भारत सरकार
GOVERNMENT OF INDIA
मत्स्यपालन विभाग
Department of Fisheries

Fisheries Fortnightly Friday (F3) Webinar No: 9

"Startups in Fisheries"

05-12-2025

11 AM - 12. 30 PM 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 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.

Introduction

The ninth 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.

Speaker 1

Mr.NIK MULAKKAL
Founder & CEO
ZEWA ECOSYSTEMS
info@zewafeeds.com

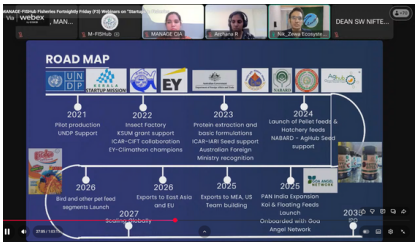
Mr. Nik Mulakkal is a visionary aquaculture entrepreneur and the Founder & CEO of ZEWA Ecosystems, a deep-tech startup transforming sustainable ornamental fish nutrition in India and beyond. With an engineering foundation from the University of Melbourne and executive education from IIM Bangalore and IIM Kozhikode, he brings a powerful blend of technical insight and strategic leadership to the sector. Under his leadership, ZEWA Ecosystems is setting new standards for traceable, sustainable, and high-performance aquaculture nutrition, marking a significant shift in the future of ornamental fish feed.

Highlights of the Session

"Go abroad to learn, but return to build."

- Mr. Nik Mulakkal

- India's ornamental fish sector relies heavily on traditional fishmeal-based feeds, which face major challenges such as poor protein quality, biosecurity risks, marine resource depletion, and lack of traceability, creating a large performance and sustainability gap in the feed ecosystem.
- ZEWA Ecosystems addresses this gap by developing species-specific ornamental and koi feeds made from traceable, sustainable insect protein, formulated using 26+ optimized ingredients to deliver 15% faster growth, lower mortality, and superior water stability.
- The major challenges that still persist are slow market trust for novel proteins, long R&D cycles, manufacturing constraints, supply-chain inconsistencies, and the need for stronger policy/IP support for deep-tech feed startups.



- The company has built a strong innovation pipeline supported by UNDP, ICAR-IARI, NABARD, AgHub, ICAR-CIFT, and global programs such as Temasek NextGen Ecosphere, showing India's capability to lead in future-ready sustainable pet nutrition.
- Mr. Nik Mulakkal concluded by stating that sustainable, insect-based feeds will be central to the next revolution in aquaculture and pet nutrition, enabling India to shift from a feed-importing nation to a global exporter of high-performance, eco-friendly ornamental feeds.

1. With already big players in the market and more people coming to the animal feed sector, talking about sustainability - what's going to be your USPs?

ZEWA's USP lies in its species-specific, deep-science formulations designed exclusively for ornamental fish, a segment that is still underserved by major feed companies. Unlike generic feeds available in the market, ZEWA develops precision formulations using sustainable, traceable insect protein, optimized through a blend of 26+ functional ingredients. These formulations deliver 15% faster growth, 10% lower mortality, and superior water stability that are critical parameters for ornamental systems where tank hygiene and fish behavior differ from food-fish culture.

2. With more insect welfare research happening and there is some evidence that insects too show a range of cognitive abilities- how are you going to address the sustainability angle while using BSF in your feed?

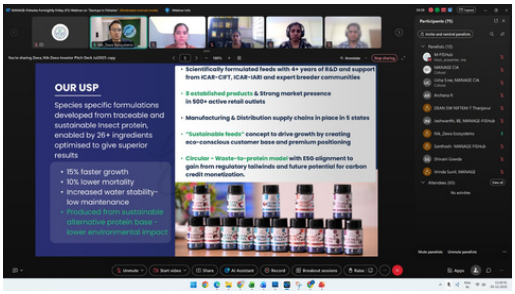
BSF are not harvested for any behavioral or neurological traits; their life cycle naturally involves rapid biomass conversion, making them ideal for circular-economy models. By redirecting organic waste into high-quality protein, BSF farming actually reduces environmental pressure, cuts landfill emissions, and prevents over-harvesting of wild fish for fishmeal.

