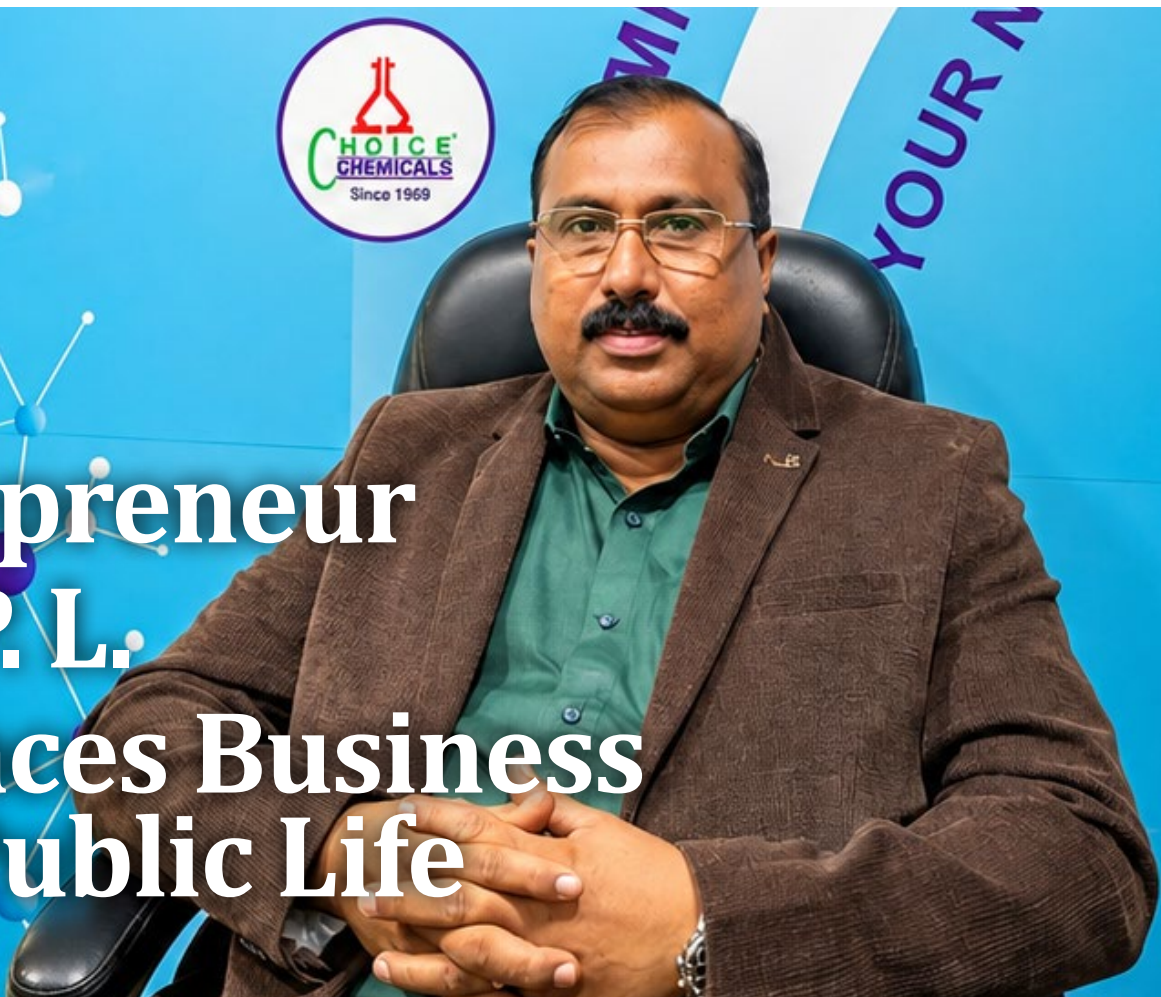




Entrepreneur Anil P. L. Balances Business and Public Life



**SATHEESAN
GOVERNMENT
MARKS 100 DAYS
WITH DEVELOPMENT,
WELFARE PUSH**

**WORLD IS ONE;
A DIVIDED ONE**



Towards an Efficient Marine Fish Distribution System in Kerala: Challenges and Strategic Options



Shyam S. Salim
Principal Scientist,
FRAEED Division,
ICAR-CMFRI



S Navya Sree
Research Scholar
FRAEED Division,
ICAR - CMFRI



Fish is more than just a commodity in Kerala; it's an integral part of Kerala's economy, cultural staple, an affordable source of animal protein, and a livelihood for lakhs of people. Kerala remains one of India's largest fish-consuming states, with annual per capita fish consumption estimated at 19–23 kg much higher than other states in India. Kerala is one of the handful of states where the fish demand and supply patterns are in unison.

