Fisheries Fortnightly Friday (F3) Webinar No: 7

"Startups in Fisheries"

07-11-2025

11 A.M - 12. 30 P.M IST

MANAGE Fisheries Innovation and Startup Hub (MANAGE - FISHub)
(A National Fisheries Incubation Centre Supported by the Ministry of Fisheries, Animal Husbandry and Dairying, Govt. of India)
National Institute of Agricultural Extension Management (MANAGE)
(An Autonomous Organization of Ministry of Agriculture and Farmers Welfare, Govt. of India)
Rajendranagar, Hyderabad – 500 030, Telangana, India
https://www.manage.gov.in/managefishub/

About the Webinar

The MANAGE- FISHub F3 Webinars, introduced in August 2025 by the MANAGE – Fisheries Innovation and Startup Hub (MANAGE- FISHub), Hyderabad, mark a pioneering step in digital learning for fisheries entrepreneurship. Designed as a vibrant knowledge-sharing arena, the series empowers aspiring aquapreneurs with expert insights, inspiring success stories, and actionable strategies to navigate entrepreneurial hurdles. Beyond sparking collaboration among fisheries stakeholders, it ensures that cutting-edge updates and sustainable aquaculture practices reach learners everywhere, creating a dynamic platform where innovation and opportunity in the fisheries sector truly flourish.

Inaugural Session

The seventh session of the MANAGE–FISHub Fortnightly Friday (F3) Webinar commenced with an insightful welcome address by Dr. Rahalya, MANAGE Fellow. She greeted the participants and outlined the vision of MANAGE–FISHub as a national-level incubation and innovation hub established with the support of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India. Dr. Rahalya highlighted the hub's role in promoting entrepreneurship, mentoring, and technology transfer, underscoring its commitment to strengthening the fisheries and aquaculture innovation ecosystem in the country.

Speaker 1

Dr. Debtanu Barman,
Founder & CEO,
Aqua Doctor Solutions Pvt. Ltd., Kolkata
debtanu080@gmail.com

Dr. Debtanu Barman, Founder and CEO of Aqua Doctor Solutions Pvt. Ltd., is driving innovation and sustainability in aquaculture through technology-led solutions. His work focuses on empowering farmers, women entrepreneurs, and rural communities through training, digital tools, and modern aquaculture systems.

Highlights of the Session

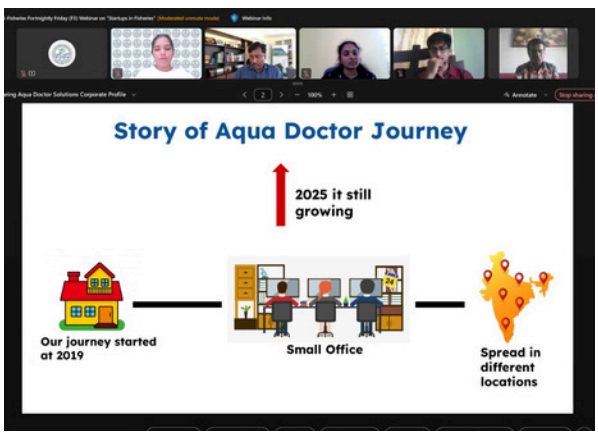
Dr. Barman discussed how Aqua Doctor Solutions Pvt. Ltd. is transforming aquaculture through technology, innovation, and community development.

Key Highlights:

- The "Adopt the Village" initiative empowers rural farmers and women entrepreneurs by developing aquaculture clusters with training and infrastructure support.
- The Matsya Sathi App provides comprehensive digital solutions for farm management, water quality analysis, disease diagnosis, and e-learning support.
- Innovative products such as solar-powered aerators, AI-based fish disease detection systems, and bio-secure culture units promote efficiency and sustainability in aquaculture operations.
- Through the Aqua One Centre (AOC), supported by NFDB and MANAGE, the company has conducted over 2,000 training programmes, benefiting more than 10,000 farmers.
- The "Out of the Village" project, a women-led FPO with 754 fisherwomen members, has introduced fishery insurance and buyback systems to enhance economic security.
- The company's product portfolio includes fish feed, water testing kits, healthcare and collagen-based products, and solar-dried fish.

Dr. Barman encouraged aspiring aquapreneurs to utilize startup support from MANAGE, NFDB, and RKVY–RAFTAAR, and to build strong professional networks through platforms such as LinkedIn.

