



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 5,68,955 MJ** and an **energy profitability of 5.63**. Furthermore, the IFS promotes resource and organic waste recycling, saving of water (2000 m3), and **230% increase in yield**.

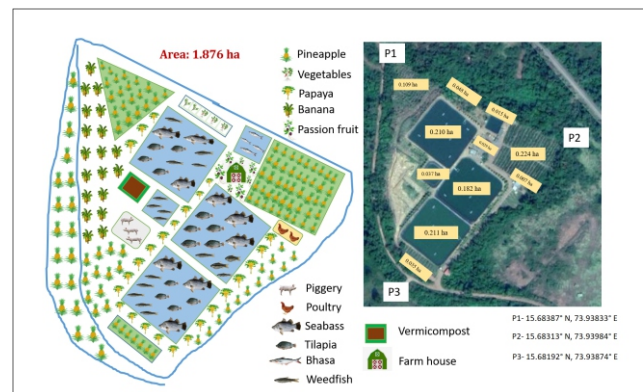
IMPACT

- The technology can benefit about **2,000 farmers** along the coastal region and can generate an additional income of about **1,000 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

- Mayekar T, et al. 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.

Components and layout of the livestock-fish-horticulture IFS



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)