

Developments in progressing India's marine fisheries towards Marine Stewardship Council (MSC) certification

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Introduction

Ecolabelling is a market-based tool to promote the sustainable use of natural resources. Ecolabels are seals of approval given to products that are deemed to have fewer impacts on the environment than functionally or competitively similar products. The ecolabel itself is a tag or label placed on a product that certifies that the product was produced in an environmentally friendly way. The label provides information at the point of sale that links the product to the state of the resource and/or its related management regime. Sitting behind the label is a certification process. A range of ecolabelling and certification schemes exists in the fisheries sector, with each scheme having its own criteria, assessment processes, levels of transparency and sponsors. One of the first scientifically developed ecolabelling schemes, the Marine Stewardship Council (MSC) was set up by the World Wildlife Fund (WWF) and Unilever in 1997, but has been independent of them for past many years. The MSC is arguably the most comprehensive fisheries certification scheme in that it covers a range of species and deals with all aspects of the management of a fishery.

What is MSC Certification?

1) The Marine Stewardship Council (MSC) is an international not-for-profit organization established to transform the way the oceans are fished by creating market recognition and incentives for well managed and sustainable fisheries worldwide. The MSC has developed a logo to inform consumers that when they buy seafood products with a MSC logo they are

supporting healthier oceans and a healthier environment.

- 2) Only fisheries certified to be sustainable can use the MSC logo. MSC supports development of sustainable marine fisheries by promoting responsible environmentally sound, socially beneficial and economically viable fisheries practices while maintaining the biodiversity, productivity and ecological process of the marine environment. Both the end customer and the fishing industry gain through this certification.
- 3) MSC environmental standards for sustainable fishing are based on FAO Code of Conduct for Responsible Fisheries (CCRF). MSC Certification is a set of Principles and Criteria for sustainable fishing which is used as a standard in a third party, independent and voluntary certification programme. These were developed by means of extensive international consultative process through which the views of stakeholders in fisheries were gathered.
- 4) MSC has a strong and influential market presence (<https://www.msc.org/about-us/10-facts>). There are 9.5 million metric tonnes of seafood caught annually by MSC certified fisheries in 34 countries, which is almost 12% of the annual global harvest of wild capture fisheries. There are 24,768 products with the MSC ecolabel on sale to consumers in over 100 countries. There are about 3,000 MSC Chain of Custody certificate holders, operating in 34,500 sites, which link the certified fisheries to markets. Market use of the MSC label is particularly strong in Western Europe and North America, and is growing quickly in Japan.

The three basic principles of MSC Certification are

Principle (P1) : A fishery must be conducted in a manner that does not lead to overfishing or depletion of the exploited populations and for those populations that are depleted, fishery must be conducted in a manner that demonstrably leads to their recovery.

Principle (P2): Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species on which the fishery depends).

Principle (P3): The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.

To determine if each principle is met (for guidance on how certification can be approached see <https://www.msc.org/documents/get-certified/fisheries>), the MSC Fisheries Standard comprises 28 performance indicators (Fig. 1). These are used by independent conformity assessment bodies (CABs) to score the fishery (Fig. 2).

To ensure the MSC program and its associated benefits are accessible to all fisheries including those from the developing world, the MSC developed a set of precautionary risk-based indicators for the assessment of data-deficient fisheries - the Risk-Based Framework (RBF). However, RBF does not cover the assessment of management: Principle 3 of the Fisheries Standard.

Do Indian Fisheries need certification ?

In order to be competitive in global seafood trade (currently India's share of global seafood exports is 4% and it is growing), India needs to be proactive on seafood ecolabelling and, in future, aim for MSC certification of its major globally traded fisheries. In particular India would benefit from MSC certification of fishery products destined for the European and North American markets in two complimentary ways - enhanced economic

opportunities and market access for the fishing industry and enhanced international reputation for the quality of Indian fishery management. Besides, these there would be environmental and ecosystem health benefits. Some of these benefits that could be obtained by a commitment and effort toward MSC certification, depending on the nature of that commitment and its public exposure are listed below.

- **Fishing industry:** Recognition of good and heightened management of fisheries, preferred supplier status, newer markets and better pricing.
- **Retailers and wholesalers:** Commitment to sustainability, confidence in sustainability of product, meeting consumer demand.
- **Consumers:** Not contributing towards overfishing and ecosystem degradation and supporting the management effort.

