



# BOBP REFLEX

## A Quadrimester Newsletter

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*Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO) is a Regional Fisheries Advisory Body (RFAB) for promoting sustainable fisheries in the Bay of Bengal and associated regions. Its current members are Bangladesh, India, the Maldives, and Sri Lanka. It serves as the think tank on transboundary and contemporary national issues of the member countries concerning fisheries management.*



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## Ocean Accounting and Marine Spatial Planning: The Wingmen of Blue Economy for a Sustainable Future

Ocean accounting (OA) and Marine spatial planning (MSP) provide a robust, data-driven approach to managing marine resources, balancing their use with the need to maintain ecological integrity. They provide a foundation for knowledge and data sharing, adaptive ecosystem management, policy development and governance, and stakeholder engagement, all of which are essential for the sustainable use of our oceans.

As we find ourselves well into the Anthropocene, a period where human activities have left a significant mark on Earth's ecosystems, the role of our oceans becomes increasingly crucial. Covering over 71% of our planet, the marine world is more than just a vast blue expanse; it's Earth's lifeblood, functioning as a dynamic source of vital ecosystem services, supporting a wide range of biodiversity, and fostering human lives and economies. However, in this era of swift industrialization and burgeoning population, issues like pollution, overfishing, and climate change pose serious threats to these rich marine ecosystems.

The United Nations' Sustainable Development Goal 14 (SDG 14) is dedicated to the conservation and sustainable use of the oceans, seas, and marine resources for sustainable development, highlighting the urgent need for effective strategies to safeguard our oceans. To achieve the objectives of SDG 14, we need to adopt innovative, data-driven tools like OA and MSP.

*Traditionally, the value of oceans has been measured in terms of their contribution to gross domestic product (GDP) - a narrow economic indicator that fails to capture the complete status picture. It neglects natural capital stocks, non-market uses of the ocean, and the impacts of various economic sectors on ocean ecosystems.*

In contrast, OA represents a paradigm shift, integrating ocean wealth, natural capital supply and use, the distribution of benefits, and access to decision-making processes. By doing so, OA allows us to better appreciate the true value of oceans, leading to more informed and sustainable decisions about their use and conservation.

MSP is another critical tool in the sustainable management of marine resources. Defined as a "public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives" (Ehler & Douvere, 2008), MSP helps to

mitigate environmental pressures, manage conflicts between sectors, and identify ecologically sensitive areas.

OA assesses the economic significance of various activities, such as artisanal and industrial fisheries, while also evaluating the value of ecosystem services from mangroves and coral reefs and estimating the economic impact of marine-based tourism. With competing interests in fisheries, shipping, and other activities, the risk of overexploitation and environmental degradation is high. MSP offers a cooperative approach to resolving these conflicts, promoting collaboration among governments, industries, and local communities. By designating protected areas for vulnerable marine habitats and species, MSP enhances the region's resilience to climate change and human-induced pressures, ensuring the sustainable and responsible use of the shared marine resources.



*By integrating OA & MSP, we can foster data and information exchange that leads to a comprehensive understanding of the marine environment which would aid the decision-makers in making informed choices about the designation of protected areas, ensuring long-term health and sustainability. Moreover, integrating these approaches promotes a participatory approach to effective ocean governance.*

### Challenges in Mainstreaming OA and MSP

- Ocean accounting is still a developing field that faces many challenges, such as data gaps, methodological issues, and policy relevance. For example, Ocean accounting aims to go beyond GDP and includes both market and non-market values of marine ecosystems, such as cultural heritage, biodiversity, and ecosystem services. These values are often difficult to quantify though they are essential components of the total value of the oceans.
- Ocean accounting also needs to incorporate the spatial and temporal dimensions of ocean systems, as well as the impacts of human activities on the ocean environment, which are again difficult to quantify. It is also challenging to set minimal methodological requirements that everyone can adhere to.
- OA relies heavily on robust and up-to-date data, a requirement that is often difficult to meet in the marine biodiversity and ecosystem health domain.
- Adoption of international standards like the UN System of National Accounting—the backbone of OA—is not universal. While most countries have adopted these standards, the integration of environmental and economic aspects remains inconsistent.
- The capacity to develop and implement OA and MSP varies drastically among nations. Many countries, particularly in the developing world, lack the technical expertise, data

availability, and financial resources necessary for effective implementation.

- The international waters or the high seas, which constitute much of the ocean, are fraught with legal and jurisdictional complexities, and who holds accountability for these regions in an OA framework remains a contentious issue.
- MSP, on the other hand, requires extensive stakeholder engagement and coordination, a process that can be challenging given the diverse interests involved. Further, it needs to account for the dynamic nature of marine ecosystems, which is not an easy task, given the complexities and uncertainties associated with factors such as climate change.

### Role of Regional and International Organizations

Regional bodies, such as regional fishery bodies (e.g., BOBP-IGO), regional seas organization (e.g., SACEP), regional economic organizations (e.g., BIMSTEC), and international organizations like the United Nations (UN) and the World Bank can play pivotal roles in advancing the goals of OA and MSP.

Regional organizations, by virtue of their proximity and intimate understanding of local issues, can foster cooperation among neighbouring countries, help in capacity building, and ensure the effective implementation of OA and MSP. They can also facilitate the exchange of best practices and relevant data across borders. Meanwhile, global entities such as

the UN and the World Bank can provide guidance, technical support, and crucial funding to boost OA and MSP initiatives worldwide. They can lead in setting international standards, ensuring consistency in data collection, and advocating for the adoption of these frameworks at a global scale. Additionally, these organizations can offer platforms for dialogue, dispute resolution, and consensus-building, ensuring that the high seas' governance aligns with international laws and global sustainability goals.

### Bay of Bengal –A Strong Case for OA and MSP

In the context of the Bay of Bengal, both OA and MSP play vital roles in managing and preserving marine resources. The Bay of Bengal is a region of immense ecological and economic significance, but it faces formidable challenges due to intense human activities and climate change. OA and MSP, as Siamese twins, offer a comprehensive and data-driven approach to effective ocean governance. By integrating these concepts, decision-makers can make informed choices that balance economic development with environmental protection.

**While OA and MSP face several challenges, they offer promising solutions for the sustainable management of our oceans. Our oceans, the life-sustaining hub of biodiversity and economies, are in our hands.**

**By utilizing OA and MSP tools, we can steer towards sustainable development, ensuring the health and prosperity of our marine ecosystems for future generations.**



# Reflections

*In this featured section, eminent persons would recall and reflect their association with BOBP, providing insights from their experiences.*



**Uwe Tietze**

*Ex-Training & Extension Officer,  
BOBP (1980-86)*

## Journey with the Fisherfolk: An Odyssey of Change

Dr. Uwe Tietze, a distinguished expert in international fisheries and aquaculture development, earned his Doctorate in Economic and Social Sciences with top honours from the University of Kassel, Germany. He devoted over 25 years to the Fisheries and Aquaculture Department of FAO. His significant contributions during his tenure with BOBP include pioneering a unique credit scheme and a non-formal education program for Odisha's coastal fishing communities. Since his retirement in 2005, Dr. Tietze continues to influence the fisheries sector as a sought-after International Fisheries Consultant.

### The Beginning: An Odyssey of Change

My engagement with BOBP was during the formative years of the BOBP (established in 1979) and the environment was euphoric. One of my jobs was to train fisheries officers of the project countries in fisheries statistics. Alongside, I was also involved in evaluation of training on the performance of employees of a fish marketing corporation in Andhra Pradesh, design and implementation of an in-service training programme of fisheries extension officers (BOBP/REP/31).

### Odisha: The Heartbeat of My Journey

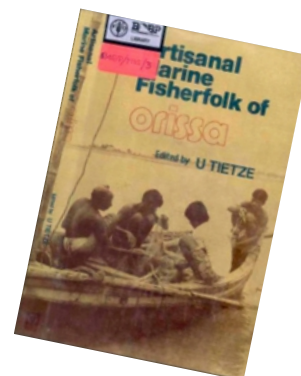
Odisha was not just another project location; it was where I truly connected with the essence of my work. The in-service training programme for fisheries extension officers in Odisha was a testament to our commitment. This initiative bore fruit in the form of:

- an anthropological dive into the lives of Odisha's artisanal fisherfolk (published as *Artisanal Marine Fisherfolk of Orissa*, Vidyapuri, Cuttack, 1985).

- design and implementation of a credit scheme for small-scale fisheries (described in BOBP/REP/32), and
- design and implementation of a non-formal primary education programme for children of coastal fishing communities (described in BOBP/REP/33).

The journey was not only challenging but also rewarding. One of the significant obstacles to the success of the fisheries extension officers' in-service training programme was that they were posted in remote coastal villages and towns rather than in the block headquarters as other extension officers. The Directorate of Fisheries overcame the obstacles by acquiring office space and supporting facilities and staff at their own expense. BOBP provided much-needed motorcycles, enabling extension officers to frequently visit the coastal fishing villages under their jurisdiction. And during my field visits together with the extension officer, I was riding in the backseat.

In the process, I also met people who left a lasting impression on me apart from making friends. To



mention a few: M.A. Upare from NABARD, R.K. Nayak from SBI, Namita Ray, High School Principal, Professor Rita Ray of Utkal University, Bhubaneswar, and her students, who executed the field survey on artisanal marine fisherfolk in Odisha, P. Mohapatra, Additional Director of Fisheries, the Orissa coastal fisheries extension officers, i.e., G.S.P. Misra, B.S. Durgaya, R.K. Das, A.N. Sethy, S.R. Das, R.P. Nanda, their colleagues, and so many others, including my colleagues at BOBP. What I learned helped me immensely in my later career.

I was also impressed by the competence and commitment of



the counterparts I worked with, the promise of the fisherfolk leaders, and the contribution of fisherfolks in kind and time. The competent management of BOBP greatly facilitated the commitment of the government counterparts.

### Odisha Credit Scheme: A Beacon of Progress

Looking back, I still take pride on the credit scheme in Odisha that BOBP piloted. Although the credit scheme was not continued beyond the pilot stage, the lessons learned at the pilot stage have dissipated globally through national and regional workshops and have been applied in numerous credit and revolving fund schemes implemented by Governments, banks, and NGOs.

The lessons learned also formed the basis of the Management Guidelines for Revolving Loan Funds and Credit Programmes for Fishing Communities (FAO 1989), as well as of the more recent Guidelines for micro-finance and credit services in support of small-scale fisheries in Asia (FAO 2019).

Preparatory work for the credit project encompassed a study of credit needs and traditional sources of credit, a cost and earnings study, the design of a lending programme and banking plan, the design of forms and documents to help bankers assess and appraise loan applications, training of bank and fisheries officers and negotiations with banks on designing a credit flow strategy, which continued till 1983.

The first loan was disbursed in 1983, and the last one was in 1986. The banking operations demonstrated by the project tried to combine the principles of commercial banking i.e., flexibility, timeliness, financial viability and no subsidies with the principles of development banking i.e., simplicity, borrower education, and supervision.

The noteworthy points of the credit project were:

- A multi-purpose character (20 types of boats and nets and supporting activities were financed),



- Active participation and autonomy of loanees and banks,
- Keeping down to the barest minimum the number of institutions involved,
- Technically sound bank formats and procedures for loan appraisal; and
- Quarterly review meetings at the district or state level attended by bank representatives, Fisheries Department and NABARD to monitor loan disbursement, recovery, and refinance.

The loan recovery rate by fisherfolk was 95% at the end of the scheme. Other indicators of the effectiveness of the project were the short period between loan application and

disbursement and the productive utilization of the loan assets.

### Importance of People-to-people Connection

A key to the success of the credit scheme and the non-formal primary education programme were regular field visits to the fishing villages and meetings and discussions with fisherfolk and local authorities, who were involved throughout. While I was present, the primary role was played by the extension officers and their Assistant and Deputy Directors of Fisheries since I did not speak Odia, with one exception perhaps.

I can still vividly recall the visit. During visit to a fishing village that had a poor record of loan repayment, I was asked by the extension officer to address the villagers in English. He would





translate. My address can be summarized as follows.

*"Before I came to your village, I thought I would visit a very downtrodden and poor place where people are desperate and starving, and that is why you could not repay the loans received. But now I am delighted that you all look healthy and proud, including your women and children, and are well dressed. Your houses are well maintained, and your boats look just fine, just like in any other fishing village in Odisha. I am so happy. So, it must have been just a misunderstanding with the loan repayment."*

And Surprise, surprise, the outstanding loans were repaid in no time. The fisherfolk must have had the proper motivation.

### Sailing in International Waters

After I left BOBP, I worked at the HQ of FAO in Rome as Fishery Industry Officer (Socio-economist) till my retirement in 2005. Since then, I have started working as an International Consultant, however, my bond with BOBP and the region remain as fresh as ever. My latest venture with BOBP was a techno-economic performance review of selected fishing fleets in Asia (FAO Fisheries and Aquaculture Technical Paper 653/3), which was a follow-up

to three global studies, I had initiated and coordinated when I worked at FAO HQ. I was also with the Director, BOBP-IGO, on the WWF Global Think Tank on Fisheries Management in Areas Beyond National Jurisdictions, an area of work BOBP is presently getting involved with as far as biodiversity is concerned.

