 'Clean Ocean'). The visiting ships can make a request in the online portal well in advance to provide adequate waste reception facilities at the port of call.

As per the 2018 UNEP report, Single use plastics - A roadmap for Sustainability, "Plastic pollution is a defining challenge of our times. Single use throw-away plastics are the biggest contributor every year, millions of plastic bags end up in the environment, thus polluting soil, water bodies, rivers and Oceans".

To prevent plastic pollution from ships, through the DGS order no. 05 of 2019, the Directorate General of Shipping has imposed a ban on single use plastics on Indian Ships which are registered under the Merchant Shipping Act, 1958 and foreign ships while in Indian waters and has been successfully implemented the same with effect from 1st January 2020.

With respect to prevention and control of pollution in inland-waterways, the Inland Waterways Authority of India (IWAI) regulates the same through the State Maritime Authorities concerned.

In order to prevent and reduce the impacts of SBMPL, a framework is required to support:

(a) to prevent and control SBMPL, ALDFG and IUU, and contain their ill effects;
(b) for schemes as incentives to fishermen for collection / reporting of ALDFG, etc.;
(c) for schemes of coastal cleanup, awareness creation, training on data collection; and,
(d) research on alternative materials, recycle, reuse, innovative ventures, etc.

4.1 Public and private participation

Government of India and local administrations are implementing various flagship clean-up programmes including *Swachhta Abhiyaan*; *Suchitwa Sagaram, Sundara Teeram; Swachh Sagar, Surakshit Sagar*'/Clean Coast Safe Sea', coastal clean-up campaign, etc., which cover the entire nation or state level clean-up programmes. In addition, several local/beach level clean-up programmes are being regularly conducted at local levels.

Government and NGOs are actively participating and implementing the above campaigns and public-private partnership is ensured in these mass clean-up drives. Citizen participation is the basis of India's democratic system and the clean-up campaigns and awareness programmes ensure active participation of all sections of the society in activities aiming to reduce pollution, especially by plastic waste.

India Country Assessment Report on sea-based MPL with specific reference to shipping and fisheries is at Annexure 1 and Data/information needed for updated Baseline Report on Marine Plastic Litter (MPL) with specific reference to shipping and fisheries is at Annexure 2. The information contained in these Annexures form the basis for outlining the SBMPL National Action Plan (NAP).

5. SBMPL National Action Plan

The objectives of the National Action Plan (NAP) are to prevent, reduce and control sea-based marine plastic litter (SBMPL) in the country, especially in the shipping and fisheries sectors in India.

To achieve this goal, a framework will be established, with the support of the GloLitter Partnerships project, that coordinates the actions to be taken, as identified in the Country Status Assessment. This NAP will also have actions that need to be taken in collaboration with regional participating countries.

Specific Actions, responsible authorities/ agencies/ institutions and timelines are detailed under the following aspects, provided by GloLitter, viz., (a) legal, policy and enforcement

reforms; (b) institutional capacity and reforms; (c) education and outreach; (d) regional and global cooperation, and (e) private sector engagement.

INDIA SBMPL NATIONAL ACTION PLAN

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
5.1	**Actions related to the legal, policy and enforcement reforms**							
Action 5.1.1	Effective enforcement of existing acts and rules [The Environment (Protection) Act, 1986 and Rules, Plastic Waste Management Rules, 2016 and subsequent amendments, Water (Prevention and Control of Pollution) Act, 1974 and Rules etc] to prevent, reduce marine plastics entering the marine environment through an appropriate system.	Medium	Central / State Govts; State Fisheries Dept. Officials.	2024	2026	FSI, Ports, State Fisheries Dept. Officials, Technical, Field staff.	Periodic reports[1](6-monthly)	Reports & Executive instructions
Action 5.1.2	Sensitize 'marking of fishing gear' to fisherfolk and net manufacturers on voluntary / mandatory basis for fishing vessels based on "FAO Voluntary Guidelines on the Marking of Fishing Gear" (VGMFG).	High	DoF. Central / State Govts Central and State Fisheries Depts., Fishermen Associations, Net Manufacturers/ Importers Associations.	2024	2025	External (for advice, training), FSI, State Fisheries Dept. Officials, Technical, Field staff.	Periodic reports[2] (6-monthly) of no. of markings.	No.of sensitization workshops organised (Approx-8-10 nos). Number of fisherfolk and net manufacturers participated. Notifications/ orders (8-10 nos)

1 Following data collection from States/UTs, Fisheries Survey of India (FSI) a lead agency identified for the GloLitter Partnerships project will submit biannual reports to D/o Fisheries, Govt. of India for furtherance.

2 The Fisheries Survey of India (FSI) a lead agency identified for the GloLitter Partnerships project will submit biannual reports to D/o Fisheries, Govt. of India for furtherance.

	Description	Priority Level (high, medium , low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
Action 5.1.3	ReALCraft or similar website shall be maintained for accountability of fishing gears possessed by fishers. This includes the development of a database under ReALCraft/or under a similar mobile-based application. Net manufacturers/ importers, will also be encouraged to register with ReALCraft / Similar website.	Medium	Central and State Fisheries Depts., Fishermen Associations, Net Manufacturers/ Importers Associations.	2024	2026	External (for advice, training), FSI, State Fisheries Dept. Officials, Technical, Field staff.	Periodic report (6- monthly) of no. of fishing gears/net manufacturers/importers registered	Database developed under ReALCraft/ or under mobile based application. Data input to database and/or website of fishing gears owned by fishers, and registration of net manufacturers/importers.
Action 5.1.4	Sensitization of fishers on ALDFG reporting.	High	DoF, FSI. Central / State Govts.	2024	2025	FSI, DoF, State Fisheries Dept. Officials, Technical, Field staff.	Periodic report (6- monthly) of no. of sensitization programmes conducted.	No.of sensitization workshops organised. Number of fisherfolk participated. Notifications/orders.
Action 5.1.5	Waste reception facilities and waste recycling units to be incorporated in Fishing Harbours (FHs)/Fish Landing Centres (FLCs). This includes establishing standardized operating procedures (SOPs), guidelines, waste management best practices, operational standards and compliance mechanisms.	High	Central / State Govts should notify; State Fisheries Dept. Officials.	2024	2026	FSI, Ports, State Fisheries Dept. Officials, Technical, Field staff.	SOPs and guidelines: completion of stakeholder consultations, draft documents finalized, and official adoption of the SOPs and Guidelines	Database: on number of facilities adopting the SOPs/Guidelines, compliance rates and waste collection/recycling volume data etc.
Action 5.1.6	Identification of best waste management practices and development of guidelines for recycling and reuse of recovered ALDFG.	Medium	Central/ State Govts, ICAR and other research institutes, private entrepreneurs.	2024	2026	IMO, FAO guidelines, if any. Research staff.	Outcome of policies and training: completion of stakeholder	Adoption of the guidelines by relevant agencies and stakeholders (e.g., Fisheries

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
							consultations, draft documents finalized, and official adoption of the guidelines.	Departments, waste management companies). Increase in the volume of ALDFG recovered and recycled using the developed guidelines
5.2	**Actions related to institutional capacity and reforms**							
Action 5.2.1	Creation of a permanent National Task Force (NTF) for implementation and monitoring of National Action Plan .	High	FSI, MFAH&D, State Fisheries Depts., DGS, MoPSW, MoEF&CC, other Ministries / Dept. / Insts.	2024	2026	Central /State govt. officials; Scientists, representatives from administrative departments.	Official orders, News articles, Publications	Official orders, Publications.
Action 5.2.2	Creation of infrastructure facilities, computers, etc., at FSI / DoF, and other Depts./ Institutes for implementation of the NAP	High	FSI, DoF, MFAH&D, State Departments, and other Institutes as required.	2024	2026	Computers, printers, data loggers, etc.	The establishment and operationalization of a dedicated SBMPL cell within Fisheries Survey of India (FSI	Government orders, monthly Progress reports, and Key Milestones etc.