Are Indian Fisheries Certifiable as per MSC standards ?

The MSC is a 'high bar'. Although there are exceptions, many Indian fisheries would likely not meet the requirements of the MSC standards. There are technical assessment methods, such as the Risk Based Framework, that are available for MSC assessment in data limited situations, and these may help relatively quickly to address shortcomings in the ecological principles (i.e. P1 and P2). However deficiencies in meeting the management and governance Principle (i.e. P3) would need to be addressed directly through concerted efforts in revision of rules and regulations through the State and Central governments. Though this would take focused effort it could be addressed through development of time-limited action plans.

The short-neck clam (*Paphia malabarica*) fishery of Ashtamudi Lake which is a low-volume, low-value, small-scale fishery with an export market got MSC certified a few years back. About 20 years ago when the fishery was in a crisis with low biomass and dwindling catches, the advice of ICAR-CMFRI for regulations was voluntarily followed by the fishers.

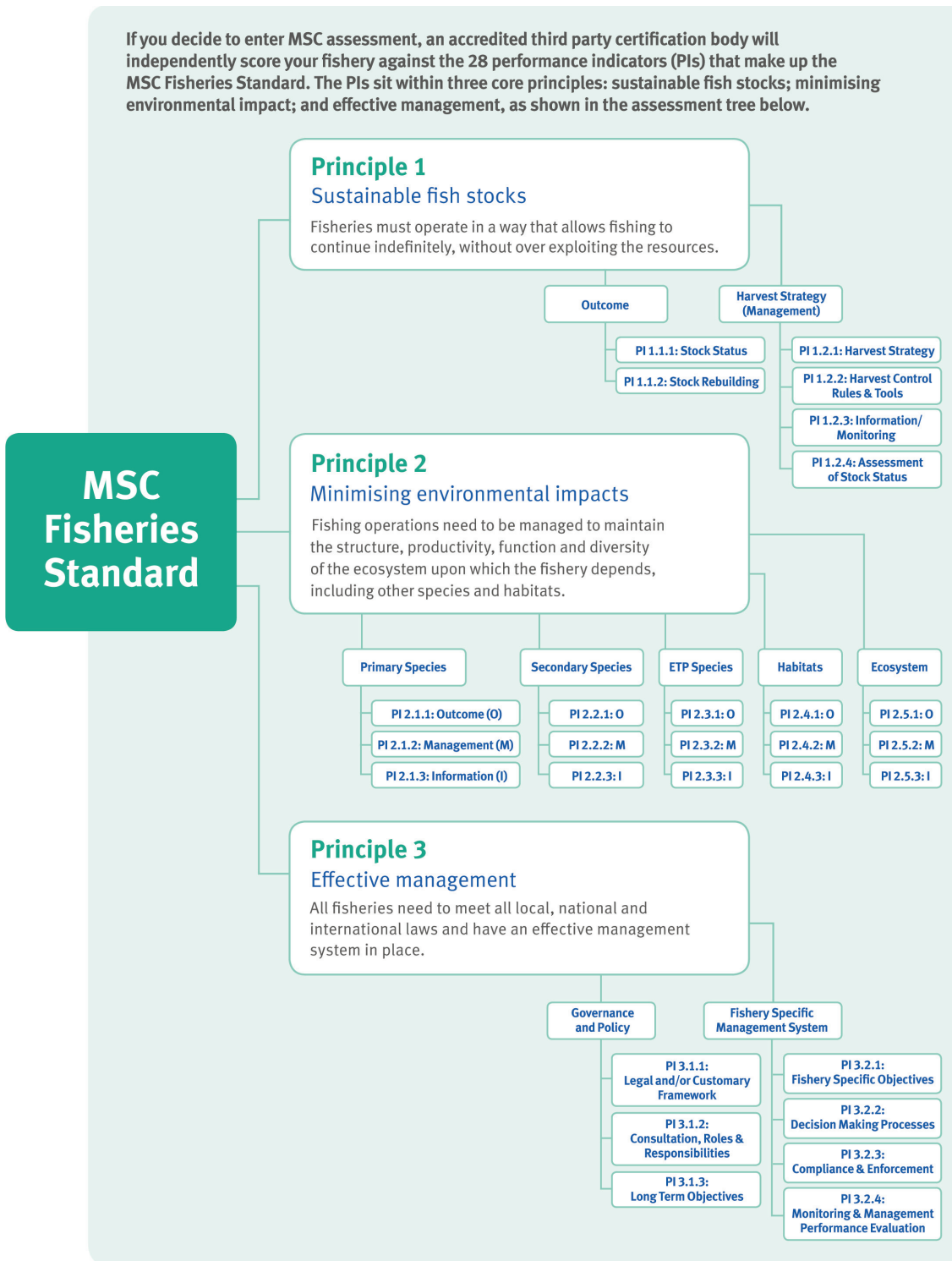


Fig. 1. MSC principles and performance indicators (source : www.msc.org)