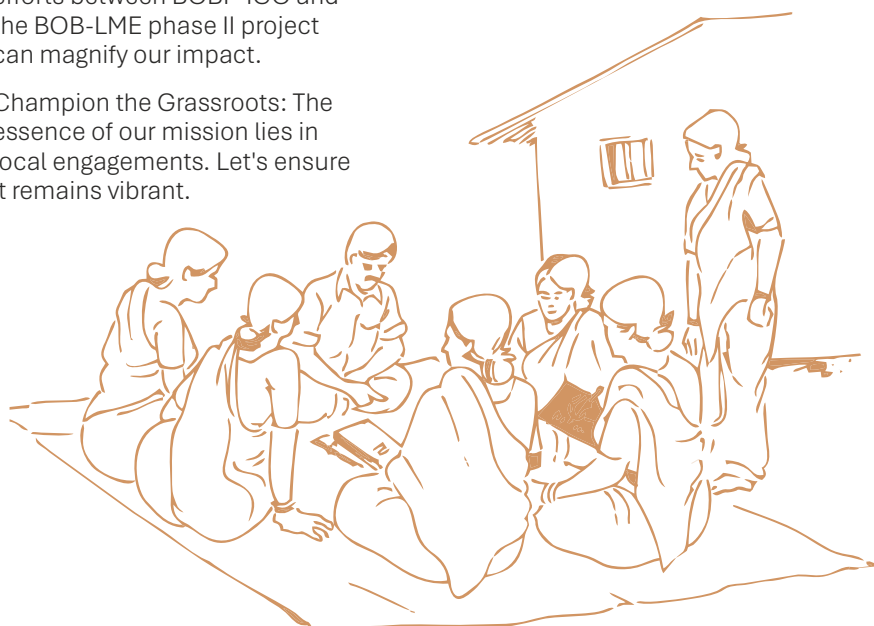
### Charting the Course Ahead

As I reminisce about the waves of the past, I propose these navigational beacons for the journey ahead:

- Cultivate Synergy: Merging efforts between BOBP-IGO and the BOB-LME phase II project can magnify our impact.
- Champion the Grassroots: The essence of our mission lies in local engagements. Let's ensure it remains vibrant.

- Adapt with the Ebb and Flow: The marine realm is ever evolving. Perpetual learning and adaptability are our guiding stars.
- Build Global Bridges: Alliances with international stakeholders can guide us to new horizons and triumphs.

In the dynamic seascape of fisheries, our nets should always be cast wide, poised to embrace evolution, acquire knowledge, and instigate waves of positive metamorphosis.





# Salient Programs/Events

## Panel Discussion on Tuna Fisheries under BBNJ Regime

BOBP-IGO hosted a Panel Discussion on “Tuna Fisheries in BOB Region: Emerging Challenges under Changing Climate and BBNJ Regime” on World Tuna Day (02 May 2023) to bring attention to the importance of sustainable tuna fisheries and the evolving management of these fisheries under the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement. The event was co-organized by the Bangladesh Fisheries Research Institution (BFRI), ICAR-Central Marine Fisheries Research Institute (CMFRI), Fishery Survey of India (FSI), International Pole and Line Foundation-Maldives (IPNLF), and National Aquatic Resources Research and Development Agency (NARA), Sri Lanka.

Over 120 participants and organizations from 15 countries took part. Dr. P. Krishnan, Director of BOBP-IGO, spoke at the event, emphasizing the importance of tuna fisheries in the Bay of Bengal rim countries and providing an overview of the panel discussion.



Dr. E. Vivekanandan discussed the impact of changing climate on the distribution, abundance, migration, and physiology of Tunas. Dr. Maeve Nightingale, IUCN, provided an overview of the evolution, objectives, and key provisions of the BBNJ and Dr. N. Saravanane, Scientist, Centre for Marine Living Resources and Ecology (CMLRE), Ministry of Earth Sciences (MoES), India, and Dr. Hussain Sinan,

Director (Fisheries), Maldives, highlighted the implications of the BBNJ Agreement on the fisheries, in general, and tuna, in particular. The Panel called for enhanced cooperation to meet the concerns of the developing countries for addressing climate change and exploring the opportunities provided by the BBNJ agreement.

The detailed meeting report is available at <https://www.bobpigo.org/publications/Tuna%20Fisheries%20BBNJ%20Regime.pdf>

## Train the Trainer Programme on Safety at Sea for Small Scale Fishers

A comprehensive training program on Safety at Sea for small-scale fishers was organized in Negombo, Sri Lanka from 22<sup>nd</sup> to 26<sup>th</sup> May 2023. The officials from fisheries department and faculty of Ocean University participated in the five-day training of the trainers course aimed at improving their safety practices and emergency preparedness while at sea. Mr. R. Mukherjee, Policy Analyst and





Dr. M. Sri Hari from BOBP-IGO participated in the training programme, which covered various critical topics on safety at sea viz., emergency preparation, risk management, boat basics, emergency first aid, communications, and marine traffic rules.

Speaking to the participants, Mr. R. Mukherjee, Policy Analyst, BOBP-IGO, explained the dynamic nature of fisheries risks in the Bay of Bengal region. He said that BOBP-IGO and FAO are developing an action plan, "BOBSAFE," aiming at policy intervention and capacity building to address fishers' challenges. Mr. Darren Mitchel from the Fish Safety Foundation (FSF) as the lead trainer, highlighted the risks fishers face and noted that about 100 000 fishers die annually in

fisheries, many of which are preventable with proper intervention.

Speaking at the closing ceremony, Mr. Upul Perera, Director (Training), Ocean University, Sri Lanka said that the successful completion of the training programme as a significant step forward in enhancing the safety

and security of small-scale fishers in Sri Lanka.

The programme was commissioned by FAO and organized by the Fish Safety Foundation with support from BOBP-IGO and the Government of Sri Lanka.



## MDP on Fish Stock Assessment Organized in Sri Lanka

BOBP-IGO, in collaboration with ICAR-Central Marine Fisheries Research Institution (CMFRI), Kochi and National Aquatic Resources Research and Development Agency (NARA), Colombo, organized a week-long Management Development Programme (MDP) on New Paradigms in Fish Stock Assessment from 25 May to 01 June 2023 in Colombo, Sri Lanka. The participants (25 Nos) consisted of officials from the Department of Fisheries, researchers from National Aquaculture Development Agency (NAQDA) and NARA, and academicians from Universities in Sri Lanka.

Inaugurating the event, Mr. Dhammika Ranatunga, Additional Secretary, Ministry of Fisheries & Aquatic Resources Development, Government of Sri Lanka (MFARD), underscored the necessity of fish stock assessment for sustainable resource management. He expressed his gratitude to BOBP-IGO for organizing the programme. Dr. E. Vivekanandan, Advisor, BOBP-IGO, explained the scope and purpose of the training programme during the opening ceremony and emphasised the significance of stock



*Glimpses of the MDP on Fish Stock Assessment at Sri Lanka*





assessment. Other dignitaries who attended the inauguration included Prof. M.J.S. Wijeyaratne, Chairperson, NARA; Mr. Namal Talangama; Mrs. Anusha Gokula Fernando, Additional Secretary, MFARD; and Dr. Kamal Tenakoon, Director General, NARA.

The faculty included Dr. E. Vivekanandan, Advisor, BOBP-IGO, Dr. J. Jayashankar and Dr. Eldho Varghese, Principal Scientists from ICAR-CMFRI, and Dr. Rishi Sharma, Senior Fisheries Resources Officer, FAO.

Speaking during the valediction of the training, Dr. P. Krishnan, Director, BOBP-IGO, underlined the need for enhanced regional collaboration in research among countries on fisheries management and elaborated on the IGO' initiatives to foster regional cooperation.



*Trainers of the MDP on Fish Stock Assessment*



*Participants of the MDP on Fish Stock Assessment*

## Online Workshop on Techniques in Freshwater Fish Stock Assessment

BOBP-IGO, in collaboration with ICAR-Central Inland Fisheries Research Institute (CIFRI) and NARA, organised an Online Workshop on Techniques in Freshwater Fish Stock Assessment on 12 July 2023. This Workshop was a sequel to the Management Development Programme on New Paradigm in Fish Stock Assessment organised by BOBP-IGO from 25 May to 01 June 2023 in Colombo jointly with the Government of Sri Lanka.

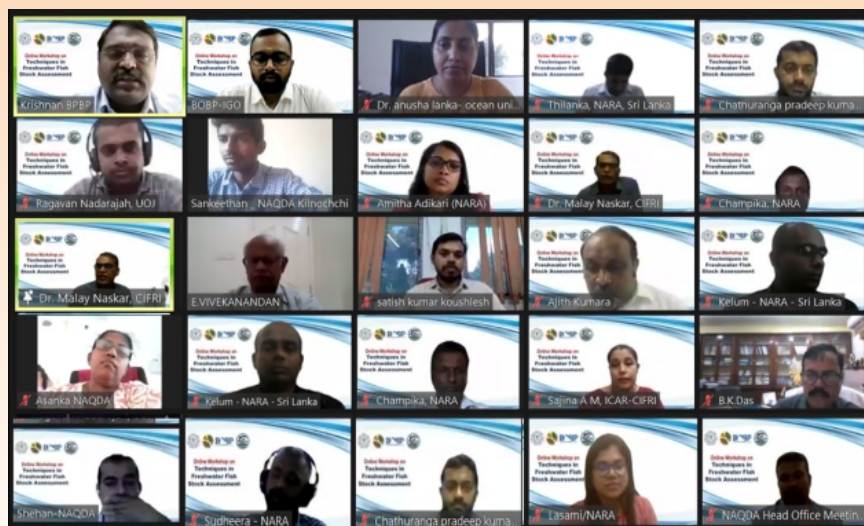
The participants (45 Nos) consisted of officials from the Department of Fisheries, researchers from NAQDA and NARA, and academicians from Universities in Sri Lanka.

Dr. B.K. Das, Director, ICAR-CIFRI delivered the inaugural address. Dr. Malay Naskar, Dr. AM Sajina and Mr. Sathish K. Koushlesh, scientists from ICAR-CIFRI, were the resource persons, who provided an overview on the various approaches and models used for stock assessment of fishes in the rivers and reservoirs.

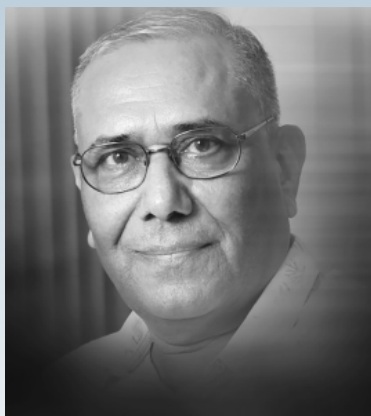
Dr. P. Krishnan, Director, BOBP-IGO, welcomed the participants and provided an overview of the Workshop. In his opening remarks, Dr. B. K. Das, Director, ICAR-CIFRI, highlighted the potential areas of collaboration between the researchers in India and Sri Lanka.

In her closing remarks, Dr Geevika Ganegamaaachchi, ADG, NARA, thanked BOBP-IGO and ICAR-CIFRI for organising the Workshop. She also looked forward to research collaborations between institutions in India and Sri Lanka.

*A screen grab of the online training programme*







**18 March 1953 - 30 July 2023**

## OBITUARY

Dr. Yugraj Singh Yadava, who served as the Director of BOBP (2000-03) and BOBP-IGO (2003-21), passed away on 30 July 2023. He was instrumental in transforming the then BOBP under FAO, as an Inter-Governmental Organisation (IGO) in 2003.

BOBP cherishes his significant contributions in the global arena for promoting sustainable fisheries management and in mainstreaming code of conduct for responsible fisheries (CCRF), ecosystem approach to fisheries management (EAFM) and sea safety in the national policies in the Bay of Bengal region.

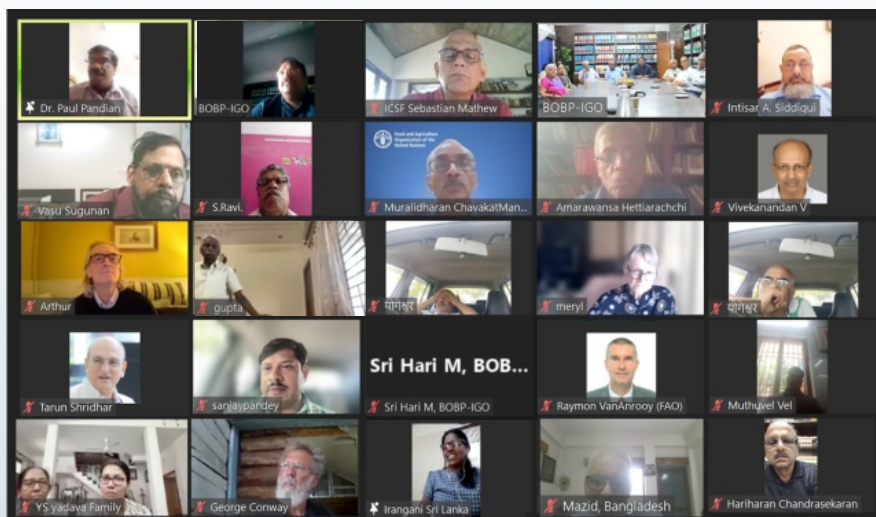
We at the BOBP-IGO offer our deepest condolences to his family. As we remember his work, we also commit to furthering it and taking it to new heights, in the years to come.