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
Action 5.2.3	Installation of plastic waste reception facilities (PwRFs) in Fishing Harbours (FH) and Fish Landing Centres (FLCs) for MPL collection / disposal. Transport of reuse and recycling of retrieved fishing gear and other plastic litter	High	NTF, DoF, FSI, MFAH&D, Ministry of Ports, Shipping & Waterways, Central / State Fisheries Depts.	2024	2026	FSI, DoF, Central and State Fisheries Dept. and Port officials.	No. of Fishing Harbors (FHs)/Fish Landing Centre (FLCs)/Ports for enhanced PwRFs.	Reports on number of Fishing Harbors (FHs) and Fish Landing Centres (FLCs) provided with PwRFs. Database on Marine Plastic Litter (MPL) generated and recycled.
Action 5.2.4	Assessment of MPL from ships. Development of National (Georeferenced) database on source, sink, quantity and quality of sea-based marine plastic litter.	High	FSI, NTF, DoF, DG Shipping, State Depts., Research institutes in collaboration with other stakeholders	2024	2026	FSI, DoF, DG-Shipping Softwares - GIS, RDBMS, statistical, training, Scientists, Technical, Research Scholars, Fishers, NGOs.	Creation of database on sea-based Marine litter, Research articles, Brochures, Reports	Database Publications
Action 5.2.5	Skill upgradation of personnel in respective project implementing agencies including use of underwater cameras in clear and appropriate waters.	High	FSI, NTF, State Depts.	2024	2026	Central /State govt. officials; Scientists, Technical staff	Training programs (Approx.8-10 nos)	Pre- and post-training assessments
Action 5.2.6	Incentive based schemes from Government, routed through State Fisheries Department for collection, and surrender of damaged, unrepairable nets/ALDFG and recycling of marine litter (database	High	FSI, Dept. of Fisheries, MFAH&D, Central/State/UT Fisheries Departments, Fishers, Fishermen organizations/	2024	2026	FSI, DoF, Central/ State Fisheries Dept. Officials, , technical, field staff, Fishers.	Periodic report (6-monthly) of the No. of cases of reported ALDFG; data on locations of loss; number of	Orders/Notifications, Database, total incentives disbursed.

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
	creation and recycling options can be coordinated by State officials)					Incentives in this regard will be worked out by NTF members in consultation with relevant stakeholders for ALDFG/retrieved net and for disposal of litter collected as per requirement.	surrendered nets, number of incentives given.	Data based will be developed under ReAL Craft/ or a mobile based application will be developed.
Action 5.2.7	Radio Frequency Identification (RFID) / Radio (or smart) buoys technology for tracking of gear/ FADs retrieval.	Medium	FSI, CIFT, CIFNET, ICAR, Central and State government Depts/ other Institutes	2024	2026	Central / State Govt. Officials, Institutes, Researchers, Entrepreneurs	Number of buoys deployed and vessels equipped with tracking technology. Percentage of lost gear successfully retrieved using tracking data.	Reviews Tracking data analysis and retrieval reports. Monitoring and surveys of ghost fishing occurrences in targeted areas. Stakeholder feedback
Action 5.2.8	Research and Development for alternative, innovative technologies / reuse/recycle/mitigation technologies, etc.	Medium	FSI, CIFT, CIFNET ICAR, Central and State government Depts/ other Institutes	2024	2026	Central / State Govt. Officials, Institutes, Researchers, Entrepreneurs	Number of research projects initiated and completed. Development of promising alternative	Reports and scientific publications, Stakeholder engagement and feedback

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
							materials, technologies, or reuse systems Pilot testing and evaluation of proposed solutions.	
Action 5.2.9	Harbour level, District and State Level subcommittees be constituted, including fisher societies, NGOs, State officials, etc., for implementation of MPL control and reuse/recycle activities.	Medium	Central / State Govts should notify; State Govt Depts., Officials.	2024	2026	State Government Officials, Technical, Field staff, Fishers, other stakeholders, NGOs.	Number of subcommittees established at harbor, district, and state levels. Frequency of subcommittee meetings. Development and implementation of action plans for MPL control and reuse/recycle activities Number of training programs and awareness campaigns conducted	Official orders, feedback survey, quarterly progress reports. Monitoring data on waste collection, recycling rates etc.
5.3.	**Actions related to education and outreach**							

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
Action 5.3.1	Project inception and conclusion workshops.	High	FSI, DoF, Central/ State Govts. Central / State Govt. officials, Coast Guard, MARPOL experts, Research Institutes.	2024	2026	Central / State Govt. Officials, Research Institutes, Coast Guard, Researchers, technical, field staff.	Pre and Post evaluation: No. of workshops conducted Level of participation and no.of participants in the workshops	Evaluation report Pre- and post-workshop surveys, Workshop documentation and report, Feedback from stakeholders
Action 5.3.2	Implementation of flagship SBMPL coastal clean-up projects at Central/State level.	High	FSI, DoF, Central/ State Govts. Central / State Govt. officials, Coast Guard, MARPOL experts, Research Institutes.	2024	2026	Central / State Govt. Officials, Research Institutes, Coast Guard, Researchers, technical, field staff.	Volume of Plastic litter collected Length of coastline cleaned, No. of participants, Community engagement	Reports, Feedback and survey forms
Action 5.3.3	SBMPL awareness programs in beaches/ landing centres / harbours along Indian coast on SBMPL data collection methods, for database development.	High	FSI, DoF, Central/ State Govts. Central / State Govt. officials, Coast Guard, MARPOL experts, Research Institutes.	2024	2026	Central / State Govt. Officials, Research Institutes, Coast Guard, Researchers, technical, field staff.	Awareness programs (Approx.8-10 nos) No. of participants reached. Media coverage	Pre-and post-programme assessment / Feedback and survey forms

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
Action 5.3.4	Inclusion of topics on marine litter, international conventions (MARPOL, LP, FAO VGMFG etc.), national laws, acts, rules and regulations, impacts on marine environment and marine biodiversity, etc., in syllabus of students at school (such as NCERT) and college level.	Medium	FSI, DGS, MoEFCC, Central and State Education Departments, NCERT, Academic Institutions	2024	Continuous	University / Academic staff, Scientists, student representatives	Academic syllabus	Pre- and post-assessments, quizzes, and competition Surveys and interviews with students, teachers and parents.
Action 5.3.5	Organising 'Hackathon' for college students for novel ideas for addressing sea-based marine plastic litter	Medium	FSI, DGS, MoEFCC, Central and State Education Departments, Academic Institutions	2024	2025	University / Academic staff, Scientists, student representatives	No. of programmes conducted (Approx 10).	Pre- and post-assessments, quizzes, and competition Surveys and interviews with students and teachers.
Action 5.3.6	Production of multimedia awareness campaigns, materials on source and impacts of MPL for sensitisation for public, fishers, boat owners, school and college students, social media, radio and TV.	Medium	FSI, NTF, Fisheries Depts., Central and State Education Departments, Academic / Research Institutions.	2024	2025	Scientists, Experts, Students, Technical staff,	No. of multimedia produced, sign boards, no. of views, telecasts	Feedback through surveys and polls, News articles
Action 5.3.7	Develop and promote alternatives to synthetic fishing gear.	High	Central, State Govt. and other Research institutes in collaboration with other stakeholders.	2024	2026	CIFT, Scientists, Technical, State FDs, Researchers.	Number of research projects/studies initiated on alternative materials and gear designs and Number of prototypes developed and tested for	Publications Reports