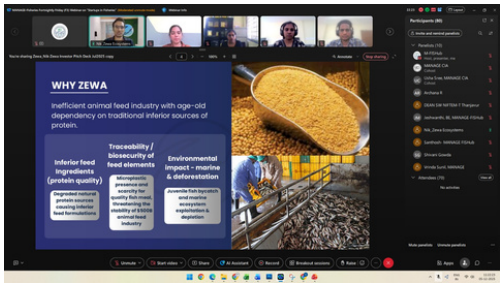
3. What is your business model for scalability and expansion?

ZEWA's model is to first build a strong product base and market acceptance, rather than rushing into scale. The priority is to perfect the formulations, validate results, and win farmer trust. Once this foundation is strong, ZEWA will expand through market development, entering premium segments like floating feeds, ornamental feeds, and koi feeds, and then scale toward pan-India distribution and exports. ZEWA is adopting a hybrid distribution model: onboarding regional distributors to widen offline market reach while simultaneously strengthening its digital retail presence.

4. It is known that BSF is rich in Chitin, does it reduce digestibility or affects nutrient absorption?

Black Soldier Fly (BSF) is rich in chitin, using larvae at the pre-pupa or pupa stage ensures that the exoskeleton is relatively soft. At this stage, the chitin content does not significantly hinder digestibility or nutrient absorption, and therefore, it does not pose concerns for feed efficiency.





5.Are these insect protein feeds useful or productive if used on a large scale for commercial production of edible fish?

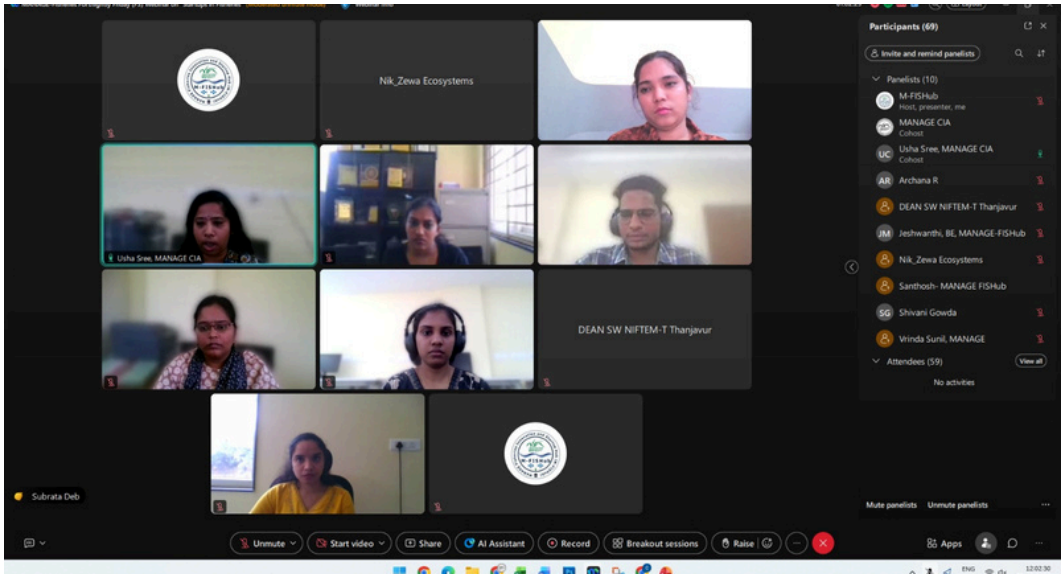
Currently, insect-based protein feeds are most suitable and effective for small-scale aquaculture, particularly for maintaining fish quality and optimal growth. At present, scaling up to commercial levels remains limited, as the cost of production is relatively high and end-market prices for edible fish cannot easily be increased, even when using more sustainable feeds. Therefore, these feeds are primarily focused on small-scale applications where quality and growth performance are the key considerations.

6. What are the synthetic components present in traditional aquafeeds?

Traditional aquafeeds often contain synthetic ingredients, such as artificial colors and additives to enhance digestion. Zewa use natural colorants instead of synthetic ones and avoid artificial additives. While the effects of synthetic products may not be immediately visible during the first six months, their impact typically becomes apparent over longer periods.