## Special Memorial Meeting to Reminisce the contributions of Dr. Y. S. Yadava

The BOBP-IGO organised a hybrid condolence meeting on 12<sup>th</sup> August 2023, in memory of the late Dr. Yugraj Singh Yadava, wherein fisheries experts across the world paid homage and appreciatively recalled his contributions. Members of the Fisheries Technocrats Forum (FTF) attended the meeting in person.

Family members of Dr. Yadava, scientists from ICAR, BFRI, MMRI, and NARA; policy makers from national governments in the region; international fisheries development organizations like FAO; WorldFish; and fisher organizations and professional societies like BSFF, ICSF, MARC and AFS, and his contemporaries from around the world, paid rich tributes to Dr. Yadava and recounted his contribution to the fisheries sector.

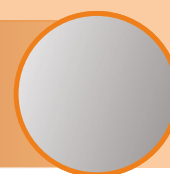
Speaking on the occasion, Dr. P. Krishnan, Director, BOBP IGO highlighted the illustrious career of Dr. Yadava and assured that the IGO will keep his legacy alive by taking forward the initiatives.



The recording of the event is available at:  
[https://www.youtube.com/watch?v=qlZo7zxR\\_X8](https://www.youtube.com/watch?v=qlZo7zxR_X8)



# Strengthening Cooperation



## FAO Side Event at the UNFSA Review Conference for Promoting Regional Collaboration for Sustainable Fisheries

FAO organized a side event on "Regional Framework among RFBs: Scaling up Cooperation and Coordination towards Sustainable Fisheries" on 23<sup>rd</sup> May 2023, alongside the UN Fish Stock Agreement (UNFSA) Review Conference at the UN Headquarters in New York.

The meeting aimed at discussing the outcome documents of the two regional consultations organized by FAO during 2022 for developing the coordination frameworks among Regional Fisheries Bodies (RFBs) in the Western Indian Ocean and Central Eastern Atlantic Ocean regions, wherein representatives from Regional Fishery Management Organizations (RFMOs), Regional Fishery Advisory Bodies (RFABs), and Regional Economic Communities (RECs) participated.

Dr. P. Krishnan presented the outcomes of the consultation held at Maputo, for the RFBs in the Western Indian Ocean. He outlined the challenges and opportunities that had emerged from the discussions. He also emphasized strategies to surmount barriers to collaboration, citing BOBP's initiatives as examples. The event provided a platform to underline the importance of strengthening ties between RFBs and RECs. These bodies actively contribute to sustainable fisheries governance through national and regional economic policies, thereby furthering food security and poverty reduction. The benefits of developing regional coordination frameworks were also discussed, highlighting their critical role in promoting responsible fisheries



*Glimpses of the FAO Side event at UN Headquarters, New York*

management and sustainability of resources. Particularly, the benefits for coastal States with multiple memberships in regional RFBs were underscored. This important

gathering demonstrated the shared commitment of the FAO, BOBP, and other stakeholders to enhancing sustainable fisheries management across the regions.

## Bay of Bengal Stock Assessment Network (BOB-SAN) Launched

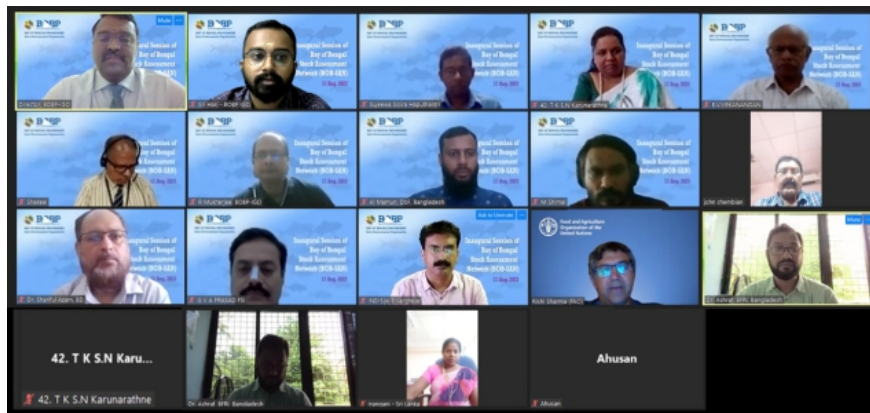
The inaugural session of the Bay of Bengal Stock Assessment Network (BOB-SAN) was held on 17th August 2023. The Idea of BOB-SAN originates from the FAO Regional Workshop for a Network of Practitioners on Fishery Stock Assessment held on 23-25 January 2023 in Bangkok, Thailand, where regional participants stressed the importance of a regional platform to promote stock assessment in the BOB Region.

BOB-SAN is a virtual network of national stock assessment practitioners from South Asia, with BOBP-IGO as the nodal point. BOB-SAN is envisaged to serve as a platform for sharing knowledge and good practices in fish stock assessment, discussing advanced methodologies, and advancing the frontiers of stock assessment based on cumulative experiences and collaboration.

Speaking on the occasion, Dr. P. Krishnan, Director of BOBP-IGO, underscored the significance of regional collaboration in the context of evolving climate and governance dynamics. He emphasized that addressing the intricate challenges of fish stock assessment in the Bay of Bengal demands collaborative efforts and countries will benefit by sharing their collective insights in the realm of fish stock assessment, particularly concerning shared stocks.

Dr. Rishi Sharma, Senior Fisheries Resources Officer, FAO, highlighted the critical role of communicating stock assessment findings to policymakers, which facilitates more informed and effective management decisions. He further emphasized that the Bay of Bengal's growing importance amplifies the significance of initiatives like BOB-SAN.

Representatives from the Governments, and expert nominees from Bangladesh, India, Maldives, and Sri Lanka attended the Inaugural Session. The Country representatives made a



*Screengrab of the BOBSAN Inaugural Session*

comprehensive coordinated presentation highlighting the status of marine fisheries, current approaches of stock assessment, challenges and way forward, and expectations from the BOBSAN. Dr. E. Vivekanandan, Advisor, BOBP, moderated the technical sessions.

The participants opined that the BOBSAN will aid in harnessing its members' collective wisdom and experiences to improve stock assessment methodologies and contribute to coordinated regional fisheries management. The members called for conduct of annual workshops to share knowledge and experiences and form technical working groups under the aegis of BOB-SAN to discuss

species-specific issues and hold focused discussions on areas like:

- Use of standardized unit of fishing effort throughout the region.
- Strengthening catch and effort data collection through the e-logbook mechanism.
- Standardization of the minimum data requirement for stock assessment for transboundary species like Tuna for the region.

The participants agreed to meet periodically to discuss advances in assessment approaches; and take every step to leverage the BOBSAN for addressing national fisheries management issues.

## Sri Lankan Fishers Support India's Turtle Tagging Programme

The Sri Lankan fishing vessel (IMUL-A-0056 GLE, Owner: Mr. M.A.M. Saafa, Skipper: Mr. A.L. Halinas) captured an entangled sea turtle, which carried the tag of Zoological Survey of India (ZSI). The turtle was released live and the tag was collected. The skipper contacted the High Seas Fishery Unit of the Department of Fisheries and Aquatic Resources which in turn informed National Aquatic Resources Research and Development Agency (NARA). BOPB-IGO facilitated in passing this important evidence from NARA to ZSI. The turtle was tagged in Rushikulya rookery on 28.02.2023 and recaptured in Sri Lanka on 22.08.2023.

Cooperation between the scientists of Sri Lanka and India is a hallmark for effective implementation of ecosystem-based fisheries management in the region.



## Interaction with Country Offices of FAO, IUCN & UNDP

In a concerted effort to foster collaboration and streamline efforts in environmental conservation and sustainable fisheries development, the Director held meetings with the key representatives from several global organizations.

The first of these pivotal meetings took place in Colombo, Sri Lanka, where the Director met with Mr. Vimlendra Sharan, FAO Representative in Maldives & Sri Lanka. Dr. Krishnan briefed him about the activities of the BOBP-IGO in the Maldives and Sri Lanka especially in the areas of stock assessment and safety at sea and implementation of the BOBLME Phase II project. Both emphasized the need for enhanced cooperation between the organizations in addressing emerging issues such as climate change, fisheries management and curbing IUU fishing.

The Director also met with the newly appointed FAO Representative in India, Dr. Takayuki Hagiwara and updated him about various collaborative programmes of FAO and BOBP-IGO as well as national programmes in India.

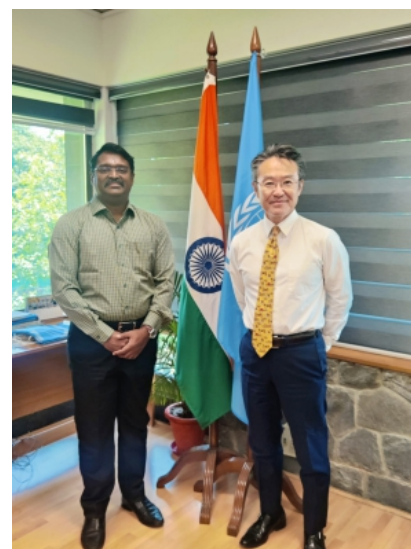
During his visit to Bangkok, Dr. Krishnan met the senior officials of IUCN regional office and the IUCN Country representatives from Bangladesh, India, Maldives, and Sri Lanka. The focus of the meeting facilitated by Ms. Maeve Nightingale,



*Interaction with FAO Country Office in Colombo and New Delhi*

Head of the Coastal and Marine Programme from IUCN Asia and Dr. Simon Funge-Smith, Senior Fishery Officer, FAO-RAP, was on the implementation of the BOBLME project, fostering in-country and inter-country inter-sectoral cooperation and promoting sustainable livelihoods for coastal communities.

The Director also deliberated with Dr. Ruchi Pant, Programme Manager for Environment, Energy, and Resilience at UNDP on upcoming projects and activities of UNDP in India. They discussed the potential areas of working together and explored synergy in the approved programs of both organizations for collaboration.



*Meeting with UNDP and IUCN Senior Officials*



## Visit to Fisheries Research & Development Organizations and Industry in Sri Lanka



*Vice Chancellor, University of Vavuniya*



*Faculty, Dept. of Fisheries, Jaffna University*



*DoFAR, District Office - Jaffna*



*Secretary and Senior Officials of MoFAR, Sri Lanka*



*Chairman & Scientists, NARA*



*Fish market in Jaffna and Negombo*



*Seacucumber Breeding and Processing Unit, Jaffna*





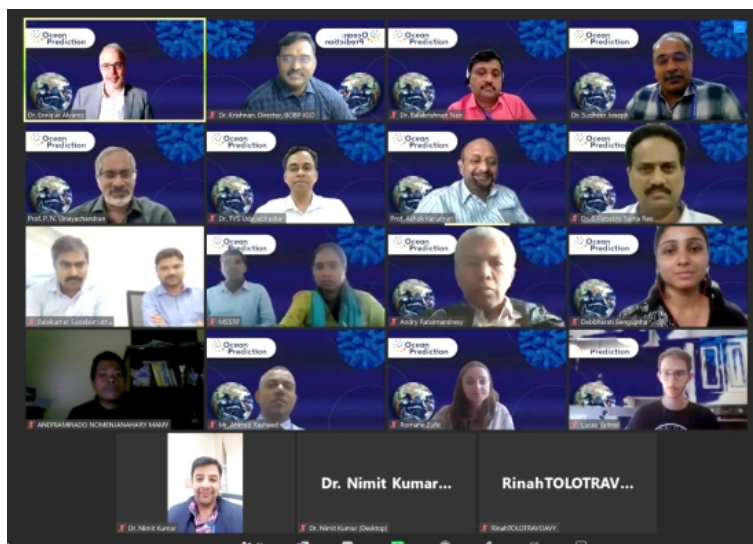
# Meetings / Events Participated

## Regional Conference on Ocean Prediction: Regional Team Meeting of Indian Seas

Dr. P. Krishnan, Director, participated as a panelist in the "Ocean Prediction: Regional Team Meeting of Indian Seas" organized by MoES-Indian National Centre for Ocean Information Services (INCOIS), Hyderabad on 03<sup>rd</sup> May 2023.

During his intervention, Dr. Krishnan informed that there is a strong appetite for ocean information services among the rim countries of the Bay of Bengal. There are also possibilities for networking amongst the researchers from these countries to develop advisory solutions for the fishers and the community.

Highlighting the initiatives taken by the BOBP-IGO in this regard, he assured that the Secretariat would extend all support for such regional thematic networks.



## Interactive Session on Ocean Accounting

Australia-India Indo-Pacific Oceans Initiative Partnership (AIPOIP) and the Madras School of Economics (MSE) organized a webinar on "Interactive Dialogue on Ocean Accounting: Synthesizing Lessons and Understanding Challenges" on 16<sup>th</sup> May 2023. This dialogue was part of the AIPOIP project, "Building an Australia-India Community of Practice on Ocean Accounting" to advance the goals of India's Indo-Pacific Oceans Initiative (IPOI).

Speaking on the Panel, Dr. P. Krishnan, Director, highlighted the need for integrating Marine Spatial Planning (MSP) and Ocean Accounting (OA) in the policy framework and delineating their linkage with ongoing national initiatives in various sectors including fisheries. He also emphasized the need for capacity development of the BOB rim countries so as to aid in the

integration of MSP and OA in the blue economy framework; developing regional frameworks for data collection and process for scalability; and harmonization of institutional mechanism to undertake both MSP and OA, in national waters and in the high seas.