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
							different fishing gear types.	
Action 5.3.8	Develop and implement gear marking/tracking systems.	High	Central, State Govt. and other Research institutes in collaboration with other stakeholders.	2024	2026	CIFT, CIFNET Scientists, Technical, State FDs, Researchers.	Number of research projects/ studies initiated on development of gear marking/ tracking system. Percentage of fishing vessels or gear complying with the marking/tracking system.	Publications Reports
Action 5.3.9	Develop techniques/designs for SBMPL collection and recovery from the sea.	High	Central, State Govt. and other Research institutes in collaboration with other stakeholders.	2024	2026	CIFT, Scientists, Technical, State FDs, Researchers.	Number of research projects/studies initiated on development of techniques /designs for SBMPL collection and recovery from sea. Number of prototypes developed and tested .	Publications Reports

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
Action 5.3.10	R & D - Ecotoxicity assessment of SBMPL/ microplastics (MP) from sea-based activities; impact on marine organisms and ecosystems.	Medium	FSI, DoF, ICAR/ Research Institutes	2024	2026	Lab and field equipment, Consumables, chemicals, etc.	Research publications, communications (Technical reports and progress reports etc)	Publications, Reports Visual outputs for awareness creation
5.4.	**Actions related to regional and global cooperation**							
Action 5.4.1	Training on FAO Voluntary Guidelines on the Marking of Fishing Gear, recovery of abandoned and lost fishing gear, etc., and other aspects of combating MPL.	High	NTF, FAO, FSI, Ministry of Fisheries.	2024	2026	External experts, India Govt. officials.	No.of training programmes conducted. (Approx.4)	Pre-and post-programme assessment / Feedback and survey forms
Action 5.4.2	Explore possibilities of collaboration, knowledge sharing and control/ mitigation of SBMPL with regional countries or bilateral programmes and global programmes like GloLitter, IMO, etc.	High	NTF, IMO, Regional countries, Ministries.	2024	2026	External support, India, Central and State Dept. officials, funds.	Post project evaluation Number of potential partners identified and contacted, No. of programmes conducted (approx. 4)	Feedback Reports, MoUs/ Agreements if any
Action 5.4.3	Exchange of expertise among member countries (Indian Ocean Rim Association (IORA) and IMO) on devices and mechanisms to collect SBMPL in beaches and hotspots in oceans.	Medium	NTF, Ministries.	2024	2026	External , India, Central and State Dept. officials, funds.	Post project evaluation Number of potential partners identified and contacted, No. of programmes conducted	Feedback Reports, Proof of exchange of Best Management Practices MoUs/ Agreements if any
5.5.	**Actions related to private sector engagement**							

	Description	Priority Level (high, medium, low)	Responsible authority	Start Date	End Date	Resources required (staff, tech, etc.)	Progress indicators	Methods of verification
Action 5.5.1	Private and public plastic collection and recycling units in landing centres. Utilization of collected plastic waste for recycling/re-use	Medium	Fishing vessel owners, Fisher Associations, Central and State Governments or any other key stakeholder	2024	2026	Private entrepreneurs, State Governments.	Total volume of plastic waste utilized	Reports Database on Marine Plastic Litter (MPL) recycled/ re-used .
Action 5.5.2	Engaging Fisherwomen in SBMPL recycling activities like collection, classification, grading, shredding of plastics, etc.	Medium	Department of Fisheries of States, Fisherwomen Associations.	2024	2026	Central and State Government officials, NGOs, fisherwomen.	No.of fisherwomen engaged in activities	Reports and database generated.

5.6. Support required from IMO and FAO for NAP implementation

While implementing the NAP, NTF shall require guidance from IMO, and FAO in various aspects as indicated below:

NAP Action	Task
5.1.2	Marking of fishing gear based on "FAO Voluntary Guidelines on the Marking of Fishing Gear"
5.1.6	Identification of best waste management practices for recycling and reuse of recovered SBMPL, ALDFG.
5.2.5	Skill upgradation of personnel in respective project implementing agencies as required for Govt and other staff.
5.3.2 & 5.3.3	SBMPL coastal cleanup, workshops, training in data collection methodology, for database development.
5.3.7	Develop and promote alternatives to synthetic fishing gear
5.3.8	Development of gear markers/trackers
5.3.9	Techniques/designs for SBMPL collection and recovery from sea.
5.4.1	Training/Guidance on FAO Voluntary Guidelines on the Marking of fishing gear, recovery of abandoned and lost fishing gear, etc., and other aspects of combating SBMPL.
5.4.2	Explore possibilities of collaboration, knowledge sharing and control/ mitigation of SBMPL with regional countries or bilateral programmes and global programmes like GloLitter, IMO, etc.
5.4.3	Exchange of expertise among member countries (IORA and IMO) on devices and mechanisms to collect SBMPL on beaches and hotspots in oceans.

6. Expected Outputs and Outcomes

- Reduction and control of SBMPL including ALDFG from shipping and fishing activities.
- Infrastructure development at fishing harbours/ fish landing centres for collection of SBMPL, storage and disposal for reuse, recycle, etc.
- Assessment of extent (and hotspots) of SBMPL in the Indian coasts.
- Removal of SBMPL from Indian seas to an approximate quantity of 10 tonnes in a year for four years.
- Awareness creation among the stakeholders including fisherfolk, industries, students, various departments, NGOs and public at large, using short films, pictures, multimedia posts, on marine plastic pollution and their ill effects in marine organisms, marine environment and human health.
- Georeferenced interactive map / database for analysing the sources and sink of MPL including ALDFG and assessment of quantity and quality of MPL including ALDFG and development of mitigation measures.

(http://www.cmfri.org.in/Beach_Litter_Map_Final_4/Beach_Litter_Map_Final_4.html#6/15.657/81.607)

- Assessment of impact of sea-based marine plastics / sea-based marine microplastics in marine organisms and human health.

- A thorough understanding of climatic and oceanographic factors influencing the distribution of SBMPL for predictive modelling and forecasting.

- Significant achievement in research / private sector on EPR and innovations on alternative biodegradable materials for fishing gear and technologies for reuse and recycling.

- By adopting suitable strategies, schemes, the final goal for reducing marine plastic debris by 70% in 2026 can be achieved.

- Implementation of strategies to achieve the UN Sustainable Development Goals (UN SDG) 14.1 in respect of the nation. (Target 14.1: Reduce marine pollution. UN definition: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution).

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Annexure 1 – INDIA Country Assessment Report on sea-based MPL with specific reference to shipping and fisheries

1. Country Context

Key facts and geographical scope of the Assessment

1.1 General Information

Population: 1.40 billion (Approx)	Coastline (km) 8118 km (Source: Handbook of Fisheries Statistics,2022)

India coastline comprises of India peninsular mainland, Lakshadweep Islands (Arabian Sea) and Andaman & Nicobar Islands (Bay of Bengal, Andaman Sea).

1.2 Language:

Hindi and English are used for official purposes, besides State languages. There are 22 different languages recognised by Constitution of India.
(https://www.india.gov.in/india-glance/profile)

1.3. Brief description of governance system

India has a federal system of governance. Central and State governments have constitutional status. People of States elect Members of Legislative Assembly and Members of Parliament. Both Parliament at Central level and Legislative Assemblies at State level have powers to enact laws, pertaining to the subjects concerned. It has legislative, executive and judicial systems.

President and Vice-President are elected by Members of Legislative Assembly and Members of Parliament. Besides State Assemblies and National Parliament, Judiciary also exists in States and Supreme Court as its apex body.

Overview of policies and legislation relating to maritime transport, fishing sector, marine environment protection and waste management, in particular in relation to sea-based marine plastic litter

Provide a brief description of existing prevention and/or reduction policies/laws of marine plastics (from international shipping, domestic shipping, fisheries and ports).