He concluded with a compelling vision to create smart, sustainable, and self-reliant aquaculture communities, inspiring youth to view aquapreneurship as a viable and impactful career path.



Speaker 2

Mr. Ishan Joshi,
Managing Director,
Oceanic Seaweeds Pvt. Ltd., Gujarat
ishannj2005@gmail.com

Mr. Ishan Joshi, Managing Director of Oceanic Seaweeds Pvt. Ltd., specializes in sustainable seaweed cultivation along the Gujarat coast. With extensive expertise in coastal ecosystems, he leads eco-friendly product development and community-based livelihood initiatives, driving progress in India's blue economy.

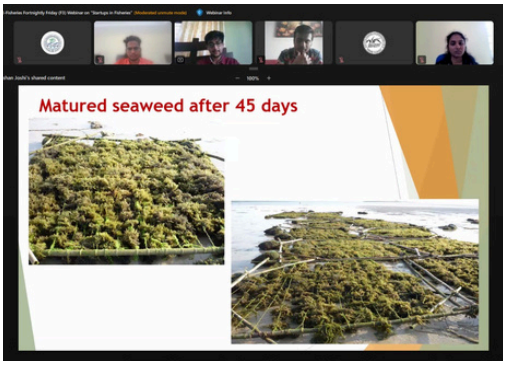
Highlights of the Session

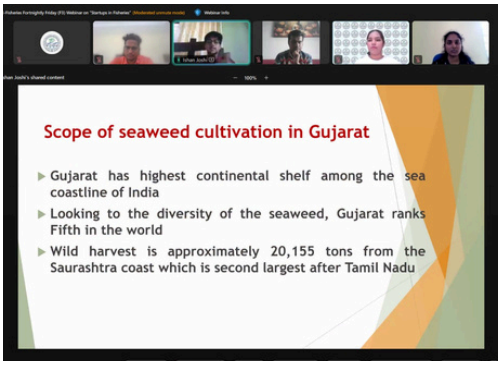
Mr. Joshi discussed how Oceanic Seaweeds Pvt. Ltd. is promoting seaweed cultivation as a sustainable and scalable livelihood model, focusing on industrial applications across food, agriculture, pharmaceuticals, and cosmetics.

Key Highlights:

- Emphasized India's 10,000 km coastline and the diversity of over 844 seaweed species, highlighting the country's potential to become a global leader in seaweed production.
- The company operates across the entire seaweed value chain, encompassing cultivation, collection, processing, and high-value product development.
- Focus areas include biostimulants, hydrocolloids, and animal feed additives, addressing growing market demand for natural and eco-friendly products.
- Stressed the importance of research and development collaborations and public–private partnerships to enhance technology adoption, productivity, and farmer participation.
- Advocated for capacity building and community engagement to strengthen coastal livelihoods through seaweed-based enterprises.
- Highlighted that seaweed farming contributes significantly to the circular bioeconomy, supports coastal community resilience, and aligns with India's Blue Economy and sustainability goals.

Mr. Joshi concluded with a call to action for innovators and entrepreneurs to explore opportunities in seaweed-based industries, emphasizing their potential to drive both economic and environmental sustainability.





1. Can we raise seaweed in indoor systems?

Indoor seaweed cultivation is a growing field that utilizes controlled environments like tanks and raceways to precisely manage factors such as water quality, temperature, and artificial lighting. This approach offers significant benefits, including ensuring a consistent supply of high-quality biomass, preventing contamination from environmental pollutants, and allowing year-round production regardless of climate or season. However, a major disadvantage of these systems is the high upfront and operational cost associated with setting up and running the necessary infrastructure, such as filtration systems, lighting, and climate control equipment.

2. How can seaweed be used as a shrimp feed additive to enhance astaxanthin levels and antioxidant activity?

Seaweed is used as a feed additive by incorporating its dried and powdered form into shrimp pellets. This provides a natural, highly bioavailable source of astaxanthin and other carotenoids. The shrimp absorb these compounds, leading to increased total carotenoid and astaxanthin concentration in the muscle tissue, which directly enhances both the market-desirable red pigmentation and the essential antioxidant capacity of the animal. Furthermore, the inclusion of certain seaweed species, like Ulva or Gracilaria, can also contribute valuable minerals, vitamins, and prebiotics, thereby improving gut health and overall immune system function in the farmed shrimp. This not only results in a more robust and disease-resistant animal but also reduces the reliance on synthetic pigments and potentially harmful chemical additives, aligning the practice with sustainable aquaculture goals.