This resulted in steady yields from late 1990s and these informal self-regulations were formalized through the creation of the Ashtamudi Clam Fisheries Governance Council under the District

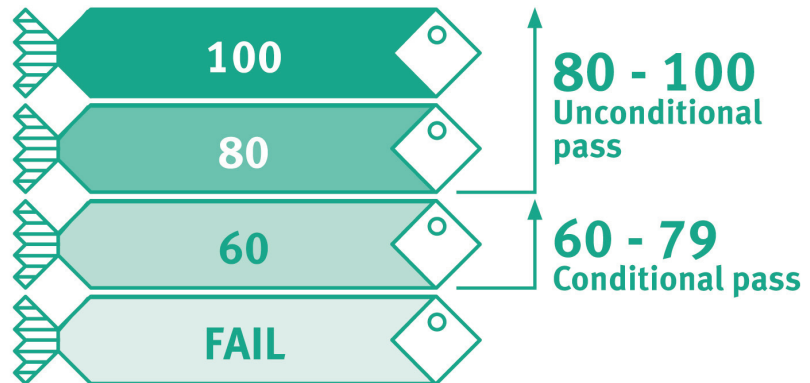
Administration on the basis of a fishery management plan (Mohamed *et al.*, 2013, *CMFRI Spl. Publ.* 114). This paved way for the successful ecolabelling of the fishery as India's first MSC certified fisheries

How does the scoring process work?

Your fishery will be assigned a score for each performance indicator where 60 is the minimum acceptable performance, 80 is global best practice and 100 is near perfect performance.

In order to be certified, your fishery must score:

- At least 60 for each of the 28 performance indicators
- An average score of 80 across all performance indicators under each of the three principles



If your fishery scores between 60 and 79 for any performance indicator, you will be required to take appropriate action to improve performance against the particular indicator so that it scores 80 or above within a predetermined timeframe (typically five years).

Fig. 2. MSC fishery scoring guideposts (source : www.msc.org)

(Mohamed and Malayilethu, 2015; <http://eprints.cmfri.org.in/10522/>).

What is the way forward ?

Accepting that maintaining fisheries in a sustainable manner is a necessity for steady and ongoing yields and employment from wild-caught fisheries in India, and accepting that the MSC ecolabel is a global leader in sustainable fisheries certification with obvious market and trade benefits, the government may develop programs aimed at achieving ecolabelling of identified fisheries. The WWF-India has been a prime mover for supporting certifiable fisheries in India and developing plans for its improvement so that it can be MSC certified. Fishery Improvement Projects (FIPs) are commonly used in many parts of the world to help fisheries meet the requirements of MSC certification (<https://www.msc.org/about-us/credibility/all-fisheries/tools-for-fisheries-improving-towards-msc-certification/tools-for-improving-fisheries-towards-msc>). An infographic on the characteristics of a credible FIP is given in Fig. 3.

The first step is to identify fisheries which have the potential for MSC certification. There are several small-scale fisheries using relatively low-

impact fishing gear, some of which are exported or have a potential export market, and hence, can be considered immediately. The larger fisheries that support seafood products for export are shrimp, squid and cuttlefish. These are trawl-caught and thus would need considerable more work to demonstrate achievement of the MSC standard. These fisheries can be taken to be a long-term target for MSC certification. The challenges in these fisheries can be gradually overcome through longer-term FIPs for the concerned fishery, which would include involvement of the government and stakeholders relevant to management and operation of the fishery. All these fisheries would need to develop FIPs, and funding support for this is vital.

WWF has recently used independent international auditors (M/s Poseidon, Australia. Intertek Moody, UK and Jo Gascoigne, UK) to evaluate the shortcomings, with respect to MSC certification, of shrimp and cephalopod trawl fisheries on southwest coast of India and the main constraints are given in Table 1.