National Maritime Transportation Policy			
Major Industries Do your major industries include any of the following?		Imports and Exports Do your imports/exports include any of the following?	
Crude oil	☒	Crude oil	☒
Gas or natural gas	☒	Gas or natural gas	☒
Dangerous goods (chemicals)	☒	Dangerous goods (chemicals)	☒

Fishing	☒	Other	☐
Shipbuilding or Ship repair	☒		
Tourism involving domestic ferries or passenger ships	☒		
Other	☐		

Passenger Transportation: Data currently not available.		Maritime Tourism: Data currently not available.	
(No. per annum)		(No. of cruise ships per annum)	

National Maritime Transportation Policy

Adopted	☐	In preparation	☐	No information	☒

India prepares a 10-yearly vision document. The last one called Maritime Vision 2030 was released in 2021. It presents India's vision, plans and initiatives to ensure a Safe, Sustainable and Green Maritime Sector.

The mission and vision of the Directorate General of Shipping is available at https://www.dgshipping.gov.in/Content/RTI.aspx?menu_id=244

Vision statement: To be recognized globally as a highly effective, efficient, responsible and progressive maritime administration.

Mission Statement:

Provide an effective supervisory and regulatory regime conducive to: achieve, safe, efficient and secure shipping; protect the marine environment; all round growth of maritime university.

Provide support to the Government of India in developing and implementing a holistic and integrated maritime development program that has a positive impact on national economy;

Develop and Implement policies that facilitate an environment which is conducive for promoting an investment in the expansion of a modern merchant fleet under the Indian flag and develop globally competitive ship building and repair facilities;

Develop and sustain a high-quality human resource management catering to the needs of global including national maritime industry for competent seafarers;

Ensure good governance by adhering to the highest standards of integrity, quality and efficiency in delivery of shipping services through constant innovation, technology upgradation and value addition.

Develop measures to ensure compliance of relevant international instruments relating to safety and security of ships, protection of environment and welfare of seafarers.

Maritime Strategy & Policy: (brief description)

To foster the development and ensure the efficient maintenance of an Indian Mercantile Marine in a manner best suited to serve the national interests and for that purpose to establish a National Shipping Board to provide for the registration, Certification Safety and Security of Indian ships and generally to amend and consolidate the law relating to Merchant Shipping. Further the Government of India has also formulated and released Maritime India Vision 2030. Maritime India Vision 2030 envisages taking India to global maritime leadership. Identifies over 150 initiatives across 10 themes, covering all the facets of the Indian Maritime Sector and is a comprehensive effort to define and meet the national maritime objectives.

National Maritime Administration

Focal Point (Ministry): (Name and brief contact details)

GOPIKRISHNA CHOCKALINGAM
Member Delegate-National Task Force,
Engineer & Ship Surveyor cum DDG (Tech)
Directorate General of Shipping,
I Think Techno Campus, 9th Floor, BETA Building, Kanjumarg (East),
Mumbai - 400042
INDIA
Tel No: 0091-22-25752036

Maritime Legislation

National Legal Framework

National Merchant Shipping Act / Merchant Marine Code:

	Adopted ☒	Not adopted ☐	In progress ☐

Merchant Shipping Act 1958 as amended from time to time.

Enforcement Monitoring Authority:

Director General of Shipping,
i-Think Techno Campus, 9th Floor, Beta building, Kanjurmarg (East), Mumbai 400042.
INDIA

Legal Framework for Marine Environment Protection (MARPOL)

MARPOL Annexure V ratified by India on 31-12-1998 and entered into force on 11-09-2003.

National Legislation*: Merchant Shipping Act 1958 as amended from time to time.*

	Adopted ☒	Not adopted ☐	In progress ☐

Enforcement Monitoring Authorities: (Please list)

Directorate General of Shipping, Ministry of Ports, Shipping and Waterways,
i-Think Techno Campus, 9th Floor, Beta building, Kanjurmarg (East), Mumbai 400042.
INDIA

Flag State Implementation & Port State Control Responsibilities

Flag State Implementation

No. of Surveyors:	35* *They are also PSCOs	No. of Ship Detentions (under National Flag): (last 2 years). Specify type of vessels (cargo, fishing, passenger etc.)	In 2020: 17 vessels In 2021: 28 vessels

In 2020: (17) Oil Tanker: 2, Tug boat: 5, Chemical Tanker: 1, General Cargo: 4, Offshore vessels: 2, Other types: 3

In 2021: (28) Oil Tanker: 2, Tug boat: 12, Chemical Tanker: 1, General Cargo: 4, Offshore vessels: 6, Other types: 3

Port State Control (PSC) Implementation

MoU(s) on PSC:

Abuja MoU	☐	Paris MoU	☐
Black Sea MoU	☐	Riyadh MoU	☐
Caribbean MoU	☐	Tokyo MoU	☐
Indian Ocean MoU	☒	Viña del Mar or Latin-American Agreement	☐

Implementation of Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing ☒

It is under consideration. (as per Fisheries Bill 2020)

Enforcement Monitoring Authorities: (Please list)

NA

(Within the territorial waters of 12 NM the enforcement is by the respective ~~Port~~ Coastal States through State Marine Fishing Regulation Acts. In the area beyond 12 NM and within EEZ it is the responsibility of the Ministry of Defence through Coast Guard and Navy.)

No. of Port State Control Officers:

Nil.

Though there are 35 PSCOs, Illegal, Unreported and Unregulated Fishing (IUU) is not monitored by PSCOs.

Main and Secondary Ports: (Please list, if known)

Major Fishing Harbours – 07; Fishing Harbours - 58

Major Fishing Harbours (07): West Bengal: Roychowk, Petuaghat; Odisha: Paradip; Andhra Pradesh: Visakhapatnam; Tamilnadu: Madras; Kerala: Cochin; Maharashtra: Sassoon Dock.

No. of Fish Landing Facilities:	1363	No. of Cargo Terminals:	Data currently not available	No. of Cruise Ship Terminals:	Data currently not available

Marine Environment Protection

Pollution Prevention

Port Reception and Waste Management Facilities: Yes, available at 63 facilities (List in Annexure A). All these PRFs have facilities for reception of ship generated wastes including plastic material/wastes. Fisher gears are not brought to PRFs.

Available Yes ☒ No ☐

If yes, which Annex of the MARPOL Convention is applicable?

As per MARPOL Annex- I, II, IV, V & VI

Annexure A

Name of Ports registered

Total 63 ports are registered on Portal as of now; the list is as follows in alphabetical manner.

No.	Name	No.	Name
1	Adani PetronetDahejPort Pvt Limited	34	JSW Jaigarh Port Ltd.
2	Adani Ports and SEZ Ltd,Mundra	35	Kakinada Anchorage Port (Government of Andhra Pradesh)
3	AEML DahanuPort - Adani	36	Kakinada Deep Water Port (sea port)
4	Ambuja Cement Ltd, - Muldwarka	37	Kamarajar Port Ltd
5	AmbujaMagdalla Jetty	38	Karaikal Port Pvt Ltd.
6	AmbujaUlwaJetty	39	Karwar Port
7	AMNS India Ltd, Hazira, Surat (Gujarat)	40	Kattupalli Port-Ennore Chennai
8	Angre Port Pvt Ltd	41	Kolkata Port Trust-Kolkata Dock system
9	AzhikkalPort	42	Kollam Port
10	Bedi Group of Ports - owned by GMB	43	Krishnapatnam Port (KPCL)
11	Beypore Port	44	Magdalla Group of Ports -owned byGMB
12	Bharat Oman Refineries Ltd SPM Sikka	45	Mandvi Group of Ports -owned by GMB
13	Bhavnagar Group of Ports -Owned by GMB	46	Mormugao Port Trust
14	Captain of Ports Goa	47	Mumbai Port Trust
15	ChemplastCuddaloreVinyls Terminal	48	NavLakhi Group of Ports- owned by GMB
16	ChemplastSanmar Limited Terminal Karaikal	49	New Mangalore Port Trust (NMPT)
17	Chennai Port Trust	50	Nhava Supply Base
18	Cochin Port Trust	51	Okha Group of Ports - Owned by GMB
19	Dahej RORO Jetty owned by GMB	52	Paradip Port Trust
20	Dahej Group of Ports - Privately owned terminals	53	Porbandar Group of Ports -owned by GMB
21	Deendayal or Kandla Port Trust	54	Port Management Board, Andaman and Nicobar Islands
22	Dhamra Port Company Limited	55	Reliance Hazira Shipping and Offshore Division
23	Ennore Minor Port -Coromandel	56	Revdanda JSW Steel (Salav) Ltd
24	Essar Bulk Terminal Ltd-Surat	57	Sanghi Port
25	Essar Bulk Terminal-Salaya	58	Sikka Ports and Terminals Ltd.
26	Finolex Terminal Ratnagiri	59	Thirukkadaiyur Port
27	Gangavaram Port	60	UltraTech Captive Jetty Sewagram
28	Gopalpur Ports Ltd	61	UTCL Captive Berth - Pipavav
29	Gujarat Pipavav Port Ltd	62	V. O. Chidambaranar Port Trust Tuticorin
30	Haldia Dock Complex - KoPT.	63	Visakhapatnam Port Trust
31	Hazira (Surat) Port		
32	Jawaharlal Nehru Port trust (JNPT)		
33	JSW Dharamtar Port		

