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Fish Insurance Policy in India: A Review of Progress, Challenges, and Future Prospects

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ABSTRACT: India's aquaculture sector plays a vital role in rural livelihoods, job creation, food security, and contributing to the national economy. Despite its significance, the sector is susceptible to multiple risks like disease outbreaks, natural disasters, and environmental shifts. To alleviate these risks and offer a safety net for fish farmers, fish insurance policies have been implemented. Nevertheless, the adoption of these insurance programs is low due to several structural and operational issues. This review provides comprehensive analysis of the development of fish insurance policies in India, including their varieties, implementation processes, challenges, and possible approaches to enhance their effectiveness. The paper concludes with a series of policy suggestions aimed at boosting insurance uptake among fish farmers and promoting sustainable aquaculture growth in India.

Keywords: Fish Insurance, Aquaculture, Risk Management, PMMSY, Fisheries Policy, India.

INTRODUCTION

India ranks as the second-largest fish producer in the world, generating over 14 million metric tonnes annually (FAO, 2020). This industry represents approximately 1. 24% of the national Gross Value Added (GVA) and supports the livelihoods of over 16 million fishers and fish farmers. The fisheries and aquaculture sector is highly diverse, including marine, inland, brackish water, and cold-water fisheries. Nevertheless, this sector increasingly faces threats from natural disasters, declines in water quality, disease incidents, and fluctuations in market conditions.

Fish insurance, as a tool for risk management, can protect fish farmers from potential financial losses. However, in contrast to agricultural crop insurance, which has been widely adopted under initiatives like the Pradhan Mantri Fasal Bima Yojana (PMFBY) (Devi *et al.*, 2024), fish insurance in India remains in its early development phase. The Government of India and several state governments have launched programs to encourage fish insurance, yet challenges in implementation persist, limiting its overall effectiveness.

EVOLUTION OF FISH INSURANCE IN INDIA

The idea of fish insurance in India began to gain popularity in the early 2000s, initially tested by public sector insurers like United India Insurance Company (UIIC) and Agriculture Insurance Company of India Ltd. (AICIL). These initial insurance programs mainly centered on pond-based aquaculture and focused on species such as rohu, catla, mrigal, and shrimp.

Throughout the 11th and 12th Five-Year Plans, fish insurance was advocated under the guidance of the National Fisheries Development Board (NFDB), which urged states to integrate fish insurance into their development initiatives. Despite these efforts, awareness and coverage remained limited. The Blue Revolution scheme (2016) and the Pradhan Mantri Matsya Sampada Yojana (PMMSY), which was introduced in 2020, incorporated insurance support as a part of fisheries development (NFDB, 2021).

TYPES OF FISH INSURANCE IN INDIA

Various fish insurance products have been designed to address the needs of different sub-sectors within aquaculture. These include:

Pond Fish Insurance: Covers mortality losses due to diseases, pollution, poisoning, natural calamities, and accidents.

Shrimp Insurance: Specialized insurance for shrimp farming, especially prevalent in coastal states like Andhra Pradesh and Tamil Nadu.

Cage Culture Insurance: An emerging category targeting fish farming in reservoirs and lakes. Pilots have been conducted in Maharashtra and Karnataka,

Hatchery and Seed Insurance: Covers broodstock, hatchery facilities, and fish seed during transportation and rearing.

Input-Based Insurance: Some schemes include coverage for feed, seed, and infrastructure losses.

Premiums typically range from 2% to 7% of the covered sum, with government assistance of up to 50% accessible for small and marginal fish farmers through programs such as PMMSY (PMMSY, 2020).

IMPLEMENTATION MECHANISM

The execution of fish insurance policies requires various participants, which include insurance firms, fisheries agencies, financial organizations, and cooperatives of fish farmers. The standard process encompasses:

- Providing pond layout and ownership documentation
- Receiving stocking and health certification from fisheries officials
- Regular monitoring of the pond/farm by assigned staff
- Conducting post-mortem and loss evaluation in instances of mortality
- Confirmation and authorization by insurers prior to claim resolution

Despite possessing a clear framework, the system faces challenges such as delays in procedures, a shortage of qualified personnel, and ineffective collaboration among participants (Gul *et al.*, 2024a).