Proposed plan to enable MSC certification of key Indian Fisheries

The lesson learnt from the Ashtamudi Clam certification process is that concerted effort is



Fig. 3. MSC infographic on fishery improvement project (source : www.msc.org)

required from various agencies concern. It is proposed that the agencies develop and agree on a plan that enables some key Indian fisheries to achieve MSC certification. Table 2 describes the objectives for the different agencies to address each of the MSC Principles. While a more detailed workplan to achieve each of these objectives would be developed by the agencies, some possibilities are outlined.

The workplan along with the information and documentation it generates, would allow India to focus its and other agencies attention toward MSC certification of major Indian marine fisheries. In a world in which the demand for fishery products are increasing in leaps and bounds, and the pressure on the natural resources are rising, ecolabelling appears to be a possible way to bring about a greater degree of control and sanity in the system.

Table 1. Major constraints identified for MSC certification of the shrimp and cephalopod trawl fishery in India

<i>MSC Principle</i>	<i>Shortcomings</i>	<i>Possible Solutions</i>
P1 Sustainable fish stock	No Limit Reference Points have been identified for the stock. The management regime does not include any measures to prevent the fishery from impairing the reproductive capacity of the stock. No Target Reference Points have been set. There does not appear to be a harvest strategy in place for this fishery that meets this definition at present.	To meet the MSC standard, some Limit Reference Points would be needed. To meet the MSC standard, some Target Reference Points would be needed. In order to meet the MSC standard, a Harvest Strategy would be needed for the fishery.
P2 Minimizing environmental impacts	There is no management strategy in place to govern the retention of non-target species in this fishery. There is no management strategy in place to govern the discarding of non-target species in this fishery.	An appropriate strategy for managing the retention of non-target species would be needed. An appropriate strategy for managing the discarding of non-target species needed.
P3 Effective management	No appropriate long-term objectives can be found in policy documents, such as a harvest strategy or harvest control rules. In this respect the management system is not complete. As noted above, the decision making process in place does not appear to link fishery specific objectives to management measures for either serious issues or to deliver precautionary management. No mechanisms exist to enable the management system to be subject to internal and external review. There is no formal schedule for such review, nor a commitment to respond to the results of such review.	The fishery management system needs to be updated to include a harvest strategy and harvest control rules that are linked to fishery specific objectives. The decision making processes needs to be updated to link management measures to management objectives. A formal system for management performance evaluation required.

Development of a separate sustainability standard for the country rather than use of internationally accepted standards is an option which is often debated. There are several drawbacks in this consideration as the reputation and reliability of the label is the primary criteria considered by buyers of sustainable seafood. Developing a standard adhering to FAO and GSSI (Global Sustainable Seafood Initiative) guidelines and consistent with ISEAL (International Social and Environmental Accreditation and Labelling Alliance) code of good practice is an expensive and time consuming task. Furthermore, a diluted standard will not find any market acceptance.

Recent Developments

a) Improving the certification basket of India

During the 25th Technical Advisory Board meeting of the MSC at Kochi in 2015, the Seafood Exporters Association of India (SEAI) requested for focussed attention of the MSC on India's seafood industry. This was primarily because importers of Indian seafood from Europe and North America were demanding certified sustainable products or at least products from fisheries which have shown an inclination towards sustainability as in a FIP. In 2017, the MSC opened its presence in India through the appointment of a consultant based in India. The

Table 2. Workplan and suggested roles and responsibilities of various organisations in the effort to move towards MSC certification in India

MSC Principle/ Other	Objective	By whom?	Workplan
P1 Sustainable fish stock	Stock status Harvest strategy & controls Fishery information & monitoring	ICAR-CMFRI	Create fishery specific groups to collate biological and technical information. Identify gaps with respect to the standards requirement and make plans to address them.
P2 Minimizing environmental impacts	Primary & secondary species ETP species Habitats & ecosystem	ICAR-CMFRI	Collate information on primary and secondary species, ETP species and habitats.
P3 Effective management	Governance & policy Fishery specific management systems Legal framework	State & Central Fisheries Departments	Create time-limited action plans to address gaps in policy and management as identified by the consultant.
Stakeholder management & coordination	Awareness, scoping studies, FIPs, stakeholder meetings, consultant management	WWF-India MSC-India	Identify consultants, conduct scoping studies and make FIPs. Coordinate stakeholder meetings and create awareness.
Overall Coordination & funding	Coordination with government departments and seafood exporters and arranging funding	MPEDA	Generate corpus fund for certification; get all players together; coordinate meetings and actions.