Some of the key takeaways from the event were addressing data

limitation and data standardization; upscaling pilot projects; developing cost-effective assessment methods for ocean accounting using remote sensing; capacity building and sensitization at all levels; and knowledge sharing and leapfrogging through learning from national accounting practices.



BOBP-IGO took part in the Inter-Agency Meeting convened by the IUCN Asia Pacific Office in Bangkok during 18-19, May 2023 to review the planning and preparations for the implementation of 2<sup>nd</sup> phase of the Bay of Bengal Large Marine Ecosystem (BOBLME 2.0) Project. Senior Officers and Scientists from FAO, SEAFDEC, and IUCN participated in the deliberations.

Dr. Krishnan, Director, presented the approach envisioned by the BOBP-IGO and the steps already initiated for the effective implementation of the project. Concurrently, he explored potential collaboration opportunities with IUCN Country Representatives from India, Bangladesh, and Sri Lanka to ensure the efficient execution of the BOBLME 2.0 project in the western Bay of Bengal.



## BOBP-IGO Participates in the 3<sup>rd</sup> Bay of Bengal Maritime Dialogue

The 3<sup>rd</sup> Bay of Bengal Maritime Dialogue was held in Colombo, Sri Lanka, during 23-24, May 2023. The event was attended by around 50 individuals from Australia, Bangladesh, India, Indonesia, Malaysia, Myanmar, and Sri Lanka.

On behalf of BOBP-IGO, Dr. E. Vivekanandan, Advisor of BOBP-IGO delivered a presentation on "Regional Synergies to Mitigate Marine Environmental Degradation

in the Bay of Bengal" during the event. He highlighted the challenges the Bay of Bengal faced due to marine environmental degradation, pollution, and climate change and the need for marine nature conservation. The Dialogue unequivocally acknowledged the significance of regional cooperation in addressing transboundary issues. The participants commended the efforts of BOBP-IGO in promoting regional collaboration.





## Fourth UNFSA Review Conference Resumes: A Focus on Sustainable Management of Fish Stocks

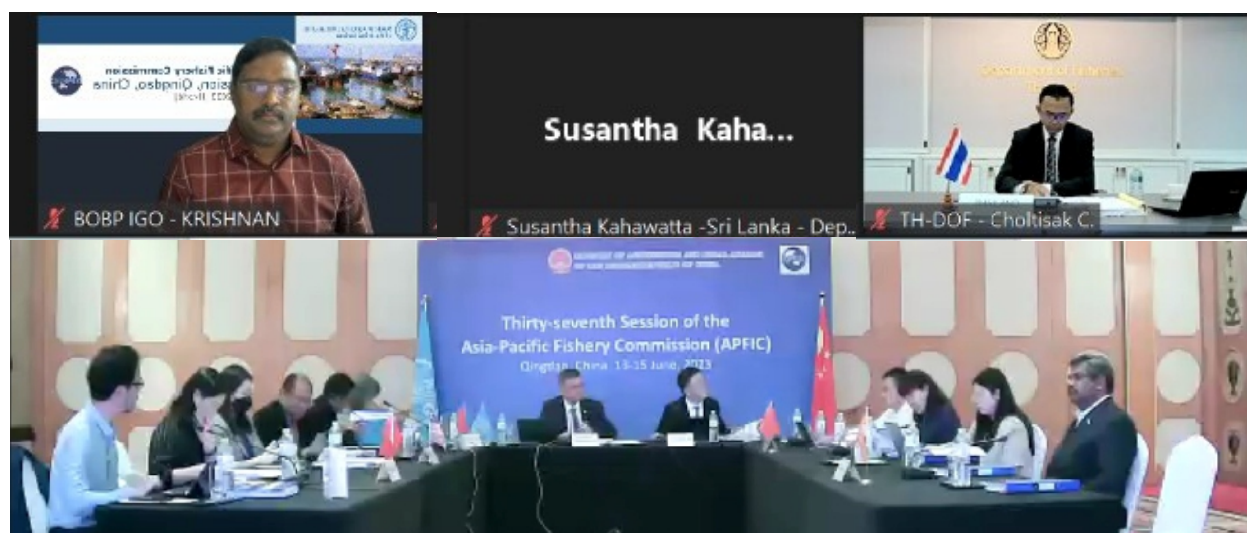
Dr. P. Krishnan, Director, attended the fourth Review Conference on the United Nations Fish Stocks Agreement (UNFSA) from 22 to 26 May 2023, hosted at the United Nations headquarters in New York. The aim of the conference was to assess the implementation of the Agreement, identify any gaps, and discuss strategies for strengthening it. Notably, it reviewed recommendations from the 2016 session, which have significantly impacted sustainable fisheries management globally. The conference also considered recent international fisheries developments, such as the World Trade Organization's Agreement on Fisheries Subsidies and measures to tackle illegal fishing.



Dr. Krishnan, in the event, underlined BOBP-IGO's key role in sustainable fisheries management. He, later, interacted with the senior officials and representatives from FAO, RSN, CBD, and also the Indian Mission officers at the UN on the subject.



## BOBP-IGO Participates in the 37<sup>th</sup> Session of APFIC



The 37<sup>th</sup> Session of The Asia-Pacific Fishery Commission (APFIC) was convened in hybrid mode in Qingdao, China from 13 to 15 June 2023. Speaking on the occasion, Dr. P. Krishnan, Director, commended APFIC for successfully organizing the 37<sup>th</sup> Session and recalled the close cooperation between BOBP and APFIC and collaborative activities undertaken jointly. He highlighted the initiatives taken by the BOBP-IGO for strengthening collaboration

among the countries in evidence-based fisheries management. He hoped to work closely with the Commission during the BOBLME Phase II and contribute to mainstreaming sustainable development principles within the fisheries and aquaculture sectors in the Asia-Pacific region.



## National Fish Farmers Meet 2023

The National Fish Farmers Meet 2023 was organized by the Department of Fisheries, Animal Husbandry, and Dairying, Government of India, at Mahabalipuram, Tamil Nadu, during 10-11 July 2023 to mark the National Fish Farmers Day (NFFD). The NFFD is celebrated in India on 10<sup>th</sup> July annually

to honour the contributions of Dr. Hiralal Chaudhury and Dr. K.H. Alikunhi in pioneering induced breeding of Indian Major Carps in 1957. The BOBP-IGO participated in the meeting along with the officials of the Department of Fisheries, Government of India.



## Interaction with Faculty Members of Bihar Agricultural University (BAU)

Dr. P. Krishnan, Director visited the Bihar Agricultural University campus at Sabour, Bhagalpur, during 16-19 July 2023, on invitation from Dr. D.R. Singh, Vice Chancellor of the University. He interacted with the faculty members from Bihar College of Agriculture, Sabour, Dr. APJ Kalam College of Agriculture, Kishan Ganj, and College of Horticulture, Noorsarai, Nalanda. He discussed with the Officials and senior faculty members of the University on strengthening science-policy linkage and setting futuristic research

agenda to expand the benefits of research beyond the frontiers.

As a part of his visit, a two-day faculty development workshop was organized, wherein Dr. Krishnan sensitized the faculty members on the contemporary thoughts on breaking the frontiers through research collaboration, developing grant-winning proposals, linking science with policy, etc. Over 70 scientists participated in the Workshop.





## Colloquium on BIMSTEC and the Bay: Strengthening Maritime Security

The Nalanda International University, Bihar, India, organized a Colloquium on "BIMSTEC and the Bay: Strengthening Maritime Security" on 21 July 2023. Prof. Abhay Kumar Singh, Vice Chancellor of Nalanda University, welcomed the guests. Amb. C.S.R. Ram, Joint Secretary (BIMSTEC & SAARC), Ministry of External Affairs, Government of India, was the Chief Guest. Vice Admiral. G. Ashok Kumar, PVSM, AVSM, VSM (Retd), National Maritime Security Coordinator, National Security Council Secretariat, Government of India, delivered the keynote address.

Participating in the event, Dr. P. Krishnan, Director, delivered a lead talk on "Redefining Maritime Security: Non-Conventional Threats in the Bay of Bengal in the Context of Marine Fisheries". He emphasized the need for closer collaboration among the researchers and development professionals in the BOB rim countries to harness the blue economy potential of the Bay. Dr. Krishnan also discussed with the Vice-Chancellor and senior faculty members of Nalanda International University the potential areas of collaboration between the organizations. The Vice-Chancellor expressed the desire for his university to closely associate with BOBP-IGO.



## International workshop on 'Advances in Coastal Research'

An international workshop on 'Advances in Coastal Research with Special Reference to the Indo-Pacific (AdCoRe-IP 2023)' was organized by MoES-National Centre for Coastal Research (NCCR) during 21-22 July 2023 as a part of the Centre's silver jubilee celebrations. Distinguished scientists and researchers from various countries, including India, Australia, Japan, Vietnam, Fiji, France, and Norway, attended the Workshop. The agenda included several thematic sessions that addressed critical topics, such as coastal

protection, climate change, ocean accounting, marine pollution, and ecosystem services.

Mr. R. Mukherjee, Policy Analyst, and Dr. M. Sri Hari, Project Scientist from BOBP-IGO participated in the Workshop and interacted with the delegates. On the sidelines, they discussed with Dr. J. Ahanhanzo, Secretary, IOC-UNESCO, on potential areas of cooperation.



## Cooperation Between RFBs and RSOs and Opportunities under BBNJ Regime discussed at Sustainable Ocean Initiative (SOI) Global Dialogue

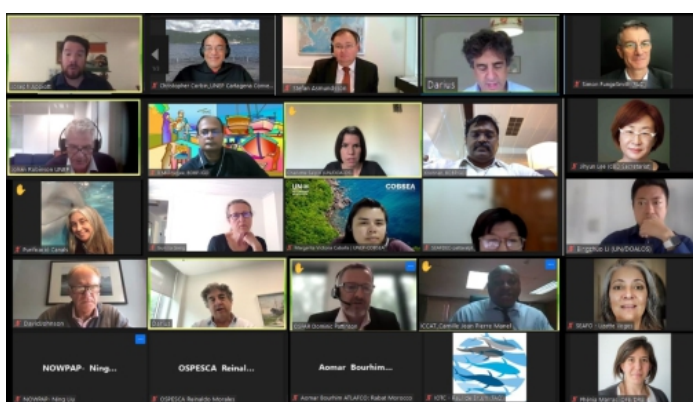
The inter-sessional workshop of the Sustainable Ocean Initiative (SOI) Global Dialogue with Regional Seas Organizations (RSOs) and Regional Fishery Bodies (RFBs) was held from 01 to 03 August 2023. The event, conducted online, brought together experts, policymakers, and stakeholders from various regions. The three-day workshop was inaugurated with opening statements from the Ministry of Oceans and Fisheries of the Republic of Korea, the CBD Secretariat, FAO, and the UNEP.

On the first day of the Workshop, the progress made on the regional roadmaps for cooperation since the third SOI meeting held in Busan in 2022 was discussed from different regions, viz., Western Indian Ocean, North Atlantic, and South & Southeast Asia. Dr. P. Krishnan, Director made a coordinated presentation on the initiatives taken against the roadmap in South and Southeast Asia.

On the second day, UN Division for Ocean Affairs and the Law of the Sea (UN DOALOS) and Global Ocean Biodiversity Initiative (GOBI) provided insights on the recently concluded marine biodiversity conservation beyond national jurisdictions (BBNJ) agreement. The concluding day focused on the

Kunming-Montreal Global Biodiversity Framework and the importance of National Biodiversity Strategies and Action Plans (NBSAPs) in facilitating it.

The Workshop concluded with a call for its continuation, supplemented by intersessional work and sessions alongside major international events. RSO and RFB Secretariats were urged to act as "ambassadors", underscoring the Dialogue's significance to their Parties/Member States for enhancing regional governance and collaboration.



## Meeting of the FAO Technical Advisory Group

The Technical Advisory Group (TAG) constituted by FAO to guide and oversee the integration of the Agricultural Science & Technology Indicators (ASTI) project into FAO's Agrifood Systems Technologies and Innovations Outlook (ATIO) and FAOSTAT framework had its first meeting at FAO Headquarters, Rome during 27-28 July 2023. The meeting was organized by the FAO Office of Innovation and the Bill and Melinda Gates Foundation (BMGF) to evaluate and enhance ASTI's framework and data quality to facilitate the integration.

Dr. P. Krishnan, Director, participated in the meeting as a member of TAG, which comprised of experts from diverse stakeholder groups and representatives from BMGF and ASTI/ATIO/FAO. The TAG discussed the core characteristics of ASTI,

gaps, and its potential to profile the trends in agricultural research investments across the National Agricultural Research Systems (NARS). The TAG members also deliberated on the essential steps for the transition of ASTI within FAO's ATIO framework by including broader agri-food R&D indicators, improved private-sector coverage, and enhanced data collection through collaboration.





## Workshop on Mainstreaming Innovations to Usher Blue Economy

A National Workshop on "Mainstreaming Research, Technology & Innovation in Ushering Blue Economy in India" was organized by CSIR-National Institute of Oceanography (NIO) in Goa on August 17, 2023. Experts from research organizations, academia, and the fisheries industry participated and shared their perspectives in bringing synergy among various stakeholders toward realizing the blue economic potential.

