

Fisheries Prowess of the Rice Bowl of India

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ABSTRACT

Andhra Pradesh, famously known as the “Rice Bowl of India” for its abundant rice production, also demonstrates outstanding strength in fisheries. Its long coastline, major river deltas, and numerous wetlands enable a vibrant mix of marine, inland, and aquaculture activities. This article offers a simple overview of the state’s fisheries sector, including traditional rice-fish systems, bivalve farming, biodiversity, and socio-economic contributions. It highlights sustainable practices and addresses key challenges and opportunities. The integration of agriculture and fisheries showcases Andhra Pradesh’s potential for a balanced blue-green economy.

INTRODUCTION

Andhra Pradesh is renowned across India as the Rice Bowl due to its fertile deltas of the Godavari and Krishna rivers, which support massive paddy cultivation. However, the state’s aquatic resources are equally impressive. With a coastline stretching approximately 1,054 km and rich estuarine ecosystems, Andhra Pradesh has emerged as one of the leading fish-

producing states in the country (Department of Fisheries, 2023).

Fisheries here complement agriculture by providing nutrition, employment, and additional income to millions. Institutions like the ICAR-Central Marine Fisheries Research Institute (CMFRI) have played a key role in promoting sustainable methods. This article presents an easy-to-understand overview of the

state's fisheries prowess and its synergy with rice farming.

Marine Fisheries

The state's marine fisheries thrive in the nutrient-rich waters of the Bay of Bengal. Important commercial species include Indian mackerel, ribbonfish, tuna, prawns, snappers, and sardines (Rout & Behera, 2025). Major landing centres such as Visakhapatnam and Kakinada support both traditional and mechanized fishing.

Andhra Pradesh contributes significantly to India's east coast fish production. Many species are rich in omega-3 fatty acids, high-quality protein, vitamin D, selenium, and zinc, making them valuable for nutritional security, especially for children and pregnant women (Rout & Behera, 2025).

Inland Fisheries, Aquaculture, and Rice-Fish Systems

Inland waters, including reservoirs, ponds, and lakes, form the backbone of the state's fish production. Lakes such as Lakshmipuram in Anakapalli district exhibit remarkable biodiversity, with 47 fish species recorded across 12 orders, Cypriniformes being the most dominant (Pratap et al., 2025).

A unique and sustainable feature is the traditional rice-fish culture. In districts like Srikakulam, paddy fields operate as "temporal semicommons" (Siripurapu & Moola, 2026). During the rice-growing season, fields are treated as private property for crop cultivation. After harvest, they become accessible to the local community for fishing. This seasonal shift in property rights allows the same wetland to support both rice and fish production, enhancing farmer incomes while promoting natural pest control and soil fertility (Siripurapu & Moola, 2026).

Bivalve Aquaculture: A Model of Sustainability

Andhra Pradesh has developed strong expertise in bivalve farming, which requires low inputs and provides high nutritional and economic returns. In Bheemili near Visakhapatnam, women play a central role in the clam fishery, primarily harvesting *Meretrix meretrix*. This seasonal activity (November to February) yields 700–750 tons per season, offering daily earnings of around Rs. 600 (Jasmin et al., n.d.).

Edible oyster farming (*Crassostrea madrasensis*) is popular in the Godavari delta and Kakinada backwaters using rack-and-ren methods (Jasmin et al., n.d.). Green mussel (*Perna viridis*) farming is also gaining momentum due to favourable coastal conditions, including suitable salinity and high plankton availability (Jasmin et al., n.d.). These practices help filter water and support ecosystem health while providing stable livelihoods, especially for women.

Table 1: Key Fisheries Features of Andhra Pradesh

Sector	Major Highlights	Significance
Marine	Mackerel, prawns, tuna, sardines	Major contribution to east coast landings
Inland & Aquaculture	Carps, shrimp, diverse lake species	High production & biodiversity
Rice-Fish Systems	Temporal semicommons in Srikakulam	Dual income from rice and fish
Bivalves	Clams, oysters, mussels	700+ tons/season, women-led livelihoods

(Source: Compiled from Department of Fisheries, 2023; Siripurapu & Moola, 2026; Jasmin et al., n.d.)

Socio-Economic Impact and Challenges

The fisheries sector provides employment to lakhs of people and supports nutritional security. Women are actively involved in bivalve harvesting and post-harvest activities. Government programmes like the Pradhan Mantri Matsya Sampada Yojana (PMMSY) are helping modernize infrastructure and promote sustainable practices.

However, challenges remain, including cyclones, pollution, overfishing, and climate change impacts. Effective implementation of regulations such as the Andhra Pradesh Marine Fisheries Regulation Act (APMFRA) is essential for long-term sustainability (Sandeep *et al.*, 2025).

CONCLUSION

Andhra Pradesh beautifully combines its agricultural fame as the Rice Bowl of India with remarkable achievements in fisheries. Traditional rice-fish systems, innovative bivalve aquaculture, and rich marine and inland biodiversity highlight a holistic approach to resource use (Siripurapu & Moola, 2026; Jasmin *et al.*, n.d.). By addressing challenges through scientific research, community participation, and supportive policies, the state can further strengthen food security and rural livelihoods. This integrated model offers valuable lessons for sustainable development across India.

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