MSC-India and WWF-India, with the help of ICAR-CMFRI, have shortlisted and prioritized several species/fisheries which can be moved to the process of MSC certification. The species selected were prioritized using criteria such as market value of the resource, the small-scale nature of the fishery and limited complexity. Some of the fisheries selected are simple single species, others are complex multi-species and multi-gear fisheries.

The concerted efforts of MSC-India, WWF-India and ICAR-CMFRI have resulted in moving more than a dozen species/ fisheries towards MSC certification (Table 3). The technical backstopping for all of these fisheries are provided by ICAR-CMFRI; and several species specific fishery management plans are on the anvil. More importantly, several clients and stakeholders have come forward by investing time and money to ensure fisheries sustainability and also better market accessibility.

b) Financial schemes to support certification

MSC certification requires sufficient funds to pay for professional audits. Recognizing the need for encouraging Indian fisheries to move towards sustainability and traceability certificates, the

Marine Products Export Development Authority (MPEDA) has launched financial schemes to support fishers moving towards certification. Under clause C.1.1 of the MPEDA scheme launched on 21.09.2018, financial grant to the tune of ₹ 5 lakhs (50% of cost subject to maximum of ₹ 5 lakhs) is provided as assistance for certification of fishery and chain of custody. This is a welcome initiative and should provide the impetus to move many Indian fisheries towards certification.

c) Training for Indian auditors

Third party auditing is an integral part of the MSC certification process. Currently auditors evaluating an Indian fishery have to come from Europe or North America. This greatly increases the cost of the assessment process. In order to reduce costs, the MSC with the help of WWF-India has been organizing training programmes in India in order to build local capability. For example, MSC Level 2 & 3 training were conducted during 2018. A recent Level 3 capacity building/training organised for three candidates took place alongside a Conformity Assessment Body (CAB) conducting MSC pre-assessment for five fisheries in Kerala. The CAB

Table 3. Details of fisheries which have moved towards MSC certification in India.

Fishery	Species	FAO Area	Client	Conformity Assessment Body (CAB) for audit	Funding	Status
1. Gillnet caught blue swimming crab	<i>Portunus pelagicus</i>	Palk Bay Area 57	Crab Meat Processors Association (CMPA)	SCS Global USA	National Fisheries Institute Crab Council, USA	<ul style="list-style-type: none"> Fisheries Management Plan (FMP) prepared by ICAR-CMFRI Pre-assessment in process Stakeholder meetings held
2. Gillnet caught Indian oil sardine	<i>Sardinella longiceps</i>	Kollam Area 51	Fishermen Welfare Society, Kollam	Moody Marine UK	WWF-India	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Pre-assessment and FIP complete Stakeholder meetings held
3. Trawl caught karikadi shrimp	<i>Parapenaeopsis styliifera</i>	Kerala/ SW coast Area 51	Seafood Exporters Association of India (SEAI)	Control Union Pesca UK	SEAI Consortium	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Draft Pre assessment Stakeholder meetings held
4. Trawl caught Indian nylon shrimp	<i>Heterocarpus woodmasonii</i> , <i>H. chani</i>	Kerala/ SW coast Area 51	Seafood Exporters Association of India (SEAI)	Control Union Pesca UK	A consortium of processors led by Choice Canning Company	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Pre-assessment due Stakeholder meetings held
5. Trawl caught poovalan shrimp	<i>Metapenaeus dobsoni</i>	Kerala/ SW coast Area 51	Seafood Exporters Association of India (SEAI)	Control Union Pesca UK	SEAI Consortium	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Draft Pre assessment Stakeholder meetings held
6. Trawl caught Indian squid	<i>Uroteuthis photololigo duvaucelii</i>	Kerala/ SW coast Area 51	Seafood Exporters Association of India (SEAI)	Control Union Pesca UK	SEAI Consortium	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Draft Pre assessment