3. Along with seaweeds what other crop can be cultivated?

The most common "crops" cultivated alongside seaweed are those that benefit from or contribute to the system's nutrient cycling, a practice known as Integrated Multi-Trophic Aquaculture (IMTA).

- Finfish (Fed Species): Fish like Salmon, Sea Bass, and Tilapia are the primary fed crops; they excrete inorganic nutrients (nitrogen and phosphorus) that the seaweed absorbs.
- Shellfish (Organic Extractive Species): Mussels, Oysters, and Scallops filter particulate organic waste (uneaten food and feces) from the water column.
- Other Invertebrates (Deposit Feeders): Sea Cucumbers and Polychaetes (worms) consume larger, heavier organic waste that settles on the seabed or tank bottom, completing the recycling process.

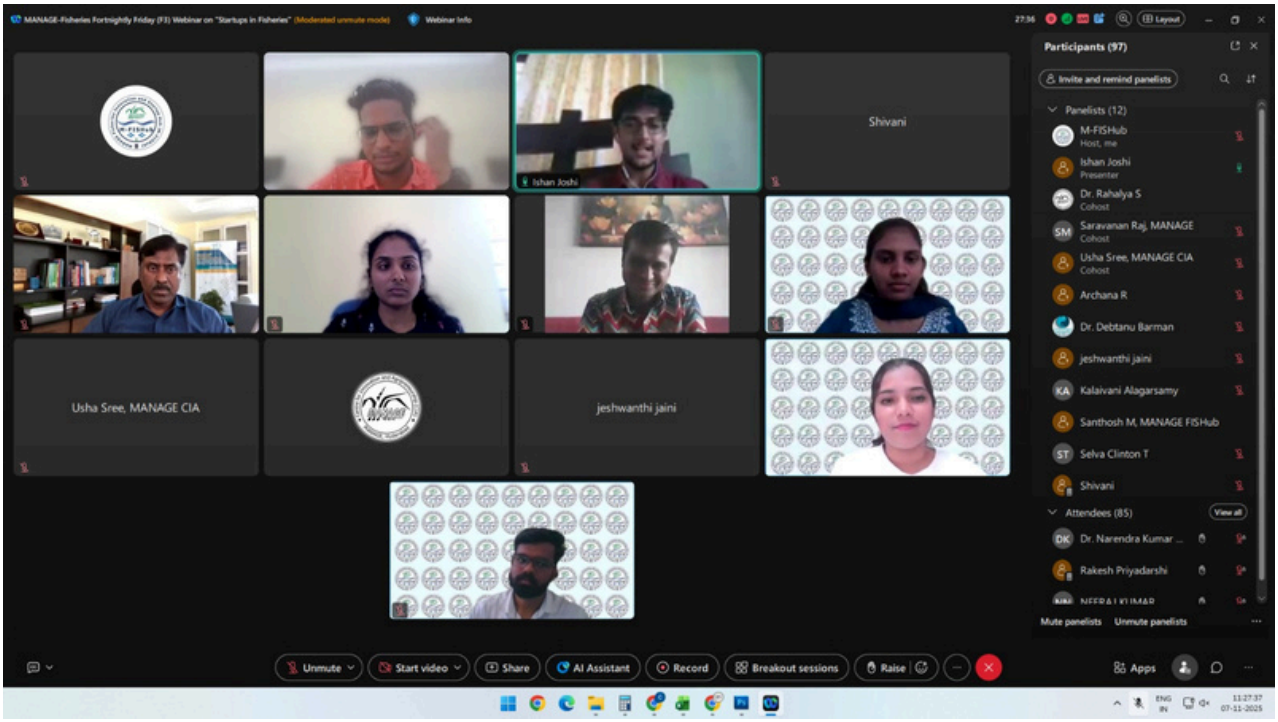
Seaweed acts as the Inorganic Extractive Species, utilizing the dissolved nutrients from the fed finfish/shrimp to grow, thus cleaning the water and improving the sustainability of the entire system.

4. Is there any govt schemes to promote the sea weed cultivation India for interested farmers?

The Government of India actively promotes seaweed cultivation through its flagship scheme, the Pradhan Mantri Matsya Sampada Yojana (PMMSY), which is designed to enhance the fisheries sector and provide an additional income source for coastal communities. Under PMMSY, interested farmers and Self-Help Groups (SHGs) can receive significant financial assistance, with subsidies covering a portion of the unit cost for essential infrastructure like rafts and monolines/tubenets specifically, 60% for SC/ST and women beneficiaries, and 40% for the general category. This scheme also supports the entire value chain, funding the establishment of seaweed seed banks, research and development (R&D) institutions, and a major Multipurpose Seaweed Park in Tamil Nadu, while also providing crucial training and capacity building to ensure the success and sustainability of seaweed farming ventures.