Information on dumping under London Protocol (LP)

Legal Framework for Dumping at sea (LP)

National Legislation:

Adopted ☐ Not adopted ☐ In progress ☒

Enforcement Monitoring Authorities: (Please list)

Ministry of Environment, Forests and Climate Change is piloting the legislation and ratification of London Protocol. Dumping related to ship and ports have been covered under the New Legislation of Merchant Shipping Bill, which is under discussion with the Ministry of Law, Government of India.

Maritime / Fisheries Training

Competencies (STCW 1978 and STCW-F)

Authority Issuing Certificates of Competency:

Towards Maritime Training, Directorate General of Shipping issues the Certificate of Competency as per STCW98 as amended. STCW-F still in progress.

No. of Training Centers for officers for fishing vessels:	3	No. of Training Centers for officers for other vessels:	156 (Merchant Shipping)
No. of Certified Officers	89525 (Merchant Shipping)	No. of Certified Ratings	116262 (Merchant Shipping)

Training Centres: There are about 75 Pre Sea and 81 Post Sea institutes, for Merchant Shipping as per the link attached.

http://220.156.189.33/esamudraUI/loadINDoSApplnExt.do?method=loadIndexPage

Training facilities at CIFE, CIFT, CMFRI, CIFNET and state level fisheries training centres will be used for imparting training.

National Fisheries Policy

Major Industries

Do your major industries include any of the following? Please include your national definition of industrial/large scale fisheries.

	Import	Export
Longline	☐	☐
Purse seine	☐	☐
Seine nets	☐	☐
Trawls	☐	☒
Gillnets and entangling nets	☐	☐
Traps	☐	☐
Hooks and lines	☐	☐

Imports and Exports

Do your imports/exports include any of the following?

	Import	Export
Longline	☐	☐
Purse seine	☐	☐
Seine nets	☐	☒
Trawls	☐	☒
Gillnets and entangling nets	☐	☒
Traps	☐	☐
Hooks and lines	☐	☒

National Fishing Policy

Adopted ☒ In preparation ☐ No information ☐

National Fisheries Policy, 2017 is adopted.

Does the National Fishing Policy include any specifications / initiatives aiming to prevent and/or reduce marine plastic litter?

No

Does the National Fishing Policy include any specific actions/initiatives aiming to prevent and/or ALDFG?

No

National Fishing Administration

Focal point (Ministry): (Name and brief contact details)

GloLitter National Focal Point: Chairperson, Ms Neetu Kumari Prasad, IAS , Joint Secretary (Marine Fisheries), Department of Fisheries, Ministry of Fisheries, Animal Husbandry &Dairying, Krishi Bhawan, New Delhi – 110 001, INDIA.

Strategy & Policy: (brief description regarding prevention and/or reduction of marine plastic litter and/or ALDFG)

Section 6.6.2 of the National Fisheries Policy, 2020, recognizing "abundance of solid waste and in particular, plastics (especially, micro-plastic particles) have increased manifold in the sea" affirmed "Strengthening regulatory mechanisms to control pollutants, including plastics, and to encourage leading by example by taking necessary measures to reduce pollution from fishing".

Fishing Legislation

National Legal Framework

Fishing Act / Code:

Adopted ☐ Not adopted ☐ In progress ☒

Does the Fishing Acts/ Codes include provisions to prevent and/or reduce marine plastic litter? If yes, please list them.

No.

Does the Fishing Acts/ Codes include provisions to prevent and/or reduce abandoned, lost or otherwise discarded fishing gear? If yes, please list them.

No.

However, in the draft "INDIAN MARINE FISHERIES BILL, 2021" proposed by the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying (MFAH&D), there is a provision for confiscating the abandoned fishing gear by the foreign fishing vessels while fishing in the Indian EEZ beyond 12 NM.

Enforcement Monitoring Authority:

Indian Coast Guard has been nominated as coordinating authority for Oil spill response in maritime zones of India.

Fisheries is a state subject, at regional levels, fisheries development is governed by respective State Fisheries Departments. All the Coastal States and Union Territories regulate their marine fisheries through Marine Fishing Regulation Acts (MFRAs).

Description of key maritime and fishing sector characteristics

This should briefly provide an overview of the maritime/fisheries industry in terms of international shipping and domestic shipping fleet, fisheries fleet, ports and cargoes/catch received at main and secondary ports.

Registered Cargo Fleet	No.	GT		No.	GT
Dry Cargo Ships	250	3,826,164	Passenger Vessels	120	179712
Tankers	156	6,308,161			
Other	981	2,908,817			

Cargoes	Volume	USD	Total catch	Volume	USD
Port 1	Data currently not available	Data currently not available	Fish type 1	Data currently not available	Data currently not available
Port 2			Fish type 2		
Port 3					

Fishing Fleet:

Updated information on fisheries fleet can be collected from the ReALCraft (Registration And Licensing of Fishing Craft) database of the Department of Fisheries, Government of India. Real Craft (fishcraft.nic.in)

'ReALCraft' is a web enabled workflow based online application system for Vessel Registration under MS Act and License Certificate under MFR Act to the fishing vessels operating along the Indian coast. With the total registration, the Security Agencies, citizens and other approved Government Machineries would be able to track the status of any Registered Vessel at any point of time from anywhere, through internet or via SMS. It is a web-enabled solution under open-source technology. ReALCraft or similar database shall be designed as per requirement.

ReALCraft will also be useful to regulate the movements of fishing vessels, to strengthen security of fishermen in the sea and also coastal security. This will also enable to prevent IUU - Illegal, unregistered and un-reported vessels in the territorial waters.

ReALCRaft

(Registration And Licensing of Fishing Craft)

Category	Vessel Registration RC	License for Fishing LC
Deep Sea Fishing Vessel	149	94
Motorized non-Mechanical	143656	109071
Motorized Mechanical	64476	51871
Non-motorized	48763	25851

State-wise landing details are available in Handbook on Fisheries Statistics: 2022.

Registered Fishing Fleet Industrial/ large scale[3] Information is not available	No. vessels	No. fishers	**Fishing Fleet Artisanal-** 48,686/ (Registered) **small scale[4]-** 1,42,532 (Registered)	No. vessels	Registered/ Estimated?	No. fishers	Registered/ Estimated?
Surrounding Nets			Surrounding Nets	Only total numbers of vessels are available, but no information is available regarding number of vessels or fishers using the gears listed			
Seine Nets			Seine Nets				
Trawls			Trawls				
Dredges			Dredges				
Lift Nets			Lift Nets				
Falling Gear			Falling Gear				
Gillnets and Entangling nets			Gillnets and Entangling nets				
Traps			Traps				
Hooks and lines			Hooks and lines				
Other gears *			Other gears *				

Overview of regional cooperation related to marine plastic litter reduction activities/agreements

Provide a short list of relevant agreements and activities related to marine plastic litter with a focus/component on sea-based sources.

