



# Fisheries Fortnightly Friday (F3)

## Webinar No: 8

### *“Startups in Fisheries”*



21-10-2025



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



**MANAGE Fisheries Innovation and Startup Hub (MANAGE - FISHHub)**

(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/managefishhub/>

## About the Webinar



The MANAGE- FISHHub F3 Webinars, introduced in August 2025 by the MANAGE – Fisheries Innovation and Startup Hub (MANAGE- FISHHub), Hyderabad, mark a pioneering step in digital learning for fisheries entrepreneurship. Designed as a vibrant knowledge-sharing platform, 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 eighth session of the MANAGE Fisheries Fortnightly Friday (F3) Webinar was held under the MANAGE Fisheries Innovation Startup Hub (MANAGE-Fish Hub), focusing on “Startups in Fisheries.”

The session commenced with a warm welcome address by Dr Rahalya, MANAGE Fellow, who introduced the objectives of the webinar and emphasised the importance of innovation-driven entrepreneurship in transforming India's fisheries and aquaculture sector.

Via webex by cisco

Dr Rahalya S

Nivedha CK

Santhosh- MANAG...

Kalaivani Alagarsamy

Shaurya Agarwal

Amey

DEPARTMENT OF FISHERIES GOVERNMENT OF INDIA

PMANTRI MATSYA SAMPRADA YOJANA

MANAGE Fisheries Innovation and Startup Hub (M-FISHHub)

MANAGE-FISHHub

Fisheries Fortnightly Friday (F3) Webinar No. 8

Startups in Fisheries

Friday 21<sup>st</sup> November, 2025

11.00 am to 12.00 nn

Registration Link: <https://www.manage.gov.in>

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Mr. Shaurya Agarwal

CEO & Co-Founder

Blue Wave Aquaculture

Mr. Amey Naik

Founder and CEO

Longshore Technologies Pvt. Ltd.

Registration Link: <https://www.manage.gov.in>

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## Speaker 1



**Mr. Shaurya Agarwal**  
**CEO & CO-founder**  
**Blue Wave Aquaculture**  
✉ [shaurya@bluewaveaquaculture.com](mailto:shaurya@bluewaveaquaculture.com)



Mr. Shaurya Agarwal is a forward-thinking aquaculture innovator and Co-Founder of Blue Wave Aquaculture. With a background in Marine Biology and advanced training in International Business (Bryant University) and Entrepreneurial Leadership (Babson College), he brings a strong global outlook to India's aquaculture sector. He has been pivotal in introducing advanced RAS technology to India, enabling climate-resilient, antibiotic-free trout production. Under his leadership, Blue Wave has become a benchmark for sustainable, technology-driven aquaculture in the country.

## Highlights of the Session

*"India doesn't need perfection; It needs precision"*

- Mr. Shaurya Agarwal

- India is now positioned to adopt smart, land-based aquaculture, with Recirculating Aquaculture Systems (RAS) emerging as a sustainable model that ensures complete environmental control and predictable production.
- The success of RAS is based on three essential operational principles: controlling the system, training the people, and protecting the margin. These fundamentals form the core of building commercially viable and technically stable RAS units
- RAS represents a revolutionary model, offering closed-loop operations with up to 99% water reuse, climate-controlled environments, uninterrupted year-round production, dual harvest cycles, with a low FCR rate (<1.2).
- Despite its potential, India's RAS sector has not yet scaled, due to challenges in high capital investment, gaps in operational discipline, technical expertise, and underdeveloped sales systems lacking branding, pricing, and strong market linkages.
- These challenges can be addressed through strategic capital planning, adoption of government subsidies and financing programs, simplified daily operating protocols, strong SOPs, and treating fish as a branded product more than a commodity supported by standardized specifications and modern sales channels.
- Mr. Agarwal concluded with a forward-looking message that RAS is set to redefine India's relationship with water, food, and technology, and Blue Wave is already demonstrating this future-ready aquaculture model successfully in Kolkata.