Participating in the Workshop as an invited speaker, Dr. Krishnan, Director, presented a talk on "Opportunities & Challenges in Fisheries Research," emphasizing the need for ensuring a balance between ocean resource utilization and marine ecosystem preservation. He illustrated the advantages of working closely with the neighbouring countries, particularly the Bay of Bengal rim countries, for optimal leveraging of the blue economy potential. The meeting served as a platform for experts, researchers, and stakeholders to exchange ideas toward integrating the Blue Economy into India's growth narrative.



## Workshop on Re-Purposing Public Policies and Programs in Agriculture for Protecting Biodiversity

The Indian Council for Research on International Economic Relations (ICRIER) organized a Workshop with senior officials from the National Biodiversity Authority (NBA), Ministry of Environment, Forest and Climate Change, Govt. of India, and UNDP on 24 August 2023. The Workshop was conducted in hybrid mode.

Prof. Ashok Gulati, Distinguished Professor of ICRIER presented the overview of the study and set the context for discussion. The event was attended by Dr. Ruchi Pant, Head of Climate Adaptation, NRM, and Biodiversity at UNDP, and senior officials from State Biodiversity Boards from Telangana, Punjab, and Maharashtra. Mr. C. Achalender Reddy, Chairman, NBA, highlighted the importance of the study in the context of preparing the National Biodiversity Strategies and Action Plans (NBSAPs) in alignment with the Kunming-Montreal Global Biodiversity Framework.

Dr. P. Krishnan, Director, participated in the Workshop as an invited expert and presented an overview of the studies and steps taken hitherto for mainstreaming biodiversity conservation in the development schemes of the agriculture sector in India.



## Other events/meetings attended by BOBP-IGO Staff

### Dr. P. Krishnan, Director

- Chief Guest at the Valedictory function of the Training Programme on "Biofloc Production Technology" at the Central Institute of Brackishwater Aquaculture (CIBA) on 04 May 2023.
- Partners' meeting of the BOBLME Project (Phase 2) (multiple meetings).
- Eighth Meeting of the Planning Board held on 10 May 2023 at the Tamil Nadu Dr. J. Jayalalithaa Fisheries University, Vettar River View Campus, Nagapattinam as its member.
- Workshop on Food Safety Strategies for the Indian Fisheries Sector organized by the National Academy of Agricultural Sciences (NAAS) on 17 May 2023.
- Annual General Body and Foundation Day of the National Academy of Agricultural Sciences (NAAS) at New Delhi during 04-05 June 2023.
- Expert Consultation to develop the socio-economic indicators and framework for the GCF project at National Coastal for Sustainable Coastal Management (NCSCM), Chennai on 04 July 2023.
- Meeting with Secretary and Senior Officials at the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India at New Delhi during 01-02 August 2023 to discuss the preparations for organizing FAO Workshop on "Mainstreaming Climate Change into International Fisheries Governance" in India.
- Resource person in the Refresher Course organized by the Indian Society of Agroforestry on 01 August 2023 and delivered a talk on scientific writing to influence public policy.
- Resource person in the 113<sup>th</sup> Foundation Course for Agricultural Research Services (FOCARS) held at the ICAR-National Academy of Agricultural Research Management (NAARM), during 07- 08 August 2023 and conducted two interactive sessions on "reparation of research project proposals" and "science communication".
- First Meeting of the Working Group to review the National Biodiversity Strategy and Action Plan (NBSAP) following the Kunming-Montreal Global Biodiversity Framework organized by the National Biodiversity Authority (NBA) at Chennai on 09 August 2023.
- Meeting with Secretary (East), Joint Secretary (BIMSTEC & SAARC), and senior officials of Ministry of External Affairs, Government of India at New Delhi on 10 August 2023 and presented the proposal on BIMSTEC-INDIA Marine Research Network (BIMReN).

### Rajdeep Mukherjee, Policy Analyst

- Follow up Meeting to the Resolution A-32/1 of the 32nd Session of the Assembly of IOC: Establishment of an IOC Sub-Commission for the central Indian Ocean IOCINDIO, on 17 July 2023.
- Meeting with the FishSafety Foundation on possibilities of cooperation on improving occupational safety of fishers and improved accident reporting (multiple meetings).
- Meeting with the participants of Safety Training programme in Sri Lanka on implementation of lessons from the training programme on Jun 19, 2023.



## High Seas Fishing in South Asia: Historical Trajectories, Regional Insights, and Future Governance

M. Sri Hari, R. Mukherjee and P. Krishnan

### History of High Seas Fishing

High seas encompass those vast expanses of the oceans that lie beyond the jurisdiction of any single state. While regular fisheries expeditions to the deeper waters are an ancient practice, modern days high seas fishing is largely developed as an offshoot of rapid progress in naval technologies during World War II. In fact, fisheries and naval warfare had and have a very close relationship. On the one hand, the fishers and fishing vessels contributed to the navy, and on the other hand, countries developed their ship-building capacity, which later helped in building factory fishing vessels.

In the aftermath of World War II, a pivotal era emerged as powerful self-contained fishing fleets, often referred to as distant-water fleets, came into vogue. These fleets traversed the world's oceans, strategically targeting lucrative fishing grounds in pursuit of rich harvests.

The concept of "nationalization" of fisheries gained significant prominence following the landmark 1982 United Nations Convention on the Law of the Sea (UNCLOS). This seminal treaty laid the groundwork for the establishment of Exclusive Economic Zones (EEZs) and significantly bolstered the authority of coastal and island nations to oversee fishing operations within a 200-nautical-mile radius from their shores. About 60% of the Earth's oceans extend beyond the

boundaries of these exclusive economic zones, representing unclaimed territories in a legal sense. UNCLOS designates these expanses as the 'high seas'. UNCLOS also has specified the duties of the countries concerning fishing on high seas and thus formalized "fisheries management in the high seas" as overseen by the regional fisheries management organizations (RFMOs)

Historical records indicate that during the 1950s, the reported catch from the "high seas" accounted for a mere 2 million tonnes (FAO, 2009). Only in recent times have fishermen begun to venture into the high seas with greater frequency, driven by advancements in fishing technology and the revolution in communication methods.

FAO reports that the biologically sustainable levels of fish stocks have been drastically reduced from 90 percent in 1974 to 64.60 percent in 2019. Most of the stocks in the country's EEZ were below sustainable levels, thereby giving a necessary mandate for the fishers to venture into the high seas.

### Evolution of the definition of High Seas

The concept and definition of high seas are dynamic and have changed over the annals of history. Ancient civilizations, from the Phoenicians to the Greeks and the Romans, considered the seas as open to all for navigation but subject to no state's sovereignty. During the Middle Ages,

Dutch jurist Hugo Grotius argued that the sea was international territory, and all nations were free to use it for seafaring trade (Mare Liberum or "free sea"). This was a challenge to the Portuguese and Spanish claims of dominion over vast stretches of the world's oceans due to their pioneering maritime explorations. Conversely, the concept of Mare Clausum or "closed sea" was defended by the English jurist John Selden. This perspective viewed the seas adjacent to a nation's coastline as territory that could be appropriated and closed off to other nations.

In the 17th and 18th centuries, as naval technology developed and states sought to exert more control over the waters adjacent to their coasts, a consensus began to form around the idea that a nation's territorial waters extended as far as a cannon shot could reach from the shore. Given the range of cannons at the time, this was generally accepted to be about three nautical miles. The Cannon Shot Rule, by extension, defined the high seas as waters beyond 3 nautical miles. Subsequently, the presently known high seas were defined under the UNCLOS 1982. It took another decade, before fisheries management measures in the high seas introduced by RFMOs, came into place.

## Current Status of High Seas Fishing

As can be seen from the above, fishing in the high seas for the larger part of time remained unmanaged or partially managed. A direct fallout of the poor management is the lack of information on the magnitude and extent of high seas fishing.

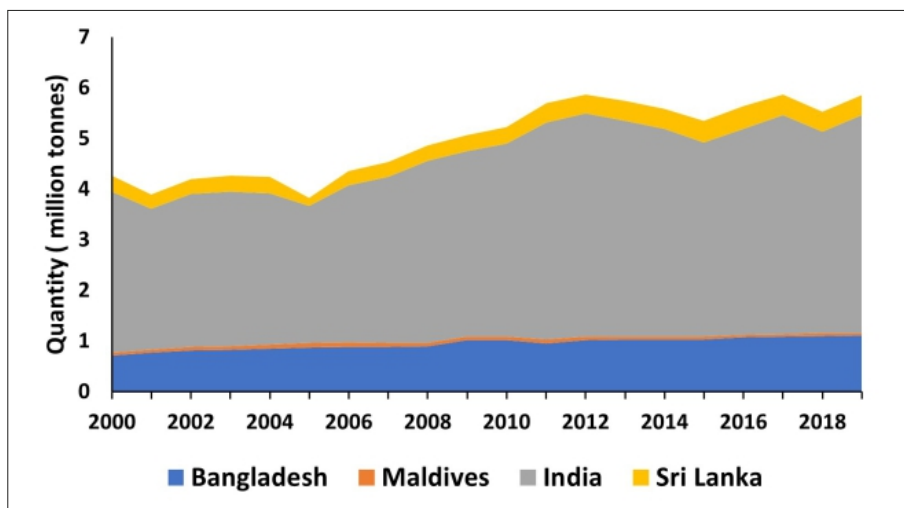
The current study was conducted to review the status of high seas fishing in South Asia. We have used the reconstructed fishery catch data, obtained from the 'SeaAroundUs' initiative, as it provides estimated catch from the high seas.

According to the "SeaAroundUs" project, the current fish catch from the high seas stands at approximately 36 million tonnes, which accounts for 6% of the global fish landings. This substantial increase from past decades (e.g., 2 million tonnes report in FAO 2009) is a testimony to the spatial transition of the fishing grounds over time and the growing reliance of the fishers on these distant waters.

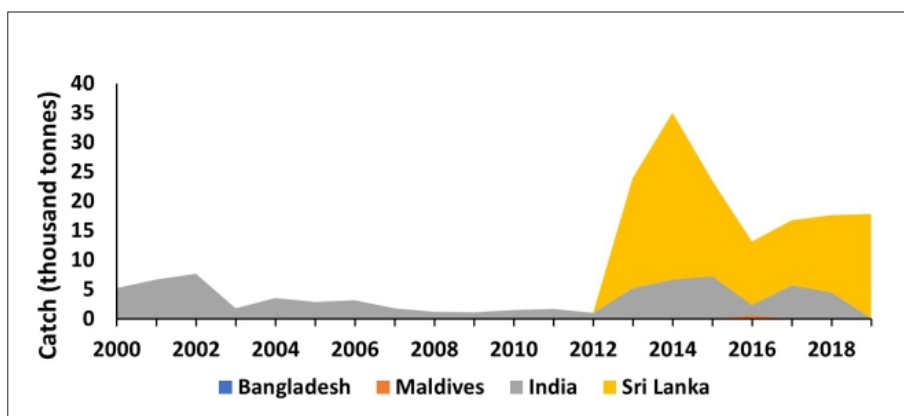
Overall, only 14 countries in the world were responsible for 90% of the fishing activities on the high seas. China, Taiwan, Chile, Indonesia, and Spain were the major fishing nations between 2002-2011, followed by Japan and South Korea.

In South Asia, India has consistently maintained the top position over the past two decades, followed by Bangladesh, Sri Lanka, and Maldives. Notably, India embarked on high seas fishing as early as the 1980s, with its catch recording a surge after 2010. Sri Lanka entered the high seas fishing in 2012, closely followed by the Maldives in 2013. However, it is noteworthy that Bangladesh has not reported any instances of high seas fishing activity. In the year 2014, Sri Lanka's high seas catch ascended to a prominent position within the regional context.

On average, the proportion of contribution from high seas fishing



Fish catch from the EEZ of South Asian Countries during 2000-2019  
Source: SeaAroundUs



Fish catch from the high seas by the South Asian Countries during 2000-2019  
Source: SeaAroundUs



<sup>1</sup> Cashion et al., 2018. Reconstructing global marine fishing gear use: Catches and landed values by gear type and sector. Fisheries Research, 206, pp.57-64.



to the overall catch exhibited considerable variability among these countries. Specifically, for India, it ranged from 0.004% to 0.25%; in the Maldives from 0.00% to 0.01%, and in Sri Lanka from 0.00% to 0.06%.

The high seas fish catch is mostly contributed by highly migratory species such as Tuna and Billfishes followed by Perch-like fishes and Sharks. Tuna and tuna-like species are caught predominantly using longline technique among the South Asian countries.

Contrastingly, in the context of India, the predominant approach to fishing encompasses a diverse array of species, ranging from fish to various invertebrates, which is achieved through the operation of different types of gear<sup>1</sup>.

### Protection or Production: The Future Implications for High Seas Fishing

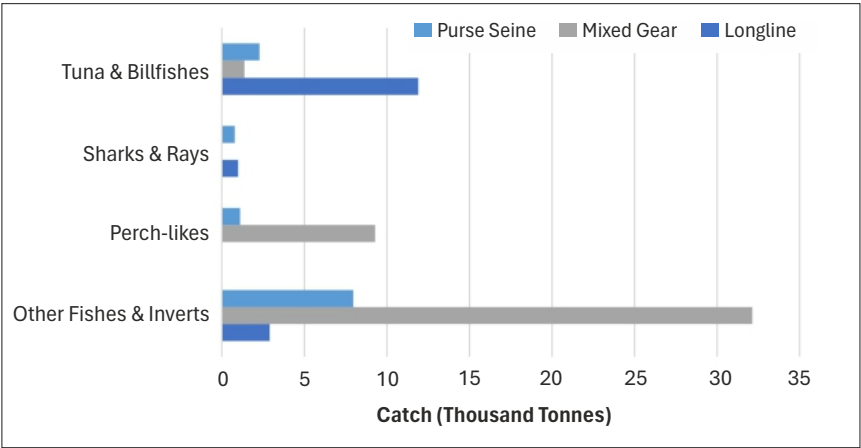
The high seas, being a shared resource, have sparked debates around their optimal use. Conservationists argue for stringent protection measures, highlighting the risks of overfishing and ecological degradation.