Regional Cooperation and agreements

Agreement related to Marine Plastic Litter (MPL): (brief description, including regional action plans)

MoES, Government of India, has entered into agreements with Norway and UK on Marine Plastic Litter.

[3] India's fisheries sector primarily operates at a small-scale and traditional level. While there's no national definition for 'industrial/large scale fishery,' few fishing practices do operate on a larger scale compared to others. However, regulations for all marine fishing activities fall under individual state-specific Marine Fishing Regulation Acts (MFRAs). These MFRAs may categorize and regulate fishing practices with varying scales within their respective jurisdictions.

[4] Artisanal fishers typically operate small boats, often non-motorized or with limited engine power. Their fishing gear is traditional and often handmade, like nets, traps, and lines. Small-scale fishers means owner-operated or entrepreneurship fisheries other than large firms or companies, involving small amount of capital and energy and making single-day or multi-day fishing trips, to provide for subsistence, domestic consumption or for export.

Indo-Norway program Title: **Marine Spatial Planning (MSP) framework for Puducherry and Lakshadweep**
Collaborating Institute / Ministry in Norway: Norwegian Environmental Agency (NEA)
Period: 2021-2023
Short Description of the program:The Pondicherry and Lakshadweep coastlines are chosen for the Marine Spatial Planning (MSP) framework as part of the Indo-Norway (MoES-Norwegian Environmental Agency) Integrated Ocean Initiative, to balance growth alongside sustainable management of ocean resources and coastal environment preservation.

Indo-UK program Title: **Marine Litter: Fate of plastics from source to sink**
Collaborating Institute / Ministry in UK: CEFAS, DEFRA
Period: 2019-2022 (Common wealth Litter Program cLip-1 & 2)
Short Description of the program: A collaborative study on Marine Litter through Commonwealth Litter Programme was agreed. As the standardisation of methods for sampling, processing and analysis of samples is an issue of international concern, an analytical protocol for microplastic was developed jointly. Beach monitoring for microplastics sampling and analysis was carried out by NCCR and Cefas scientists in 2019 and 2020. Microplastics sampling and analysis for coastal water, sediments, lagoon and mangrove environments are carried out jointly during 2022 & 2023. So far, four research articles have been published in peer reviewed journals.

Focal point for each agreement related to MPL (Ministry): (Name and contact details)
Dr.Pravakar Mishra, Scientist-G, National Centre for Coastal Research (NCCR), National Institute of Ocean Technology (NIOT) Campus, MoES, Velachery – Tambaram Main Road, Pallikaranai, Chennai 600100, INDIA.
Tel: +91 44 66783591; Email:mishra@nccr.gov.inNCCR

State of Knowledge on SBMPL at National and Local levels

Provide a list of relevant national and local stakeholders (government agencies, academia, expert NGOs, civil society organizations (CSO), etc.) working on building evidence of the marine plastic litter problem and their related activities with a focus/component on sea-based sources.

National and Local Stakeholders building evidence on SBMPL
Name of the initiative/project/program: (brief description, including scope and objectives, timelines and main results until today) FSI, TERI, NCCR, CIFT, Focal point for each initiative listed: (Name and contact details) For FSI programmes: Dr. R. Jeyabaskaran, Director General, Fishery Survey of India, 2nd Floor, Plot No.2A, Unit No.12, New Fishing Harbour, Sassoon Dock, Colaba, Mumbai 400005. INDIA. Tel: +91-22-22188234 (D); Email: dg@fsi.gov.in For TERI's Programmes: Dr Yogesh Gokhale Area Convener of Centre for Forest Mgmt. & Governance; and Nutritional Security TERI Western Regional Centre, Mumbai Office No. 318, Raheja Arcade, Sector-11, CBD-Belapur, Navi Mumbai - 400 614 Maharashtra

Tel: (+91 22) 2758 0021, 4024 1615
Email: terimumbai@teri.res.in

For NCCRs Programmes:

Dr.Pravakar Mishra, Scientist-G, National Centre for Coastal Research (NCCR), National Institute of Ocean Technology (NIOT) Campus, MoES, Velachery – Tambaram Main Road, Pallikaranai, Chennai 600100, INDIA.

Tel: +91 44 66783591; Email:mishra@nccr.gov.in NCCR

For CIFT's Programmes:

The Director,

ICAR-Central Institute of Fisheries Technology
CIFT Junction, Willingdon Island
Matsyapuri P.O., Cochin-682 029, Kerala
Ph: 0484-2412300
E-mail:aris.cift@gmail.com; akmu.cift@icar.gov.in
Website:www.cift.res.in

FSI's Programme on SBMPL

The Fishery Survey of India (FSI) survey vessels are actively retrieving the abandoned, lost, or otherwise discarded fishing gears (ALDFG) and other SBMPL encountered during their voyages. Several drifting and entangled longlines, and abandoned fishing nets were being collected and brought back to shore. In addition to the ALDFG, other plastic debris including polythene bags, water bottles, cans, plastic sheets etc., are also being retrieved.

The survey operations also encounter large quantities of artificial fish aggregating devices (FADs) made up of plastic bottles and coconut spadix being deployed all along the survey area. The Scientist Participants collect the data including type, number and weight of the debris collected, which will be analysed and extrapolated to the entire survey area to estimate the total mass of plastic debris in the survey area i.e., the entire Indian EEZ.

TERI,s Programme on Plastic Pollution:

The Energy and Resources Institute (TERI) during 2019 has initiated a joint project entitled 'Promotion of Countermeasures Against Marine Plastic Litter in South East Asia and India' in collaboration with the United Nations Environment Programme (UNEP). The project focused on creating awareness about marine plastic pollution and plastic waste management in Mumbai Metropolitan Region (MMR). Activities including clean-up activities, stakeholder interaction, training of trainers, and awareness workshops were conducted under the campaign called 'Rethink Plastic' which was launched by TERI.

NCCR's Initiatives on MPL:

NCCR, under the Ministry of Earth Sciences, is tackling marine plastic pollution with impressive strides. They generated the first baseline data on microplastics along India's east coast, paving the way for future monitoring and mitigation. Additionally, they established a standardized protocol for sampling and analyzing marine litter and microplastics, ensuring uniform data collection across the country. NCCR's outreach extends beyond research. Since 2018, they've organized beach clean-up drives and awareness programs at 75 beaches nationwide, actively engaging communities in combating this issue. To further empower citizen participation, they developed a mobile app and dashboard for beach litter data collection, promoting a collaborative approach.

Recognizing the global nature of the problem, NCCR actively collaborates with international partners like Cefas (UK), CSIRO (Australia), JAMSTEC (Japan), and Norway, seeking knowledge exchange and developing trans-boundary solutions for this pressing environmental challenge.

ICAR-CIFT's Programme on Plastic Pollution:

ICAR-Central Institute of Fisheries Technology (ICAR-CIFT) - the only technology Institute in India which caters to the broad spectrum of fisheries from harvest to post-harvest operations – has been in the service of the nation since 1957 under the Indian Council of Agriculture Research (ICAR), New Delhi. ICAR-CIFT has made important contributions to marine litter research, addressing diverse challenges related to fishing gear, microplastics, and responsible waste management. CIFT has published the first Indian study on fish and gear loss, now a FAO circular, and actively investigate abandoned fishing gear, ghost fishing, and microplastic contamination in seafood. Their research extends to assessing fishing-related debris along the Kerala coast and exploring the environmental impacts of discarded FRP fishing boats. ICAR-CIFT collaborates internationally, contributing to the GESAMP report on sea-based marine litter sources. Institutes efforts demonstrate a comprehensive approach to understanding and mitigating marine pollution, informing policies and management strategies for a cleaner ocean.