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## Speaker 2



**Mr. Amey Naik**  
**Founder and CEO**  
**Longshore Technologies Pvt. Ltd.**  
✉ amey.rnaik@gmail.com

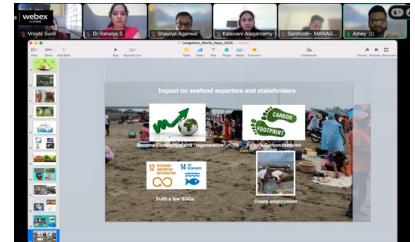
Mr. Amey Naik, Founder & CEO of Longshore Technologies Private Limited, is a visionary entrepreneur with a strong foundation in Marine Geology and early exposure to the family business. Committed to circular economy principles, he has built one of India's first zero-waste biorefineries, converting seafood-processing by-products into high-value biomaterials. Under his leadership, Longshore Technologies has become a leader in waste-to-wealth innovation, setting new benchmarks for sustainability, technological progress, and responsible growth in India's fisheries sector.

### Highlights of the Session

***"Biotechnology & Waste to Wealth is the tool to drive sustainability in the fisheries sector"***

- **Mr. Amey Naikr**

- India, despite being a leading global exporter of shrimp, generates enormous volumes of waste at processing plants, much of which is still dumped untreated, causing environmental concerns and being underutilized.
- Longshore Technologies is working to convert shrimp waste into high-value products using a chemoenzymatic process to extract proteins and biomaterials, thereby transforming waste into wealth through a clean, efficient biorefinery model.
- The enterprise currently produces chitin, chitosan, and fish protein hydrolysate, which are already being exported to international markets, such as Thailand, China, and North America, due to their strong global demand.
- Chitin and chitosan offer a wide range of industrial applications, including cosmetics, anti-ageing formulations, pharmaceuticals, feed additives, biostimulants, dairy processing, and other high-value sectors.
- Mr Naik concluded with a strong message that waste-to-wealth biotechnology can create a regenerative, competitive, low-carbon fisheries sector, while generating employment and helping India meet sustainability goals.





## Session



### 1. Is the RAS system suitable for Murrel farming, and does Blue Wave engage in contract farming with farmers? If yes, in which regions are you in operation?

RAS is not suitable for Murrel farming, as Murrel is an air-breathing species and does not adapt efficiently to fully closed, high-oxygen, water-circulating systems. Blue Wave is open to engage in contract farming, to identify and standardize region-specific, high-performing species. The company is currently operational in West Bengal and is open to expanding its venture to other states in the near future.

### 2. Which biomaterial, Chitin or Chitosan, is commonly used for sedimentation, and why?

Chitosan is the preferred biomaterial for sedimentation. Its strong positive charge, high versatility, and ability to bind and aggregate suspended particles make it far more effective than chitin in water clarification and sedimentation processes.

### 3. Why is high CapEx considered a major barrier for RAS, and how can strategic planning help reduce it?

High CapEx is a barrier because globally, RAS systems typically require around \$26/ kg of installed capacity, making the initial investment substantial. However, Blue Wave has demonstrated that costs can be significantly reduced by bringing CapEx down to \$16/ kg in India. This can be reduced further through strategic planning, minimizing dependence on imported components, and developing robust "Made in India" RAS systems that can operate reliably 365 days a year.

### 4. What are the major challenges encountered while extracting chitosan, and how are they being addressed?

One of the biggest challenges in chitosan extraction is the use of caustic soda, which generates production and disposal issues during the deproteinization and deacetylation stages. Managing this chemical safely and sustainably has been a long-standing concern. However, Longshore Technologies has recently developed a solution to recover and recycle caustic soda, allowing it to be reused within the process.

### 5. What type of raw material (waste) is commonly generated in shrimp processing units?

Shrimp processing units typically generate large quantities of shell waste, which includes shrimp heads, shells, tails, and exoskeleton fragments. These by-products are rich in chitin, proteins, minerals, and lipids, makes them a valuable yet underused raw material for producing high-value products.





