



ICAR-NRM-CCARI-Model-2023-026  
CCARI/Certified Technologies/2023-5

## LIVESTOCK-FISH-HORTICULTURE BASED INTEGRATED FARMING SYSTEM FOR IMPROVING THE LIVELIHOOD OF COASTAL FARMERS

Lead Developer : **Dr. Trivesh Mayekar**

Associate Developers : G.B. Sreekanth, Paramesha V., Parveen Kumar

### TECHNOLOGY DETAILS

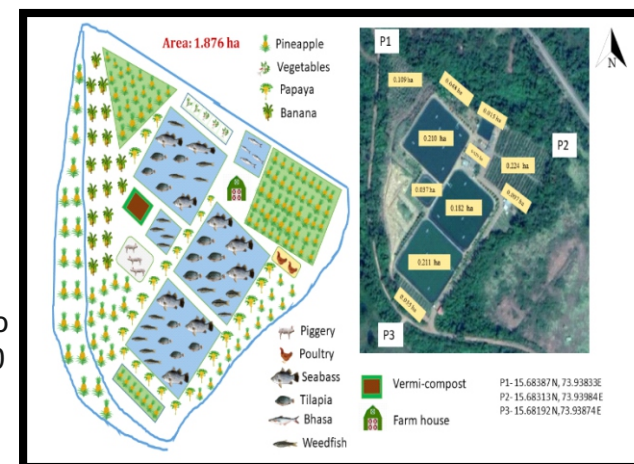
- A novel **livestock-fish-horticulture-based integrated farming system (IFS)** was developed for the coastal region of Goa, which is more profitable, sustainable, and resource-efficient when compared to the traditional fish farming systems.
- The IFS system recorded a net profit of Rs. 46.4 lakhs. The **B:C ratio of the IFS is 2.6**, higher than the farmer's traditional practice (1.5). The IFS reduced the risk of crop loss through diversification and doubles the farm income compared to mono-crop practices.
- The IFS system shows favorable energy efficiency, with a **net energy gain of 568,955 MJ** and an **energy profitability of 5.63 MJ**. Furthermore, the IFS promotes resource and organic waste recycling, saving of water (2000 m<sup>3</sup>), and **230% increase in yield**.

### IMPACT

- The technology can benefit about **2000 farmers** along the coastal region and can generate an additional income of about **1000 crores**. The progressive farmer who followed the technology has been awarded the Krishi Vibhushan Award of Rs. 1.0 lakh by the Govt. of Goa in 2021.

### PUBLICATION

- Trivesh Mayekar**, Sreekanth GB, Paramesha V, Parveen Kumar, Sajiya Yusuf Mujawar, Amit Patil, and Anita Mathew. 2022. Energy transfer and trophic organization in an integrated Fish-Livestock-Horticulture System (IFLH) from Bicholim (Goa), the western coast of India. Aquaculture 554, 7381642022. (NAAS rating 11.14)
- CCARI/Success Story/2022-3: Livestock-Fish-Horticulture Based Integrated Farming System for Improving the Livelihood of Coastal Farmers.



INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that

**Trivesh Mayekar**

(Lead Developer)

**Associate Developers**

**G.B. Sreekanth, Paramesha**

**V. Parveen Kumar**

of

**ICAR-Central Coastal Agricultural Research Institute**  
**Old Goa**

has developed the technology

**Livestock-fish-horticulture based**  
**integrated farming system for improving**  
**the livelihood of coastal farmers**

16th July, 2023

New Delhi

(Rajbir Singh)

Assistant Director General (A&AF)

(S.K. Chaudhari)

Deputy Director General (NRM)