Issues such as unsustainable fishing, bycatch, and climate change pose a significant threat to the sustainability of tuna fisheries. Due to overwhelming demand, one-third of the 7 principal tuna species are at biologically unsustainable levels. Climate change is causing a shift in the geographical distribution of tuna species, and more robust management and effective enforcement are necessary.

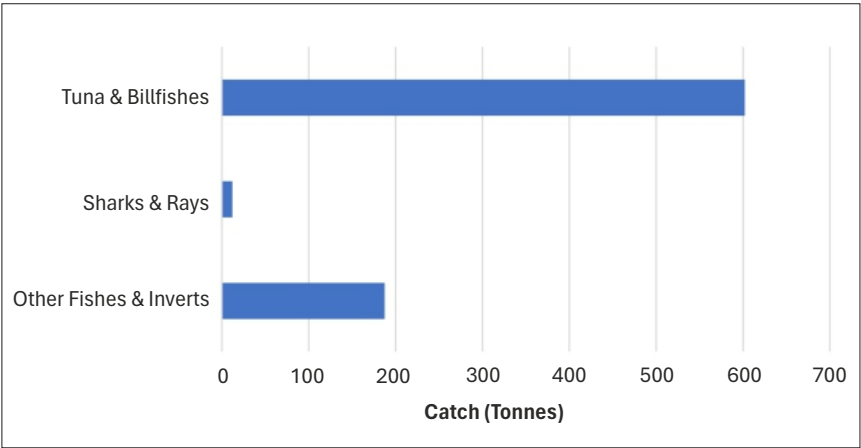
On the other hand, proponents of industrial fishing emphasize the economic value and job creation potential of these waters. A balanced approach, incorporating protection measures, sustainable practices, and economic considerations, seems imperative for the future of high-seas fisheries.

In summary, the challenges facing high seas fishing are the following:

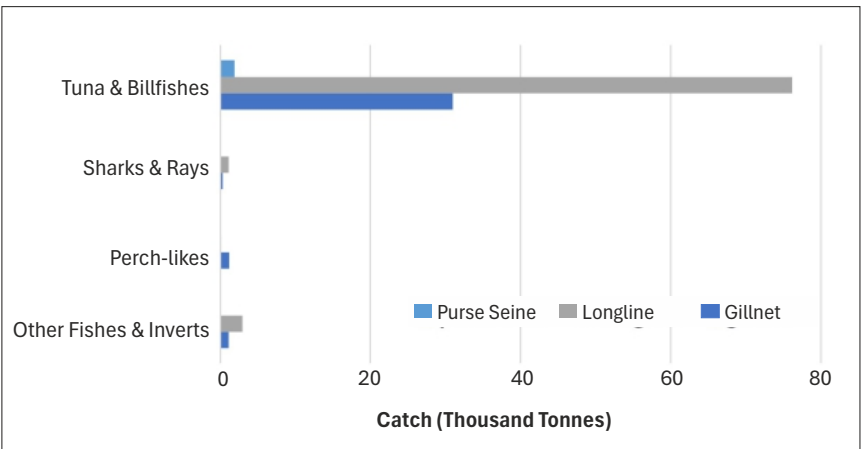
- **Overexploitation of migratory species:** High seas fishing



Major fishes caught in high seas using different gears by India during 2000-2019



Major fishes caught in high seas using longline by Maldives during 2000-2019



Major fishes caught in high seas using different gears by Sri Lanka during 2000-2019

intensifies the risk of overexploitation, as it often involves targeting migratory species that travel across oceanic territories, making them more vulnerable to overexploitation by different countries in the region.

- **Climate change:** The warming of aquatic systems due to global warming is causing significant changes with projections indicating even more prominent changes in the future. Tuna fisheries are particularly affected by climate change due to the wide distribution of tuna species in various water temperatures. As a response to warming seas, tunas may migrate towards higher latitudes at varying rates in different hemispheres.
- **Illegal, Unreported, and Unregulated (IUU) Fishing:** The vastness of the high seas makes monitoring and regulation challenging. This creates a ground for IUU fishing practices, which undermines conservation efforts and leads to unsustainable practices.
- **Bycatch issues:** Bycatch includes species that may be of no commercial value or might even be endangered and thus can lead to detrimental ecological consequences.
- **Regional Conflicts:** The shared nature of the high seas can result in geopolitical conflicts over 'fishing rights' and territories. The absence of a comprehensive framework for managing high-seas resources can lead to disputes among nations.

Issues such as unsustainable fishing, bycatch, and climate change pose a significant threat to the sustainability of tuna fisheries. Due to overwhelming demand, One-third of the 7 principal tuna species are at biologically unsustainable levels. Climate change is causing a shift in the geographical distribution of tuna species, and more robust management and effective enforcement are necessary.

To meet the multifaceted challenges for the high sea fisheries in the region necessitates a comprehensive approach encompassing research, policy, and capacity-building efforts.

**Catch data monitoring:** At the national level, location-specific robust catch documentation schema needs to be implemented to facilitate the accurate stock assessment of the high seas and EEZ stocks, separately for the formulation of effective management strategies and to curb IUU fishing activities.

**Stock structure-based management:** Identifying the differences in the stock of commercially caught species on the high seas, serves as a critical influencer in shaping management decisions. Additionally, understanding how climate change affects tuna fisheries is crucial for

developing strategies that enhance resilience.

**Strengthening collaboration:** Collaboration is key for sustainable management of high sea fishery. Strengthening the collaboration between Regional Fishery Bodies (RFBs) and Regional Seas Organizations (RSOs) can facilitate a cohesive approach to management.

**Implementing BBNJ:** Implementing the Biodiversity Beyond National Jurisdiction (BBNJ) agreement underscores the commitment to conserving marine biodiversity in areas beyond national jurisdiction. The exchange of best practices and knowledge among countries and regions serves as an important resource for honing efficient tuna fisheries management strategies across the Indian Ocean.





## Fisheries Trade Dynamics in South Asia: A Preliminary Analysis

Rajdeep Mukherjee, P Krishnan, and M Sri Hari

*The fisheries sector, integral to the economic framework of developing nations, holds immense economic value. Utilizing the capabilities of FishStatJ— tool developed by the Food and Agriculture Organization of the United Nations (FAO) for Fishery and Aquaculture statistical time series data analysis —his article presents an in-depth analysis of the fisheries trade dynamics of Bangladesh, India, Maldives, and Sri Lanka from 2019 to 2021. Emphasizing the recently added disaggregated trade data, the study reveals primary trade partners, high-demand products, and shifting trade patterns. The insights provided not only capture the current landscape but also forecast potential future trends, offering crucial insights for policymakers, stakeholders, and researchers in the fisheries sector.*

The fisheries sector plays a pivotal role in the economies of BOBP member countries, not just in terms of food security but also as a source of export revenue. In this report, we analyse the fisheries trade dynamics of four South Asian nations: Bangladesh, India, Maldives, and Sri Lanka, spanning the years from 2019 to 2021 (BOBP region).

The value of global fisheries trade (export plus import) was recorded at USD 353 billion in 2021 (all monetary values at current prices), an improvement of 8% over 2019 and recovering from a setback in 2020 when the value of the trade dipped to USD 304 billion. A similar trade pattern was observed in BOBP member countries, where the total value of the trade dipped during 2020 and recovered during 2021, except in Maldives. In Maldives, the total value of trade increased during 2019-2020 but then dipped in 2021. Overall, the total value of fisheries trade from the BOBP region in 2021 stood at approximately USD 9.03 billion, comprising about 2.56% of the global value of the trade.

India, by far the largest exporter and importer from the region, captured about 2.20% of the global value of the trade-in 2021. In terms of export and import India has contributed 4.21% and 0.13% respectively.

Bangladesh (0.19%), Sri Lanka (0.14%), and Maldives (0.05%) follow India in terms of share in the global value of trade.

Strong exports assisted the countries in maintaining a positive balance of trade (BOT). Maintaining a positive trade balance is a crucial indicator of a nation's economic health and global competitiveness. A trade surplus exemplifies a country's capacity to produce internationally sought-after commodities and

influences the strength of its currency. It means that a country exports more goods and services than it imports, amplifying the inflow of foreign currency, bolstering its foreign exchange reserves, and leading to job creation. Moreover, a prosperous trade balance provides nations with increased leverage in international trade discussions. The data underscore the resilient nature of the global fishery trade and the strong trade linkages of the BOBP countries (Fig. 1).