Kerala's fish production consists of both marine and inland fisheries. Amidst abundant resources, the inland sector hasn't shown steady growth over the last decades. Marine fisheries continue to dominate fish production (68 per cent of the total) over the inland sector. However, the marine fish landings have become increasingly volatile due to climate change and oceanographic conditions, resource depletion, and seasonal fishing bans, among others.

Despite the increase in consumption of meat, poultry and eggs, fish continues to dominate the Keralite diet because of its affordability, nutritional value and cultural preference. Fish consumption varies considerably across the state, with coastal districts recording the highest levels due to their easy access to fresh marine fish, whereas inland districts depend on supplies arriving from coastal landing centres, markets or neighbouring states. This spatial imbalance increases transaction costs and poses challenges for maintaining quality during transit and trade. Kerala's

domestic fish production caters to about 60–70 per cent of the demand and the demand deficit is met from arrivals from neighbouring states such as Tamil Nadu, Karnataka, Andhra Pradesh and Gujarat among others. During 2015-19, there was a major import influx of sardines into Kerala from Oman on account of sardine famine in Kerala. The COVID-19 pandemic temporarily disrupted fish consumption, as lockdowns, transportation restrictions, and the temporary closure of markets affected both supply and demand.

Yet, despite the strength of abundant resources, rich biodiversity, steadily increasing fish consumption base and strong policy support, Kerala faces a challenging paradox. The challenge today is not merely producing fish but ensuring that fish is made available, accessible, and affordable to the masses. The state's marine fish distribution system is under increasing pressure from supply shortages, cartel controls, fragmented marketing systems, inadequate infrastructure, poor quality and health standards amidst rising consumer demand. The widening gap between production and consumption has shifted policy attention not only towards strengthening fish production also in

streamlining distribution efficiency with innovations across the fisheries value chain. This increasing dependence on interstate fish arrivals necessitates the need for strengthening and developing sound and efficient fish distribution system.

Marine fish distribution network

Kerala has an extensive fish marketing network through informal arrangements with limited institutional coordination. Fish moves through a chain of landing centres, wholesalers, commission agents, retailers, processors and exporters before reaching consumers. This network ensures daily availability of fish at affordable prices even in distant inland districts.

Unlike regulated commodity markets, fish marketing lacks organised institutional mechanisms for transparent price discovery, market news and quality assurance. The absence of structured marketing systems often results in wide price fluctuations based on species, size, season, freshness and local demand. Multiple intermediaries perform different functions such as aggregation, transportation, storage and finance, but they also reduce the share of the consumer price received by primary producers by realising high marketing margins.



Producer organisations remain relatively weak, and collective marketing mechanisms are underdeveloped, while multiple intermediaries continue to dominate the marketing chain, reducing producer's share in the consumer's rupee particularly for low-value fish species. Small-scale fishers often depend on intermediaries for credit, transportation and market access, further reducing their negotiating power.

Infrastructure inadequacies remain another major constraint. Although Kerala has an extensive network of landing centres and fish markets, infrastructure has not kept pace with technological advancement and changing market requirements. Many landing centres require modern auction halls, hygienic handling facilities, ice plants, cold storage units and efficient transportation aimed at value addition. Fish transported over long distances from landing centres and neighbouring states and without appropriate efficient cold chain is highly vulnerable to quality deterioration which necessitates the need of an integrated supply chain.