## Session

### 6. Where do you source raw materials for processing?

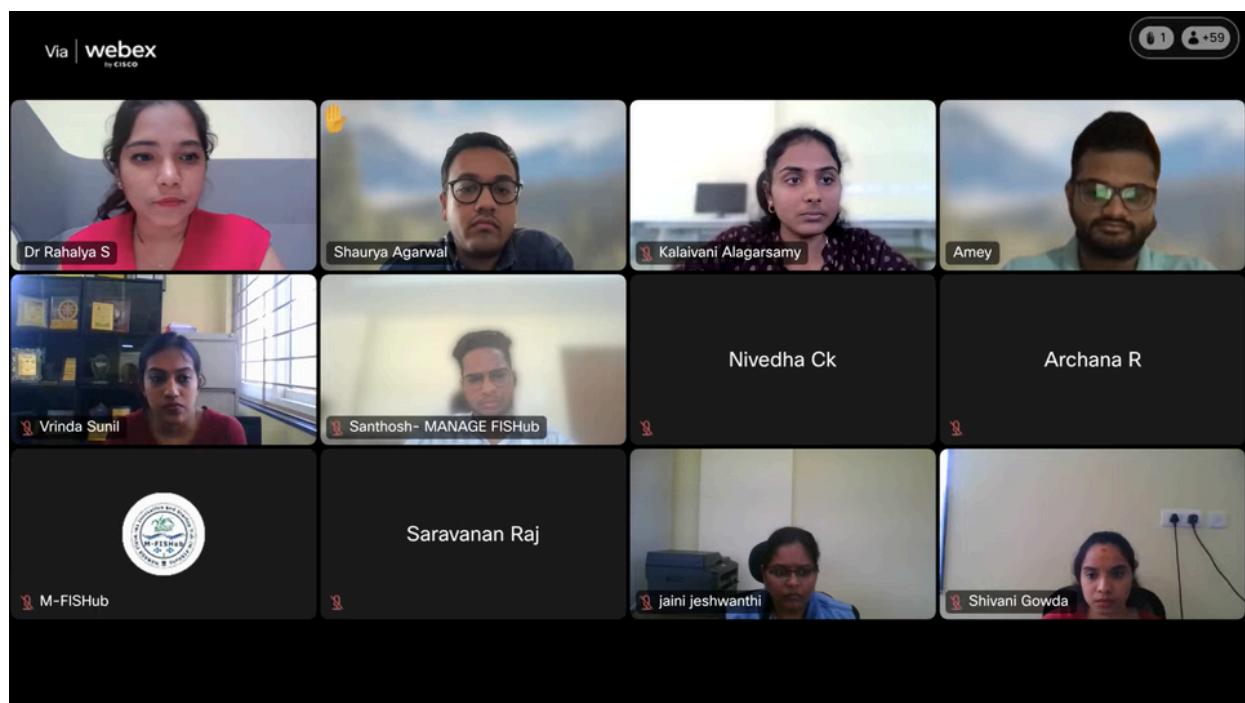
Collecting suitable raw material from fish markets is difficult because grading and consistent quality control are unreliable. Longshore therefore sources shells and processing waste directly from shrimp/seafood processing units located close to its facilities, ensuring better quality, traceability, and steady volumes for biorefinery operations.

### 7. How competitive is the chitin/chitosan industry, and will you use trash fish, juveniles, or non-penaeid shrimp as feedstock?

Longshore is actively conducting R&D on non-penaeid shrimp and low-value “trash” fish to expand feedstock options, but it categorically avoids using juveniles to protect fishery stocks and sustainability.

### 8. How does Blue Wave Aquaculture aim to make RAS scalable and cost-efficient in India?

RAS in India is often viewed negatively due to high CapEx, mortality, and ammonia issues. Blue Wave counters this by focusing on automation, strict daily feed and water-quality checks, and disciplined system control. India has a strong cost advantage: while global RAS costs average USD 26/kg CapEx and USD 8/kg OpEx, Blue Wave operates at USD 16/kg CapEx and USD 3.3/kg OpEx. Combined with redundancy systems and clear SOPs, this makes RAS both scalable and commercially viable in India.