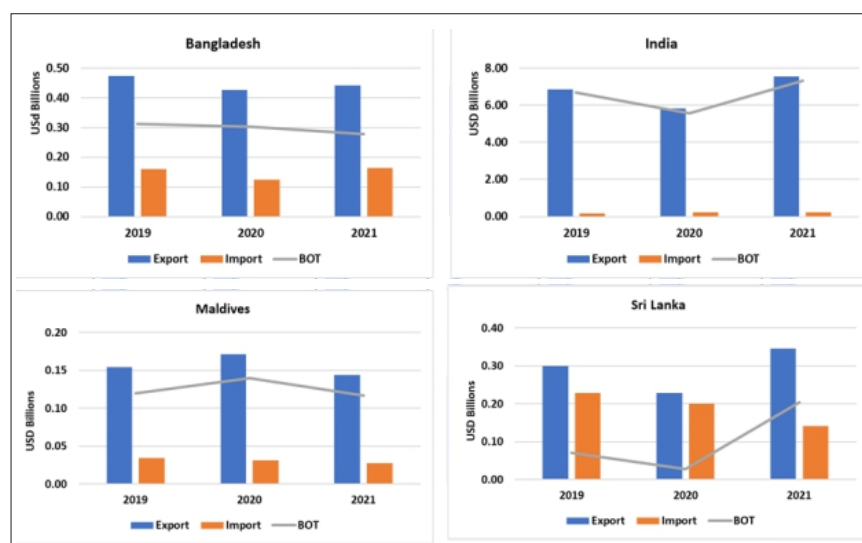


Fig. 1. Overview of fisheries trade in South Asia

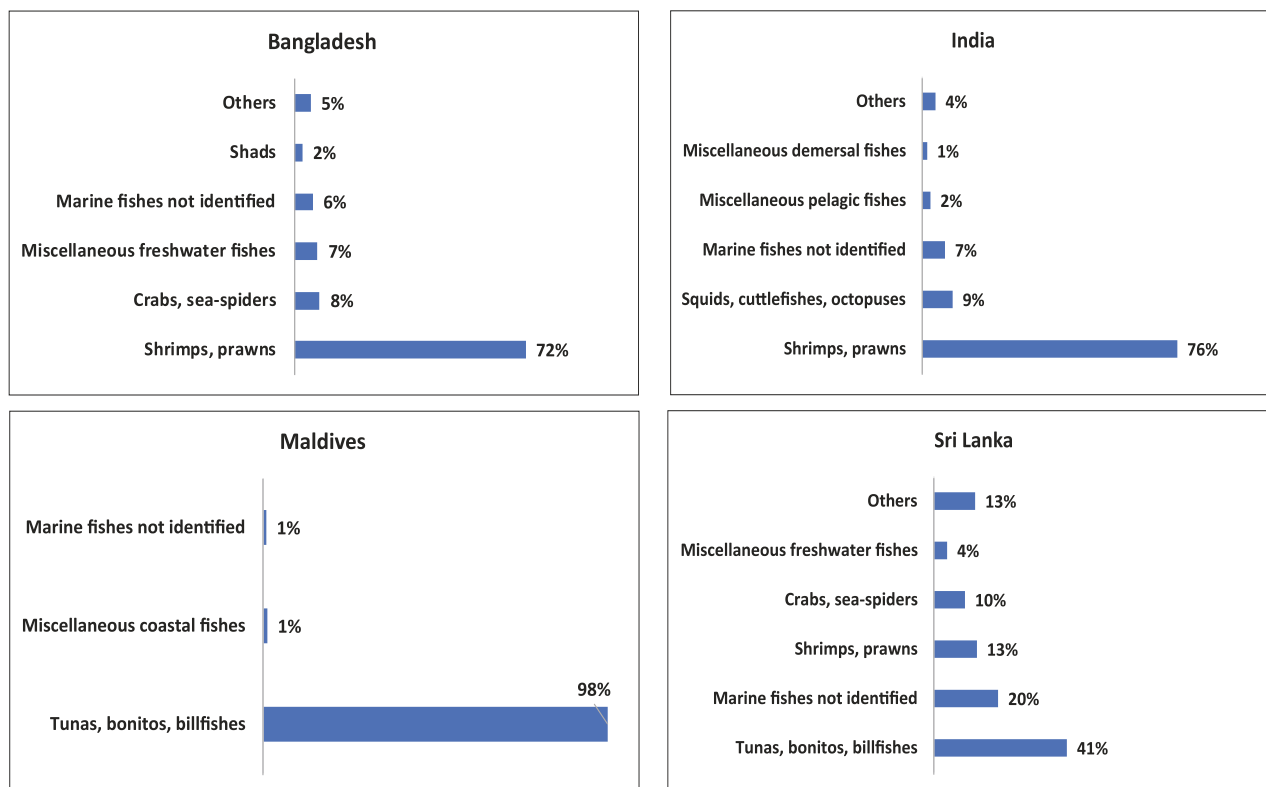


Fig. 2. Country-wise major exported commodities in 2021

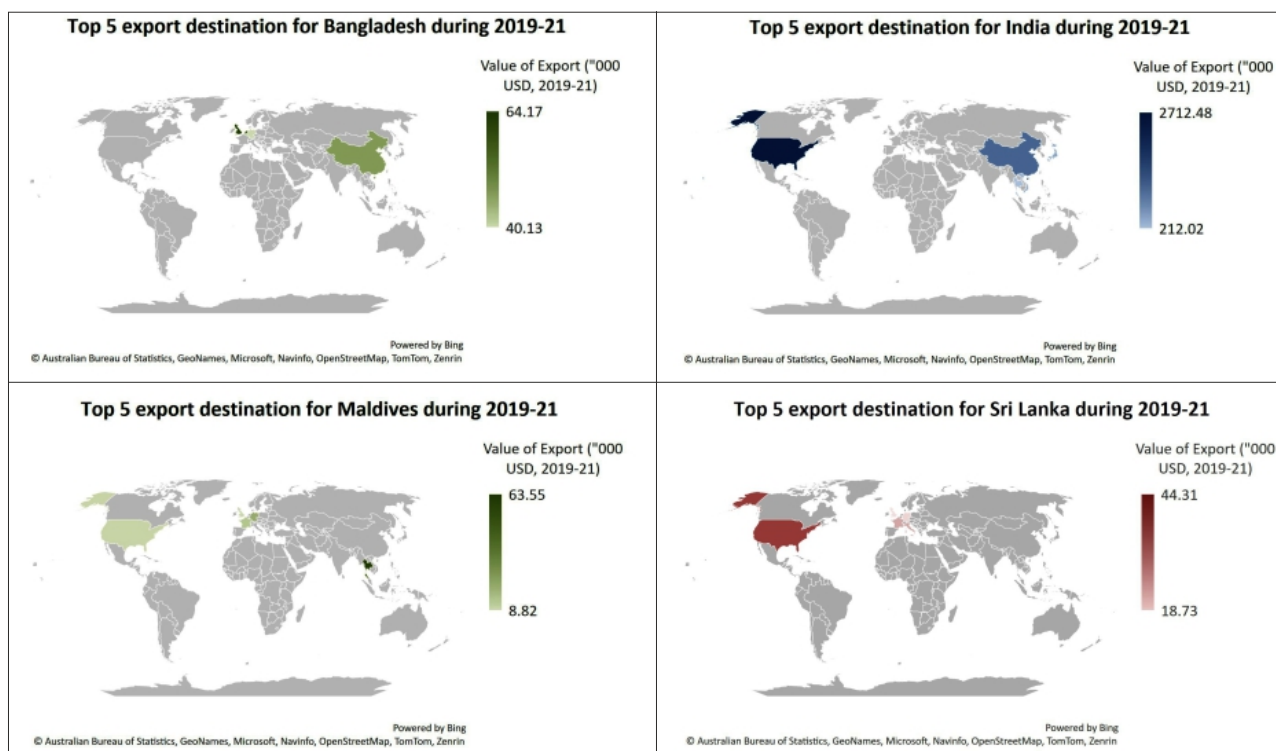


Fig. 3. Major fisheries export destinations of South Asian countries during 2019-21 (By value)



## Major Exported Commodities

The country-wise major exported commodities are presented in Fig. 2. In Bangladesh, the most significant export commodity is 'Shrimps and prawns', which constitute a dominant 72% of the total fisheries exports. This prominence is followed by 'Crabs, and sea-spiders' at 8% and 'Miscellaneous freshwater fishes' at 7%. While Bangladesh boasts a variety of commodities, the nation's focus is intensely centred around shrimps and prawns, indicating a clear specialization in this area. This concentrated attention on a single commodity suggests high expertise, efficient production processes, and potential cost advantages. However, such over-reliance brings its set of challenges; any disruptions such as disease or climate impacts can pose significant economic repercussions.

Turning to India, the scenario seems reminiscent of Bangladesh, with 'Shrimps and prawns' reigning supreme, accounting for 76% of fisheries exports. 'Squids, cuttlefishes, and octopuses' and 'unsorted marine fishes' follow, contributing 9% and 7% respectively. India's export portfolio mirrors Bangladesh's in its skewed focus on shrimps and prawns. Such mastery in shrimp and prawn production suggests India's capability to leverage economies of scale. However, like Bangladesh, India's over-dependence on a single commodity presents inherent risks.

Diving into the Maldives, the narrative shifts dramatically. The country's export market is overwhelmingly monopolized by 'tunas, bonitos, and billfishes', representing a staggering 98% of total exports. Such figures underline an almost mono-commodity export scenario, highlighting the Maldives' unequivocal specialization in tuna and related fish exports. This intense specialization has its perks, potentially positioning the Maldives with a robust global reputation and avenues for premium pricing. However, this extreme dependency again is a double-edged sword. Global market fluctuations can profoundly impact the Maldivian economy.

Contrastingly, Sri Lanka presents a more intricate tapestry. 'Tunas, bonitos, and billfishes' spearhead the exports with a 41% share, succeeded by 'unsorted marine fishes' and 'shrimps and prawns' at 20% and 13%, respectively. Offering a more diverse export palette than its counterparts, Sri Lanka maintains a healthy balance, even though tunas and related species are predominant. This diversified approach minimizes dependency risks, granting Sri Lanka the flexibility to navigate multiple markets. However, the lion's share of 'tunas, bonitos, and billfishes' in the export matrix cannot be overlooked.

In summary, while both Bangladesh and India lean heavily on 'shrimps and prawns', the Maldives stands out with its near-total dependence on 'tunas, bonitos, and billfishes'. Sri Lanka, on the other hand, carves a niche with its multifaceted export profile, though 'tunas, bonitos, and billfishes' still hold significant sway. As these countries chart their future courses, strategic diversification will be of paramount importance to mitigate risks associated with over-reliance on single commodities.

## Major Trading Partners

The South Asian countries export their fisheries produce to across continents, while USA, Europe and China are the major markets. Each country has its own key trade partners, which is depicted in Fig. 3 based on value of export during 2019-21.

Bangladesh: The United Kingdom emerged as the top export destination, with an average annual export value of approximately \$64.2 million, accounting for 14.4% of Bangladesh's total exports. The

Netherlands followed closely, averaging \$64.1 million, capturing 14.3% of the total export value. China, Belgium, and Germany were also major export partners, with average values of \$47.4 million (10.6% share), \$46.6 million (10.4% share), and \$40.1 million (9.0% share), respectively.

India: The USA held a dominant position with an average annual export value of \$2.71 billion, capturing a substantial 40.2% share of India's total exports. China was a significant export partner, with an average value of \$1.11 billion, accounting for 16.5% of India's total exports. Japan, Vietnam, and Thailand further augmented India's export profile with values averaging \$423.1 million (6.3% share), \$323.1 million (4.8% share), and \$212.0 million (3.1% share), respectively.

Maldives: Thailand was the dominant export partner, with exports averaging \$63.6 million annually, constituting a significant 40.6% of Maldives' total export value. Germany was another key destination with an average value of \$19.6 million, representing 12.5% of Maldives' exports. France, the USA, and the United Kingdom also played pivotal roles with values averaging \$13.7 million (8.8% share), \$9.98 million (6.4% share), and \$8.82 million (5.6% share), respectively.

Sri Lanka: The USA emerged as the top export partner, with an average annual export value of \$44.3 million, contributing to 15.5% of Sri Lanka's total exports. Italy and France followed with average values of \$27.5 million (9.6% share) and \$27.2 million (9.5% share), respectively. Germany and the United Kingdom also had significant

**Table 1. Number and distribution of partner countries in 2021**  
(Distribution is based on the value of total trade)

Reporting Country	Number of Partner Countries	Q1 (Lowest)	Q2	Q3	Q4 (Highest)
Bangladesh	73	19	18	18	1
India	173	44	43	43	43
Maldives	62	16	15	15	1
Sri Lanka	98	25	24	24	25

shares with values averaging \$20.1 million (7.0% share) and \$18.7 million (6.6% share), respectively.

*These figures suggest the importance of the EU market as the preferred trade partner for the BOBP Region followed by the USA, Japan, and China. The relationships highlight the importance of certain nations in each country's export strategy, driven by various factors, such as trade agreements, geographic proximity, and market preferences.*

Table 1 below summarizes the distribution of partner countries for each reporting country and the quartile breakdown based on the value of exports in 2021. The quartile distribution shows how exports are spread out. For each country reported, Q1 represents partners (number of countries) with smaller trade values, while Q4 represents the number of countries, with the higher trade values.

*The salient findings are summarized hereunder:*

**Diversity of Trade Partners:** India has the most expansive trade network in the region, with 173 partner countries, indicating its broad reach in its trade relationships and the potential, which should be further explored. In the same vein, Sri Lanka (98 partners), Bangladesh (73 partners), and Maldives (62 partners) also have extensive networks, which they need to leverage to their advantage over their competitors.

**Trade Concentration:** Table 1 demonstrates that no country displays a pronounced concentration of trade in either the lowest or highest quartiles, indicating a balanced trade distribution. This is, at the first sight, a positive sign as it reduces the risk associated with potential disruptions in trade with a few key partners.

**Key Partnerships:** For each reporting country, partners in the Q4 quartile are pivotal, accounting for a significant portion of their exports. Recognizing these key partners helps in evaluating competitive strengths or weaknesses in those markets, as well as in identifying

crucial product segments. In addition, it can help the countries to develop a risk management strategy.

**Trade Diversification:** India, despite its extensive network of partners, shows an even distribution across all trade value quartiles, pointing to a strong and diverse export strategy and Sri Lanka mirrors this balanced approach. Even Bangladesh and Maldives, with fewer partners compared to India, exhibit a well-spread distribution. This pattern could possibly be an outcome of a strategic effort by South Asian countries to diversify their fisheries exports across a range of partners.

*Summing up, each country has main trade partners that significantly boost their exports. Yet, having a mix of partners helps guard against global economic ups and downs. Countries should strengthen this trade relationships for steady growth. The balanced trade, as seen above, could be attributed to the diversification strategy, or it could simply be a natural outcome of the product line offered. We need a deeper look to understand these trade patterns fully. BOBP-IGO will dive into this in future country-specific reports. As trade has changed a lot over the past decade, it is important to see how these countries are adjusting. We will cover this in our upcoming studies.*

### **Intra-regional trade**

The intra-regional trade amongst the BOBP member countries and between BOBP-member countries and Thailand (major global fish processing and exporting centre) shows that about 10% of the value of the trade was generated from the region in 2021.

India stands out as a significant player in the regional trade. The country imported a notable quantity from Bangladesh, valued at USD 33.89 million, making Bangladesh its top source of imports within this group. On the export side, Thailand was India's dominant trading partner, with exports amounting to USD 237.64 million.

Bangladesh exported primarily to India, with goods valued at USD 33.89 million. It also had a noticeable trade relationship with

Thailand, with export value amounting to USD 9.44 million. On the import front, its main source in the region was India, from which it imported goods worth USD 31.95 million. The Maldives had a strong trade reliance on Thailand, exporting aquatic commodities worth USD 70.15 million. The Maldives also exported to Bangladesh and Sri Lanka in 2021 albeit a smaller amount.

Sri Lanka engages in a balanced trade with its neighbours. It exported goods worth USD 4.32 million to Thailand and imported goods worth USD 16.11 million, making Thailand. Conversely, Maldives is Sri Lanka's leading export destination, with exports valued at USD 3.41 million in 2021.

Thailand is predominantly an import-driven country in this regional context and imported over USD 322 million in 2021. Thailand is a major fish processing and trading centre in the vicinity of the region. The large volume of regional imports was likely used for processing and, or re-exporting.

To summarize, the intra-regional trade dynamics depict India as a significant exporter, particularly to Thailand, while also being a notable importer from Bangladesh. Thailand emerged as a significant importer, especially from India. Bangladesh, Maldives, and Sri Lanka contribute actively to the regional trade, showing a balance between their imports and exports within this group. This data underscores the intertwined trade relationships and the potential for growth and collaboration in the region (Table 2).

### **Conclusion and Recommendations**

The fisheries sector stands as a cornerstone for the economies of the BOBP region, serving dual functions, ensuring food security, and acting as a pivotal revenue source through exports. The global fishery trade's resilient nature was evident as it bounced back in 2021 after a dip in 2020. The trade patterns in the BOBP region largely mirrored global trends.

India's substantial role in the regional trade framework is



**Table 2. Intra- and inter-regional trade matrix for BOBP countries in 2021**  
(Values in USD)

Reporting Country	Bangladesh	India	Maldives	Sri Lanka	Thailand
Bangladesh		33.89	0.03		9.44
India	31.95		3.45	8.20	237.64
Maldives	2.52			2.30	70.15
Sri Lanka	0.04	0.95	3.41		4.32
Thailand	6.70	2.24	0.57	16.11	

apparent, both as a significant exporter and an importer. Other countries like Bangladesh, Maldives, and Sri Lanka, also play integral roles, emphasizing the interwoven nature of trade relationships in the region. The data suggests that the BOBP countries have strong trade linkages, both within the region and globally.