REGIONAL ADOPTION AND CASE STUDIES

Adoption of fish insurance varies widely across states:

- **Andhra Pradesh:** The region shows comparatively high adoption due to effective extension services and well-organized shrimp farming cooperatives. Shrimp insurance is linked with additional services such as credit and input supply.
- **Odisha and Bihar:** Insurance pilot programs sponsored by NFDB demonstrated favorable outcomes when integrated with capacity enhancement and weather advisory systems.
- **Kashmir:** Cage culture insurance pilot programs under RKVY-NMPS in Manasbal Lake highlighted low awareness and minimal uptake despite substantial production risks.
- **Tamil Nadu and West Bengal:** There are moderate levels of insurance penetration, especially in shrimp farming clusters.

CHALLENGES AND CONSTRAINTS

Despite the availability of fish insurance, adoption remains poor due to several challenges:

- **Lack of Awareness:** A significant number of fish farmers, particularly those in inland and mountainous areas, do not know about fish insurance programs.
- **Complex Procedures:** The processes for paperwork and claims are labor-intensive and lengthy.
- **Poor Risk Assessment:** The absence of dependable data and scientific risk models obstructs precise premium calculation (Gul *et al.*, 2024d).
- **Low Private Sector Involvement:** The majority of products are supplied by public sector insurers, which constrains innovation and competition.
- **Delayed Settlements:** Administrative obstacles and insufficient coordination result in considerable delays in processing claims (Gul *et al*., 2024b).
- **Inadequate Customization:** Generic policies fail to address specific regional or species-related risks (Bhadoriya *et al.*, 2022).

POLICY INTERVENTIONS AND GOVERNMENT INITIATIVES

To address these challenges, several initiatives have been taken:

- **Pradhan Mantri Matsya Sampada Yojana (PMMSY**): Offers financial support for premium payments, raises awareness through programs, and backs pilot insurance initiatives.
- **Kisan Credit Card for Animal Husbandry and Fisheries (KCC AH&F):** Promotes the combination of insurance with institutional credit (KCC Scheme).
- **State-Specific Programs:** Certain states such as Andhra Pradesh and Odisha have launched focused awareness and subsidy initiatives (Satapathy *et al.*, 2024).
- **Digital Platforms:** Initiatives are underway to incorporate fish insurance with digital platforms for the purposes of monitoring, reporting, and submitting claims.

FUTURE PROSPECTS AND RECOMMENDATIONS

The future of fish insurance in India depends on comprehensive reforms and collaboration among stakeholders. The following strategies can improve adoption and efficiency:

- **Awareness and Capacity Building:** Conduct regular training programs through Krishi Vigyan Kendras (KVKs), (Mishra and Verma, 2023) State Fisheries Departments, and NGOs.
- **Technology-Driven Insurance:** Implement satellite imaging, IoT-based water quality monitoring, and mobile apps for immediate risk prediction and reporting (Gul *et al.*, 2024c).
- **Public-Private Partnerships (PPP):** Engage private insurance firms and fintech startups to introduce innovation, customization, and competition.
- **Bundling with Credit and Input Supply:** Connect insurance with institutional finance, feed, and seed supply chains to enhance uptake.
- **Customised Products:** Create insurance products tailored to specific regions and species, especially for cold-water fish, ornamental fish, and cage farming.

• **Policy Integration:** Synchronize fish insurance with wider disaster management and climate resilience initiatives.
• **Prompt Settlement Mechanisms:** Create standard operating procedures for quicker and more transparent claim settlements.

CONCLUSIONS

Fish insurance in India serves as a promising mechanism for addressing risks within the aquaculture industry, which is becoming more susceptible to environmental, biological, and economic unpredictabilities. While notable advancements have been made through initiatives such as PMMSY, the genuine scope and impact of fish insurance are still restricted. The path ahead involves enhancing awareness, streamlining procedures, harnessing technology, and promoting public-private collaborations. Through strategic policy changes and cooperative execution, fish insurance can evolve into a fundamental component of sustainable aquaculture in India. In addition, there is a need to develop and implement a scalable and viable stage-wise insurance policy that can be practically tested across different aquaculture sectors in India. Such a policy framework would ensure better risk mitigation tailored to farmers' needs at different stages of fish farming operations.

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