Watch on Youtube: <https://www.youtube.com/live/4DVFKpBEEdM?si=Jf1XxQBmBaGqxDss>



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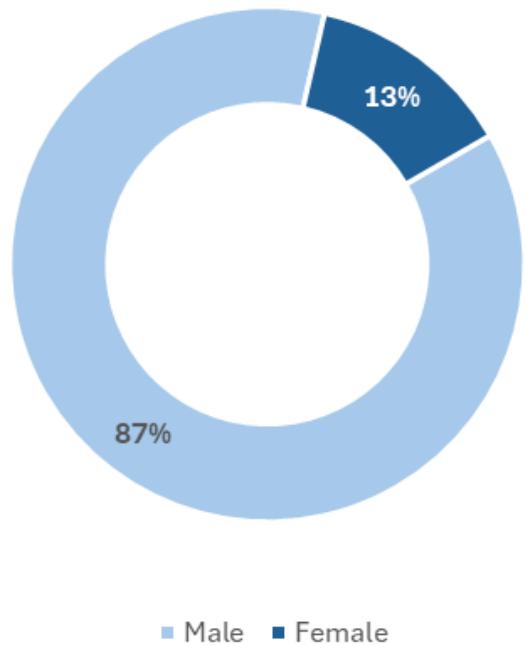
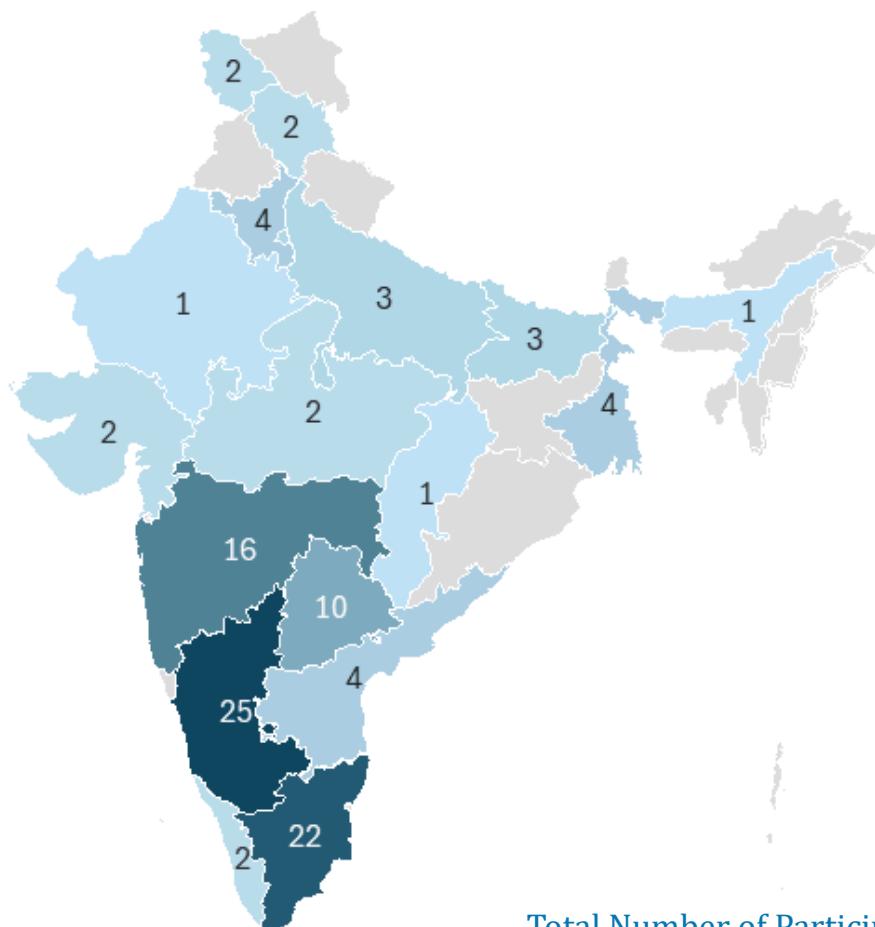


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# Participants



Total Number of Participants: **107**

Prepared by

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