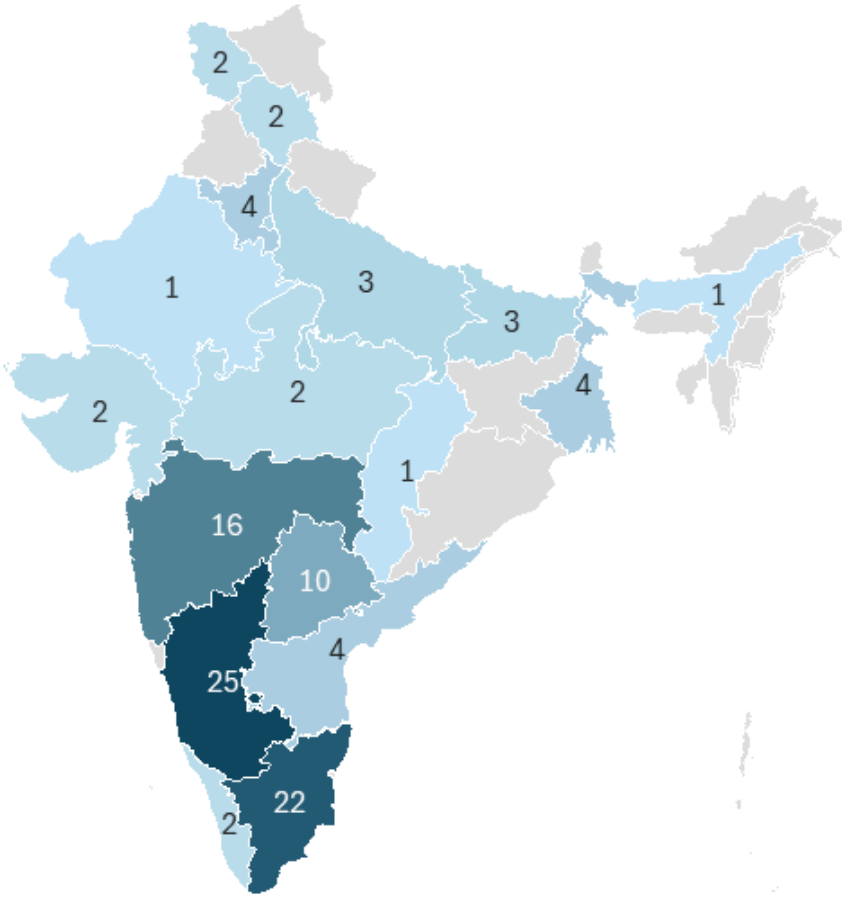
7. How did you transition from an engineering background to aquaculture, and what challenges did you face?

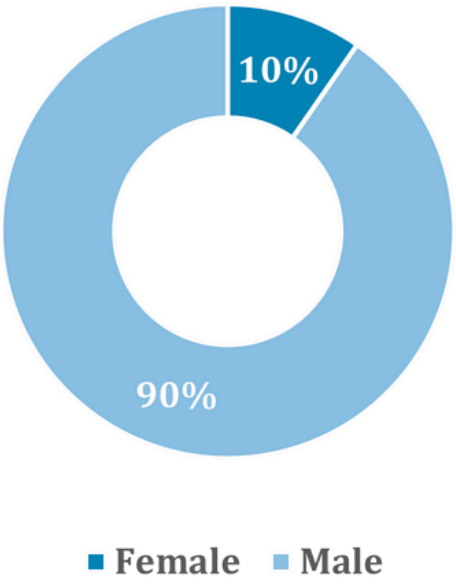
The transition was driven by curiosity and a strong interest in biology and biotechnology. Building a reliable team and leveraging professional connections were key to navigating the shift. Additionally, much of the knowledge needed is widely accessible online, which helped overcome initial learning challenges.



Watch on Youtube: https://youtube.com/live/pkOQ42GpDvU?feature=share

Participants





Total Number of Participants: **123**

Prepared by
Mr. Santhosh Kumar M.
MANAGE - FISHub Intern

Contact Us:
Dr. Saravanan Raj
Director (Agricultural Extension), MANAGE &
CEO, MANAGE-FISHub
Rajendranagar, Hyderabad
ceomfishub@gmail.com

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