***

Annexure 2 - Data/information needed for the updated Baseline Report on Marine Plastic Litter (MPL) with specific reference to shipping and fisheries

Describe the major gaps, if any, together with the priority for each gap, as well an indication of which agency or authority is responsible for this activity. Add this information as an appendix to the Template above.

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
1. Ratification of MARPOL Annex V and domestic implementing legislation/regulations	• Dates of ratification and national implementing legislation. • Name Enforcement Monitoring Authorities. • Indicate gaps and priorities if revision/updating is necessary to address SBMPL, specifically.	11-06-2003. Merchant Shipping (Prevention of Pollution of Seas by Garbage from Ships 2009) Rules were notified on 26th November 2009. Director General, Shipping PRF: Major ports and key non major ports controlled by Central Govt; audited by Surveyors of MMD. Minor ports: controlled by State Govt; no mechanism to ensure compliance. Enforcement mechanism to ensure compliance by ports with respect to obligation to provide port reception facilities. <u>Gaps</u>: Applicability of Part XI A of the MS Act 1958 to Fishing Vessels.	There are 3 parts to this Annex V of MARPOL with respect to enforcement: • Survey and Certification of Indian Ships for Compliance. • Port State Inspection of Foreign Ships visiting India by MMD/DGS. • Provision of Port Reception Facilities for Garbage. Ministry of Ports, Shipping and Waterways. Ministry of Ports, Shipping and Waterways. Ministry of Fisheries

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
	• List National Maritime Transportation Policy and Administration. • Indicate, gaps, needs and priorities if revision/updating is necessary to address SBMPL, specifically.	India prepares a 10-Yearly vision document called Maritime Vision and the last one named Maritime Vision 2030 was released in 2021. It contains a full chapter defining India's vision and plans and initiatives to ensure Safe, Sustainable & Green Maritime Sector. (MIV 2030 Report.pdf (sagarmala.gov.in) None	Ministry of Ports, Shipping and Waterways.
	• Evaluate existing mandates, competencies, and capacities of relevant agencies relating to MARPOL Annex V, including the adequacy of Port Reception Facilities and current waste management practices. • Indicate gaps, needs and priorities.	Mandate for relevant enforcement agencies is derived from Merchant Shipping Act, 1958. Competencies of Surveyors are derived from recruitment rules. Training policies enable acquiring international levels. IMO Global Integrated Shipping Information System () provides the PRF available globally. PRF details should be provided / updated continuously, in this website. Further, SwachhSagar India website may also be explicitly updated to provide information and for monitoring specifically for plastics/ SBMPL.	MMD/DG Shipping Ministry of Ports, Shipping and Waterways.
	• To the extent known list number of trained Port State Control Officers (in MARPOL Annex V) in each main port.	There are about 35 trained PSCOs in the Mercantile Marine Departments (MMD) located at various regions (Mumbai, Kolkata, Chennai, Cochin, Kandla, Goa, Haldia, Jamnagar, New Mangalore,	DG Shipping/ Ministry of Ports, Shipping and Waterways

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
		Paradeep, Portblair, Tuticorin and Visakhapatnam). There are 12 major ports and 200 + non major ports in India. Main ports are covered by PSCOs from respective jurisdictional MMD.	
	• If none, or more is needed, list training necessary.	Nil.	
2. Operational / technical practices aimed at reducing discharges of plastic litter from ships (notably in the context of MARPOL Annex V)	• Identify and list any existing incentives to use Port Reception Facilities, notably for repaired or used fishing gear, if any. • Identify gaps in existing regimes.	No incentives are being provided under Schemes. Incentive schemes shall be developed to ensure that all ships/Fishing vessel/Fishing Boats use PRFs.	Ministry of Ports, Shipping and Waterways, / Dept. of Fisheries
	• List current guidance documents used to implement MARPOL Annex V. • Indicate gaps, needs and priorities if revision/updating is necessary to address SBMPL, specifically.	Documents such as Engineering Circulars (1 and 2 of 2013), DGS Order No. 02 of 2018, DGS Order No. 05 of 2019 and Addendum No. 1 to DGS Order No. 05 of 2019. Issuance of Circular for implementation of Amendments to MARPOL Annex V (HME substances and Form of Garbage Record Book) via MEPC 277(70).	DG Shipping DG Shipping
	• Identify and list the use of on-board garbage management plans, incl. existing record keeping practices for handling of garbage by ships under 400 GT (domestic fleet only). Note for ships > 400 GT, it is mandatory.	IMO Marine Environmental Protection Committee (MEPC) held its 79th session (MEPC 79) from 12th December to 17th December, 2022 where in the following has been approved towards amendments to MARPOL Annex V.	DG Shipping / Ministry of Ports, Shipping and Waterways

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
		Requirement for Garbage Record Book applies to ships of 100 GT and above (Currently it is applicable from 400 GT). Discharge of garbage for safety of ship or accidental loss of garbage for ships of less than 100 GT is to be reported in official log book. For 100 GT and above it is required to be reported in Garbage Record book. Entry into force of date of this amendment: 01 May 2024.	
	• Identify and list existing national or local on-board best waste management practices or guidelines, if known.	The existing best waste management practices are: Prohibition on carriage and usage of items made of Single Use Plastics on Indian Ships available, Facilitation of provision of Port Reception, and Facilities and tracking end disposal of waste through on-line portal called Swachh Sagar. Both are available at DG Shipping website. https://www.dgshipping.gov.in	DG Shipping /Ministry of Ports, Shipping and Waterways
3. Ratification of London Protocol and domestic implementing legislation/regulations	• Dates of ratification and national implementing legislation. • If no dates, then the relevant National Environment Policy.	India is still to ratify the London Protocol. National Environment Policy 2006 is a response to India's national commitment to a clean environment, mandated in the Constitution in Articles 48 A and 51 A (g), (DPSP) strengthened by judicial interpretation of Article 21.	Ministry of Environment, Forests and Climate Change (MoEF & CC)

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
	• Indicate gaps, needs and priorities if revision/updating is necessary to address SBMPL, specifically.	Formulation of the National Marine Litter Policy has been initiated by Ministry of Earth Sciences and Ministry of Environment, Forest & Climate Change	
	• List Agency responsible for implementation. • Indicate needs and priorities, if necessary, to address SBMPL, specifically.	Rules are being framed. None as of now.	MoEF & CC/ Ministry of Ports, Shipping and Waterways
	• Evaluate existing mandates, competencies, and capacities of relevant agencies relating to disposal of waste at sea from land-based sources (as defined by the LP). • Indicate gaps, needs and priorities if revision/updating is necessary to address SBMPL, specifically.	MoEF & CC through Central and State Pollution Control Boards, National Green Tribunal have the mandate to control the liquid and solid wastes from land-based sources entering the coast. The Merchant Shipping Bill 2020 which is in the process of finalization for enactment should incorporate the SBMPL.	MoEF & CC Ministry of Ports, Shipping and Waterways
	• List current guidance documents used to implement LP. • Indicate gaps, needs and priorities if revision/updating is necessary to address SBMPL, specifically.	As above	MoEF&CC
	• List Waste Management Laws or Policies for domestic waste and responsible administration.	The Water (Prevention & Control of Pollution) Act, 1974, The Wildlife Protection Act 1972, The Environment Protection Act 1986, The Plastic Waste Management (PWM) Rules, 2016. Prohibition on carriage	MoEF & CC