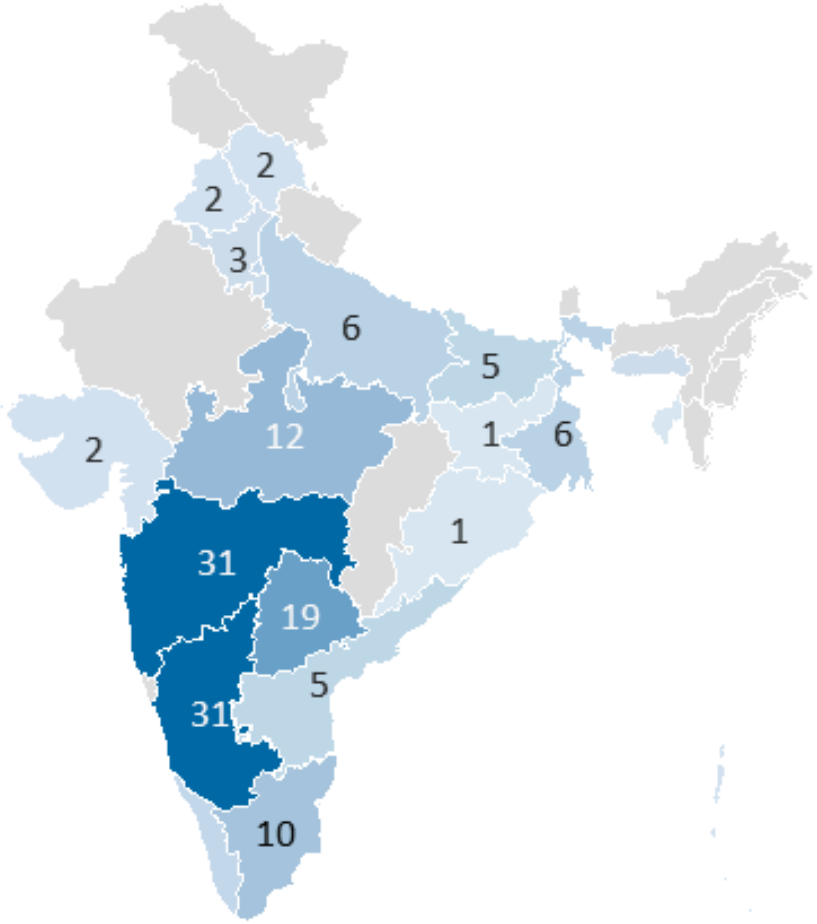
5. What are the different products that can be produced using seaweeds?

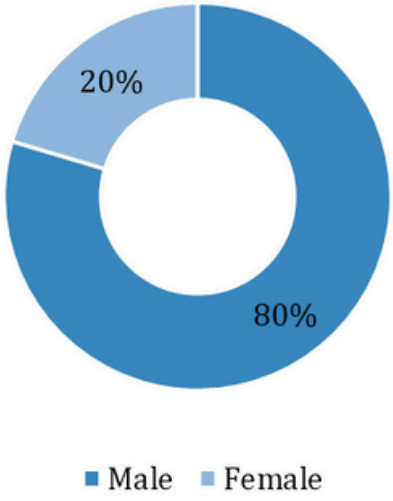
Seaweeds yield three primary categories of commercially important products: Hydrocolloids, which are gelling and thickening agents like Carrageenan (used in dairy and processed foods), Agar (for desserts and microbiology), and Alginate (for textiles and pharmaceuticals); Nutraceuticals and Functional Foods, which include directly consumed seaweed (e.g., Nori, Kombu) and specialized health extracts (e.g., for diabetes or arthritis); and Agricultural Biostimulants and Fertilizers, such as Seaweed Liquid Fertilizer (SLF), valued for enhancing crop growth, yield, and stress resistance. These applications leverage the seaweed's rich content of bioactive compounds, vitamins, minerals, and unique structural polysaccharides.



Watch on YouTube: https://www.youtube.com/watch?v=egNOnQqq1o4

Participants





Total Number of Participants: 152

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