7. Trawl caught pharaoh cuttlefish	<i>Sepia pharaonis</i>	Kerala/ SW coast Area 51	Seafood Exporters Association of India (SEAI)	Control Union Pesca UK	SEAI Consortium	<ul style="list-style-type: none"> Stakeholder meetings held Fishery mapping by ICAR-CMFRI Draft Pre-assessment Stakeholder meetings held
8. Trawl caught webfoot octopus	<i>Amphioctopus neglectus</i>	Kerala/ SW coast Area 51	Seafood Exporters Association of India (SEAI)	Control Union Pesca UK	SEAI Consortium	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Draft Pre assessment Stakeholder meetings held
9. Trawl caught whelk	<i>Babylonia spirata</i>	Kollam Area 51	SEAI, All Kerala Boat Owners Association	Control Union Pesca UK	SEAI Consortium All Kerala Boat Owners Association, MPEDA	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Client negotiations in progress
10. Trawl caught flower shrimp	<i>Penaeus semisulcatus</i>	Palk Bay/ Gulf of Mannar Area 57	ALDI SÜD / SHORE Germany	Independent consultant	ALDI SÜD / SHORE Germany	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Draft pre assessment report One stakeholder meeting held
11. Trap caught lobster	<i>Panulirus homarus</i>	Nagercoil/ Kanyakumari Area 51	FISHMARC	Under negotiation	Under negotiation	<ul style="list-style-type: none"> Fishery mapping by ICAR-CMFRI Stakeholder meetings held
12. Pole and line caught skipjack tuna	<i>Katsuwonus pelamis</i>	Lakshadweep Area 51	Department of Fisheries Kavaratti	Control Union Pesca UK	WWF-India, International Pole and Line Foundation	<ul style="list-style-type: none"> Bait fisheries management plan completed by ICAR-CMFRI, Pre assessment & FIP development competed Stakeholder meetings held
13. Trawl caught threadfin bream	<i>Nemipterus randalli</i>	Southwest coast Area 51	Ghadre Exports, Ratnagiri	Sustainability Incubator, USA	Ghadre Exports, Ratnagiri	<ul style="list-style-type: none"> Pre-assessment competed Stakeholder meeting pending

trained and mentored selected participants through the pre-assessments via CAB-led workshops and remote support. The idea is that with this additional training and exposure to CABs, the selected candidates would be in a good position to become fishery assessors in India.

Level 2 capacity building / training programmes are held as part of MSC's ongoing efforts to build capacity to support small-scale fisheries and fisheries in the global south that are interested in working towards meeting the MSC Standards. Additionally, the MSC-India is also helping fisheries colleges and universities improve and develop their post-graduate curriculum with respect to ecolabelling and MSC standards.

d) Launch of the Sustainable Seafood Network of India (SSNI)

On 5th April, 2018, a workshop was jointly hosted by ICAR-CMFRI, WWF-India and MSC-India titled "Indian fisheries towards sustainability - Marine Stewardship Council Certification" at ICAR-CMFRI, Kochi, Kerala, chaired by its Director. During this workshop which was attended by fisheries scientists, development agencies, seafood exporters and stakeholders, a networking group called as "Sustainable Seafood Network of India" (SSNI) was formed as unanimously agreed at the workshop.

SSNI is mandated to bring together people and organizations to pursue common goals that cannot be undertaken in individual capacities. This network will be sharing information related to sustainable seafood, coordinate related activities and assist to join forces for such activities that require joint efforts. The SSNI aims to work in the following areas:

- a) Provide oversight and monitoring of fisheries working towards MSC
- b) Provide advice on species/fisheries for potential FIPs and certification
- c) Provide input to the development and implementation of projects supporting fisheries working to MSC

- d) Provide awareness of sustainability and MSC certification
- e) Creating a development consensus on sustainability issues
- f) Work in collaboration with different stakeholders, NGOs and funding agencies
- g) Drives policy, project design, funding availability and project executions
- h) Creating economies of scale (assist in trade of sustainable fisheries from India)
- i) Provide a forum for capability building in India for sustainability and certification
- j) Identifying opportunities for collaboration in support of sustainability and certification among different stakeholders
- k) Documenting knowledge based on members' interventions

The SSNI has an Apex Body at National Level which is called as the Apex Advisory Board. It comprises of a Chair, 9 members drawn from different stakeholder groups and a convener. The SSNI also has a Terms of Reference (TOR) and scope to expand on regional scales.

To summarise, ecolabelling and certification of Indian seafood appears poised for further growth because of the tremendous interest and support of all stakeholders that it is currently receiving. However there is a long road ahead before Indian marine fisheries can fully meet all the standards of the MSC. On the other hand, the certification initiatives are driving the research institutions and the government to urgently tackle sustainability issues in fisheries.

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