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
	• Indicate gaps, needs and priorities if revision/updating is necessary to address SBMPL, specifically.	and usage of items made of Single Use Plastics by Ships and others. NA	
4. Implementation of FAO Voluntary Guidelines on the Marking of Fishing Gear, domestic implementing legislation/regulations and related initiatives	• Dates of implementation through SOPs/Guidelines • Indicate gaps, needs and priorities if revision/updating is necessary to address ALDFG problems.	In preparation	Dept. of Fisheries, MoFAH & D/ Dept. of Fisheries, State Govt./UTs
	• List Agency responsible for implementation or administration. • Indicate needs and priorities if revision/updating is necessary to address ALDFG problems.	In preparation	Dept. of Fisheries, MoFAH & D/ Dept. of Fisheries, State Govt./UTs
	• List current projects/plans to address ALDFG problems, including fishing gear marking, fishing gear design modifications, incentives for delivery of unwanted/fished- up fishing gear to ports/landing sites, etc.	In preparation	Dept. of Fisheries, MoFAH & D/ Dept. of Fisheries, State Govt./UTs
	• Identify and list existing national or local fishing gear best management practices or guidelines for fishers. • Indicate gaps, needs and priorities if revision/updating is necessary to address ALDFG problems.	In preparation	Dept. of Fisheries, MoFAH & D/ Dept. of Fisheries, State Govt./UTs
	• Identify and list active promotion, and existing practices, of marking of fishing gear (allowing owner identification) and fishing vessel identification number schemes.	In preparation	Dept. of Fisheries, MoFAH & D/ Dept. of Fisheries, State Govt./UTs
	• Is fishing gear marking (allowing owner identification) and/or fishing vessel identification associated to fishing licenses?	In preparation	Dept. of Fisheries, MoFAH&D/

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
	• Please specify differences between fisheries if any (e.g., small scale vs large scale, differences between different fishing gears/ methods, etc.)		Dept. of Fisheries, State Govt./UTs
	• Identify and list active promotion, and existing practices reporting mechanisms for lost fishing gear, if any.	In preparation	Dept. of Fisheries, MoFAH&D/ Dept. of Fisheries, State Govt./UTs
5. Inventory of relevant stakeholders and means of information	• Identify regional, national and local authorities responsible for maritime and fisheries sectors.	In preparation	National Level: Maritime sector: Ministry of Ports, Shipping and Waterways& Fisheries sector: Ministry of Fisheries, AH&D.
	• Identify and list important local fishing and coastal communities and their representatives.	In preparation	Dept. of Fisheries, MoFAH&D/ Dept. of Fisheries, State Govt./UTs
	• Identify and list relevant environmental NGOs.	In preparation	
	• Identify and list regional bodies and relevant RFMOs.	FAO, IOTC, Indo-Pacific Fisheries Commission (IPFC), SACEP, BOBP.	-
	• Identify and list most effective information channels to reach out to the different stakeholders in your country.	Electronic, Print, social media. Outreach programmes	-
	• Identify and list national and/or local 'champions' who can reach relevant communities.	TERI, South Indian Federation of Fishermen Societies (SIFFS)	Information may be obtained from the Coastal State Governments
	• List existing relevant links with potential Partnering Countries in your region. • Identify and list relevant maritime transportation/fisheries companies both national and foreign companies operating in your country. • Refer to list of LPCs and PCs.	In preparation	DG-Shipping/ Dept. of Fisheries, MoFAH&D

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
6. General awareness of, and awareness raising activities about, the impacts of pollution from ships and fisheries on the marine environment	• Identify maritime and fisheries training institutes or other bodies capable of instructing on MARPOL Annex V, London Protocol and FAO Codes and Guidelines. • Indicate needs and priorities if revision/updating is necessary to address SBMPL, specifically.	Teaching of MARPOL Annex V & London Protocol Teaching / Training: FAO	Indian Maritime University, The Mercantile Marine Department/ DG-Shipping FSI, MPEDA, Coastal State Governments, CMFRI, CIFT, CIFNET
	• List any existing training programmes and materials used in national training programmes for seafarers and fishing vessel personnel in education and training centers (i.e. (adaptations of the) IMO model course on marine environmental awareness). • Indicate gaps, needs and priorities if revision/updating is necessary to address SBMPL, specifically.	In preparation	Indian Maritime University & CIFNET The Mercantile Marine Department/ DG-Shipping
	• Identify and list any existing outreach and information campaigns (national/regional/local) specifically addressing fishing and other coastal communities.	Government of India and local administrations are implementing various flagship clean-up programmes including *Swachhta Abhiyaan*; *Suchitwa Sagaram, Sundara Teeram; Swachh Sagar, Surakshit Sagar*'/Clean Coast Safe Sea', coastal clean-up campaign, etc., which cover entire nation or state level clean-up programmes. In addition, several local/beach level clean-up programmes are being regularly conducted at local levels.	Ministry of Earth Science, Ministry of Ports, Shipping and Waterways/ DG-Shipping, MoEF& CC, Indian Coast Guard, Coastal State Governments/UTs, Ministry of Fisheries, Animal Husbandry and Dairying , Indian Fisheries Research and Education Institutes etc.
7. Any other relevant national or regional projects/action plans focusing on SBMPL	• List any relevant projects and national or regional contributors.	Yes. National Centre for Coastal Research (NCCR) under MoES, GoI having bilateral programmes with UK, Australia and Japan regarding MPL.	TERI, NCCR/MoES, CIFT, Green Waves Environmental Solutions etc., other institutions.

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
		NCCR is actively tackling marine plastic pollution through international collaborations. They partnered with Cefas (UK) on the "Fate of plastics" project, standardizing microplastic analysis methods and sampling beaches, coastal waters, and mangroves (2019-2023). With Norway, they developed a Marine Spatial Planning framework for Puducherry and Lakshadweep (2021-2023). Collaborating with JAMSTEC (Japan), they analyzed Arctic microplastics and explored AI-powered beach litter monitoring (2021-2023). Finally, alongside Australia and Singapore, they hosted a workshop on marine plastic debris in the Indo-Pacific region (2022).	
	• List other relevant cross-sectoral activities (maritime-fisheries-environment), if any.	In preparation	
8. Other issues of relevance	• List other issues of importance.		
9. Active registered fleet operating in your waters and main ports	• Number of vessels registered under national active fleet, including domestic operating fleet and fishing vessels.	Total number of Registered Fishing vessels = 2, 55, 476 Traditional = 48,686 Traditional Motorised = 1,42,532 Mechanized = 67,254 Deep Sea = 107	Dept. of Fisheries
	• Number and characteristics (vessel type and length) of foreign flagged vessels active or licensed in your waters.	There are no foreign flagged vessels active or licensed in Indian waters.	Dept. of Fisheries

Framework/Issue	Type of relevant information	Gaps and priorities identified (refer to EOI/Baselines you provided and update as necessary)	Agency or organization responsible
	• List major ports for handling cargos and fishing fleet.	Major Fishing Harbours = 07 1. Visakhapatnam 2. Chennai 3. Cochin 4. Kolkata (Roychowk) 5. Paradip 6. Mumbai (Sassoon Dock) 7. Petuaghat For port please see the list at page No..23	Dept. of Fisheries / Port Trusts/DG-Shipping
	• List of fishing harbors and landing sites with associated number of vessels and fishers.	Available in ReALCraft (fishcraft.nic.in)	Dept. of Fisheries
10. Dimension of the marine plastic pollution problem caused by ships	• Any estimate/study of the current share of marine plastic litter that originate from ships (incl. fishing vessels) in the marine environment.	SwachchhSagar Report available for Merchant vessels; (not available for fishing vessels).	Dept. of Fisheries/ DG-Shipping
	• If available, identify and list most frequently found plastic waste objects from ships (incl. from fishing vessels such as Abandoned, Lost or Otherwise Discarded Fishing Gear (ALDFG) and Fish Aggregating Devices (FAD)) on beaches and/or in port waters.	Fishing nets in trawling grounds, PET bottles, Plastic pouches etc.	Dept. of Fisheries