Based on the above narratives following preliminary suggestions emerge:

- 1. Diversification of Trade Commodities:** While the prominence of certain commodities, such as 'Shrimps and prawns' in Bangladesh and India and 'Tunas, bonitos, and billfishes' in the Maldives, has benefitted these countries, there's an inherent risk of over-reliance. Diversifying their export portfolio can help in hedging against potential disruptions and market volatility.
- 2. Strengthen Intra-Regional Trade:** Given the notable intra-regional trade, especially with Thailand's role as a major fish processing and trading centre, it might be beneficial to explore and strengthen trade partnerships within the region further. This can lead to more resilient supply chains and potential cost savings.
- 3. Nurture Key Trade Partnerships:** Each country has its set of primary trade partners that significantly contribute to its exports. These relationships need to be nurtured and strengthened to ensure consistent trade flows.
- 4. Expand Trade Partnerships:** To ensure sustained economic

growth, especially in the face of global uncertainties, it would be prudent for each country to continually assess and potentially expand its trade partnerships.

- 5. Risk Mitigation through Trade Diversification:** With the quartile distribution showcasing the concentration of trade values, countries may strive to maintain the balanced distribution across quartiles. This would serve as a risk mitigation strategy against potential economic downturns in specific regions.
- 6. Leverage Strengths in Trade Discussions:** A positive trade balance is an indicator of a nation's economic health. Countries with a trade surplus, like those in the BOBP region, should leverage this position in international trade discussions to negotiate favourable terms.



Given the current trade dynamics and the growth potential, it is crucial for the South Asian countries to strategize proactively and capitalize on emerging opportunities.

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FAO. 2023. Fishery and Aquaculture Statistics. Global aquatic trade - By partner country. 2019 - 2021 (FishStatJ). In: FAO Fisheries and Aquaculture Division [online]. Rome. Updated 2023. [www.fao.org/fishery/en/statistics/software/fishstatj](http://www.fao.org/fishery/en/statistics/software/fishstatj)

## About FishStatJ

FishStatJ is a dedicated desktop software tailored for the global distribution of fishery statistical data. Among various trade data platforms, FishStatJ distinguishes itself by offering accuracy and clarity specifically for the fisheries sector. The database, which initially provided trade data (reporting country vs world), expanded its offerings in its recent updates to include disaggregated trade data by the partner country, enabling detailed country-specific analyses. Currently, data for the past three years (2019-21) are available, but aggregated data date back to 1976. All terminologies and reported values mentioned in this article align with the standards of the FAO FishstatJ Database.

## Financial Empowerment for Fisherfolk: BOBP's Support to Sri Lanka

### The Challenge

The marine fishing industry in the nearshore regions of Sri Lanka, characterized by its seasonality and reliance on traditional fishing methods, faces significant economic challenges. Notably, the majority of fisherfolk is dependent on informal financial channels, predominantly local moneylenders and fish traders known as "mudalalis." These informal sources provide crucial financial support during off-seasons and assist migrant fishermen in covering the costs associated with relocating equipment and crew to seasonal fishing zones.

Historically, the Sri Lankan government recognized the need for structured financial support and, in 1942, initiated institutional credit for fisheries. This was designed to aid individual fisher in procuring necessary fishing equipment and to enable fisheries cooperative societies to participate more effectively in fish marketing. The introduction of the Fisheries Mechanization Programme in 1958 was another step towards modernization, providing fishermen access to loans for the purchase of enhanced boats and engines. A significant milestone was reached in 1975 with the ADB-funded Southwest Coast Fisheries Project, marking the commercial banking sector's first foray into fisheries credit.

Nevertheless, by the mid-1970s, the government remained the predominant provider of institutional finance. This centralized approach encountered a significant challenge by 1977,

with non-recovery of significant funds distributed under the Mechanization Advance Account of the Ministry of Fisheries and Aquatic Resources (MFAR). Following a comprehensive review in 1978, the government decided to write off these outstanding loans and withdraw the Ministry/Department of Fisheries (DoF) from direct credit disbursement. This responsibility was subsequently transferred to the two state banks, the Bank of Ceylon and the People's Bank, which were deemed more adept at managing credit operations.

In 1978, the Bank of Ceylon and the People's Bank introduced multiple credit schemes for the fisheries sector in partnership with the Ministry/Department of Fisheries (DOF) and the Ceylon Fisheries Corporation (CFC). However, loan recovery proved challenging, mirroring issues from earlier DOF-facilitated credit initiatives. Consequently, by the mid-1980s, banks became more conservative in their lending practices to the

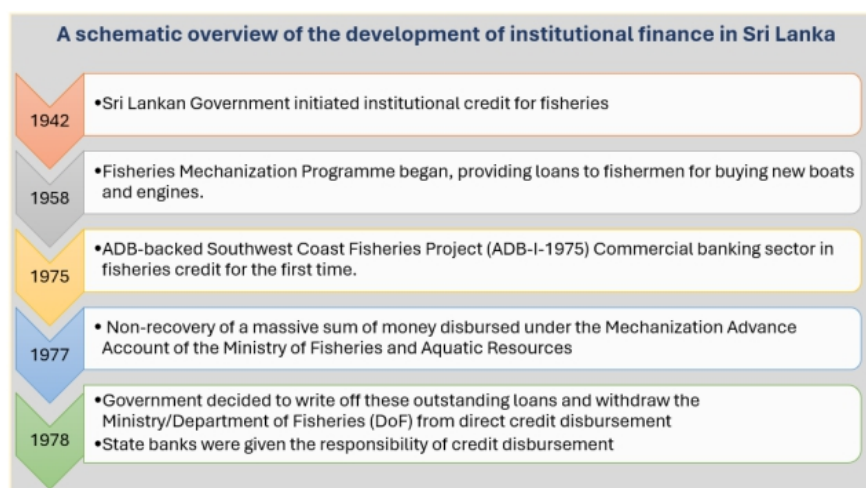
fisheries sector, and government subsidies for fishing equipment also saw a decline.

*The overarching challenge, therefore, lies in developing a sustainable financial framework that supports the fishing community while ensuring fiscal responsibility and efficient loan recovery.*

### BOBP's Assistance

In 1988, the Sri Lankan Government sought the expertise of the BOBP to collaborate with the Ministry of Fisheries and Aquatic Resources (MFAR) on a fisherfolk credit initiative. The objective was to design lending schemes that were straightforward, timely, and adaptable, aiming to enhance fisherfolk's operational efficiency, promote savings, and improve income and resource management by intertwining savings with credit.

BOBP, by then, had designed and successfully implemented a







*Bank and fisheries officials at a training programme and workshop on the Credit scheme in Hikkadwa*

fisheries credit programme in Odisha (1982-85<sup>1</sup>) and garnered considerable experience. With support from BOBP, the Sri Lankan credit scheme was revised. BOBP's Socio-Economic Survey identified the credit needs of fisherfolk and highlighted viable economic activities.

### **Key Changes Post BOBP's Assistance**

#### **(a) Recognition of Working Capital**

- Shifted focus from solely for investment to also providing working capital.
- Addressed the gap between bank credit and asset value.

#### **(b) Lending Program**

- Involved the Bank of Ceylon, the People's Bank, and the Regional Rural Development Bank.



*Fisherfolk seek clarifications after the meeting in Puttalam*

- Supported diverse fishing activities, from coastal to offshore multi-day fishing.
- Extended credit support to various economic activities like sale of fuel, providing fishing gear, manufacturing traditional craft, repairs of craft and gear and post-harvest tasks like drying, curing, and fish sales.

#### **(c) Credit Scheme Details**

- Emphasis on the necessity of working capital.
- Addressed challenges of seasonal fishing fluctuations and resulting indebtedness.
- Banks collaborated with village Fisheries Co-operative Society and Fisheries Inspectors for selection of the applicants.

<sup>1</sup> *BOBP' Credit Project for fishers in Odisha*: During this project, nine nationalized banks distributed credit worth INR 6.5 million, which was utilized for buying boats and nets, and marketing in bicycles, benefiting 2,500 fisherfolk households across four coastal districts in Orissa. The core aim was to foster a lasting relationship between marine fisherfolk and banking institutions. It showcased that bank loans to artisanal marine fisherfolk could be not only viable but also fully recoverable. This achievement was realized by merging commercial banking principles, such as flexibility, timeliness, and financial viability (without subsidies), with development of banking tenets, like simplicity, borrower education, and oversight. The project's effectiveness was evident in the impressive 95% loan repayment rate, the swift turnaround between loan application and disbursement (typically three to four weeks), and the near-complete productive use of the loaned assets. (More details provided under Reflections, page 4 in this issue)

<sup>2</sup> Gunarathna, DMMP, and SN Dushani (2013). "Expanding opportunities for working capital in the fisheries sector: Lessons learnt from formal and informal credit programmes operated for Tangalle fishing community in Sri Lanka." *International Journal of Scientific and Research Publications*: 801.



- Borrowers required to contribute 25% of project cost.
- Encouraged savings for those lacking initial funds.
- Interest rates set between 18% to 21% annually, and no interest subsidy was provided.
- Repayment periods based on cash flow and asset lifespan, with a maximum of ten years and a 180-day grace period.

From the very inception of the project in 1988, a committee comprising of members from various participating institutions collectively planned and executed all project activities. They developed the credit scheme they would implement, fostering a strong sense of commitment and responsibility. It differed from earlier fisheries credit projects which were developed without adequate consultations.

Following the Fisherfolk Borrower Education and Extension Programme meetings, potential borrowers started approaching banks. The loan applications were processed, loans were disbursed by early June 1992, and lending activity steadily increased. During June to September 1992, banks released 263 loans totalling LKR. 6.9 million.

Fisherfolks and bank officials, accustomed to operating in isolation, began frequent interactions through project-related discussions. They also jointly engaged in residential training programs and workshops led by BOBP. Over three years, this interaction fostered improved mutual understanding, goodwill, and a more effective working relationship.

### Impact

While recent data on penetration of banking could not be obtained when writing this article, a study

carried out in 2013 showed that the process of building trust between the banks and the fishers continued<sup>2</sup>. In fact, the study highlighted that fishers believe that they are more likely to get credit from the government banks than from their friends and relatives.

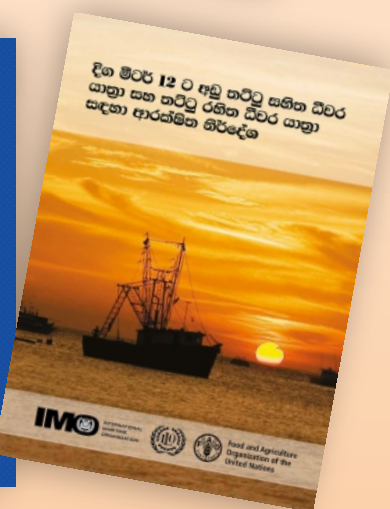
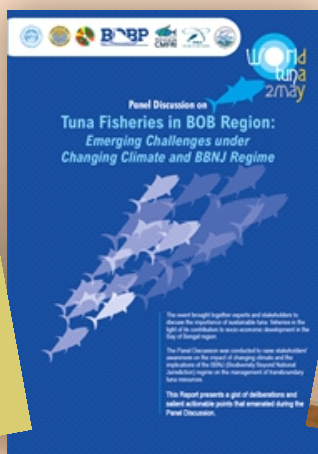
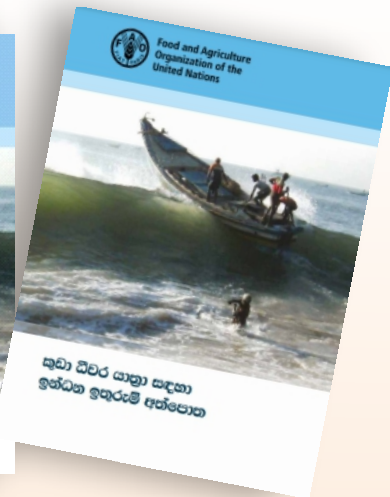
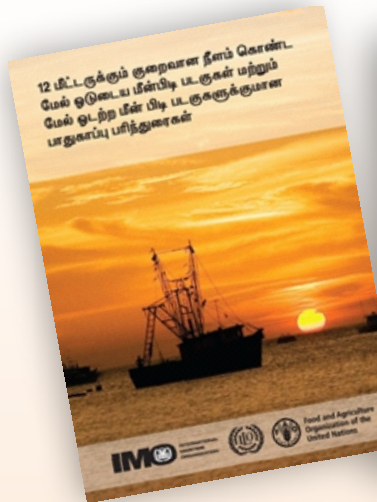
Further, half of the respondents (50%) showed their interest in the “Diwineguma Project” (a recent project launched by the Ministry of Economic Development to improve the living standards and social well-being of the people) as a proper channel of obtaining credits from formal sources to acquire the working capital.

Overall, data reported by CEIC (<https://www.ceicdata.com/en>) shows that between 2010 to 2017, commercial bank credit to the fisheries sector increased over five times from LKR 3,070 million in 2010 to LKR 17,504 million in 2017, showing penetration of the commercial banking sector in fisheries and mutual trust.





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