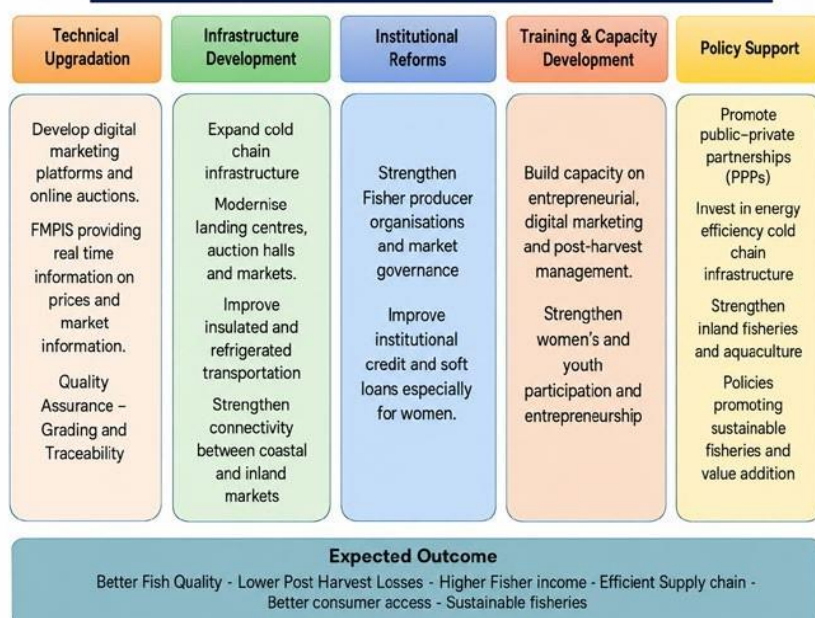
Quality regulation and value addition continue to remain underdeveloped in the marketing system. Consumers increasingly demand fresh, hygienic and traceable seafood. However, grading systems, quality inspection, traceability and standardised packaging remain limited in many domestic markets. Inadequate handling practices during transportation and retailing affect freshness and shelf life.

The sector also faces important social and institutional challenges. Women play a crucial role in Kerala's fisheries economy, particularly in retail marketing, processing and value addition. Yet many continue to operate with limited working capital, inadequate infrastructure, limited access to institutional credit, limited access to market information and the adoption of modern marketing practices.

Market-related constraints further affect the efficiency of the distribution system. Fish prices fluctuate considerably depending on season, species, market location and consumer demand. During the period of abundant landings, inadequate storage and processing facilities results in over supply and as a result the price declines, whereas lean fishing seasons lead to supply shortages resulting in increase in fish prices. This volatility in price and the increasing dependence on interstate fish arrivals leading to rising transportation costs affects both producers and consumers similarly making income and market planning increasingly uncertain. Limited value addition further constrains income generation. Much of Kerala's fish is marketed in fresh form, while opportunities in processed, branded and ready-to-cook seafood remains underutilised and reduces opportunities for income generation and market diversification.

Strategic Intervention for Strengthening Marine Fish Distribution

Strategic Framework for Strengthening Fish Distribution



Moving forward

Implementing these strategic interventions can improve the efficiency and resilience of Kerala's marine fish distribution system. A paradigm shift is required from production approach to supply chain strategy that strengthens every stage of the distribution process. An integrated approach combining investments in cold-chain infrastructure, organised markets, digital platform, producer organisations, quality assurance mechanisms, value addition, women-centred interventions and stronger public-private partnerships can transform the marine fish distribution into more efficient and transparent value chain.

Such interventions will help in reduce post-harvest losses, improve fish quality and ensure the timely availability of fresh and safe fish across the state. Improved market integration, value addition and transparent pricing mechanisms can enhance fishers' incomes by improving price realisation and increasing their share in the consumer's rupee. At the same time, digital technologies, coherent market institutions and women empowerment can create more inclusive livelihood opportunities. Further, strengthening inland fisheries and promoting sustainable distribution practices and encouraging public-private partnerships will further enhance the sector's long-term growth. These measures can reduce marketing costs, strengthen competitiveness in domestic and export seafood markets, and contribute to the development of a resilient, efficient and sustainable marine fish distribution system.

As Kerala's demand for fish continues to grow, building an integrated and consumer-oriented distribution system will be essential to ensuring food security, improving fisher livelihoods and sustaining the state's leadership in India's fisheries economy.

