

Aquapreneurship as a Pathway for Self-Employment Among Rural Youth in India

**Kamna Lahre^{1*}, B. Nightingale Devi², Chowa Ram Sahu³, Shweta Singh⁴,
Mayuri Dubey⁵ and Saroj Kanwar⁶**

^{1,5,6}Research Scholar, ²Assistant Professor, ^{3,4}Teaching Associate
Department of Fisheries Extension, LSPN College of Fisheries,
Kawardha, DSVCKV, Durg (Chhattisgarh)

Corresponding Author

Kamna Lahre

Email: kamnalahre5@gmail.com



OPEN ACCESS

Keywords

Aquaculture entrepreneurship Fisheries extension, Rural development, Self-employment, Youth empowerment.

How to cite this article:

Lahre, K., Devi, B. N., Sahu, C. R., Singh, S., Dubey, M. and Kanwar, S. 2026. Aquapreneurship as a Pathway for Self-Employment Among Rural Youth in India. *Vigyan Varta* 7 (05): 125-129.

ABSTRACT

In India, rural youth unemployment and underemployment continue to be significant issues, especially in areas that rely heavily on agriculture. Entrepreneurial involvement in aquaculture and related fisheries activities is known as aquapreneurship, and it has become a promising avenue for self-employment, generating income, and diversifying rural livelihoods India has enormous potential for aquaculture due to its favorable climate, abundant aquatic resources, and growing domestic and international markets. Youth involvement in aquaculture-based businesses, including fish farming, hatchery operations, ornamental fish culture, biofloc systems, value addition, and fisheries input supply, has been promoted in recent years due to government initiatives, skill development programs, and institutional support. This review summarizes the body of research on aquapreneurship with an emphasis on how it helps Indian rural youth pursue self-employment. The study looks at aquapreneurship development-related opportunities, enabling factors, barriers, and policy interventions. The study further identifies research gaps and makes recommendations for ways to promote aquapreneurship as a viable source of income for young people living in rural areas.

INTRODUCTION

Youth unemployment in rural India is going to become a major economic challenge due to the growing trend of depopulation, declining profitability from traditional agricultural activities, and an increase in migration from rural to urban areas. (IPCC 2021). However, due to their labor-intensive nature and quickly growing product supply chain, the fisheries and aquaculture industries have been found to produce more jobs than the traditional agricultural sector and offer a greater. Potential for producing value-added products (ICAR-CMFRI 2024). Therefore, the success of aquapreneurship has been reinforced by the near-total growth of aquapreneurs promoting new products and services, as it becomes a means for rural youth to engage in meaningful, income-generating employment opportunities. Aquapreneurship is the practice of creating fish-oriented and aquaculture-based businesses using business and entrepreneurial principles. It signifies a shift from conventional subsistence-based aquaculture, which is primarily concerned with production (farm-raised fish), to more dynamic, creative business models that emphasize taking risks on market-focused products, encourage new innovations, and produce goods that add value (Dutta *et al.* 2022). India's economy as a whole may be greatly impacted by the increasing number of young people pursuing aquapreneurship in terms of job creation and rural economic growth economy.

Concept and Scope of Aquapreneurship

Aquapreneurship entails much more than traditional fish farming. It includes seed production, feed manufacturing, ornamental fish culture, biofloc farming, cage farming, integrated farming systems, and post-harvest processing in addition to Fisheries consultancy services (Aquaculture Magazine, 2023). These diversified choices allow the rural youth an

opportunity to select Aquapreneurship enterprises that capitalize on the resource base available in their area, the ability to invest money into it and the existence of market for their product.

A purely entrepreneurial approach to aquaculture allows the youth to transform their working lives from wage jobs to becoming self-employed owners of Aquapreneurship (Sanal and Geetha ,2022). These studies have demonstrated that not only do youth engaged in Aquapreneurship realize financial benefits, but also that Aquapreneurship enhances decision-making abilities, managerial skills, and social status within the local communities.

Table 1. Major Aquapreneurship Activities Suitable for Rural Youth in India

S. N.	Aquapreneurship activity	Description	Employment potential	Reference
1.	Freshwater fish farming.	Carp and catfish culture in ponds and tanks.	High (on-farm self-employment).	Sanal and Geetha (2022).
2.	Fish feed and input supply.	Manufacturing and marketing of feeds and equipment.	Medium (service-oriented enterprises).	Aquaculture Magazine (2023).
3.	Biofloc aquaculture.	High-density fish or shrimp culture using microbial flocs.	High (technology-driven youth enterprises).	Santhi Bai (2025).
4.	Ornamental fish culture.	Breeding and marketing of aquarium fishes.	Medium to high (small capital enterprises).	Dutta <i>et al.</i> (2022).
5.	Fish processing and value addition.	Drying, smoking, pickling and ready-to-eat products.	High (especially for SHGs and youth groups).	Ssalas <i>et al.</i> (2018).

Aquapreneurship and Rural Youth Employment in India

According to ICAR-CMFRI (2024), India has the second highest aquaculture production in the world and is poised to be a significant contributor to aquapreneurship development. Over the past several years, there has been a growth in rural youth participating in aquaculture, particularly in freshwater

aquaculture, shrimp farming, ornamental fishery and service-based industries. Research conducted in the states of Kerala, Andhra Pradesh, Odisha and West Bengal, has shown that the aquaculture sector is an important source of employment and income security for many young people (Sanal and Geetha, 2022). Training intervention programs administered by ICAR, KVK and State Agricultural Departments (NFDB) and MANAGE have been effective in developing entrepreneurial abilities among rural youth. Furthermore, skill development programs that emphasize modern agricultural technology have resulted in increased rates of technology adoption and sustainability of aquaculture enterprises (Santhi Bai, 2025).

Table 2. Role of Aquapreneurship in Promoting Self-Employment among Rural Youth

S.N.	Dimension	Contribution of aquapreneurship	Supporting evidence
1.	Employment generation.	Provides year-round self-employment.	Sanal and Geetha (2022).
2.	Income enhancement.	Increases household income and savings.	Increases household income and savings.
3.	Skill development.	Enhances technical and managerial skills.	Dutta <i>et al.</i> (2022).
4.	Migration reduction.	Reduces rural-to-urban migration.	ICAR-CMFRI (2024).
5.	Social empowerment.	Improves confidence and decision-making ability.	Arulingam <i>et al.</i> (2025).

Socio-Economic Impact of Aquapreneurship

Aquapreneurship generates significant socio-economic benefits for rural youth, including increased household income, reduced rural-to-urban migration, and improved livelihood security. Engagement in fisheries-based entrepreneurship also enhances self-esteem, leadership skills, and financial independence (Ssalas *et al.*, 2018). Unlike seasonal agricultural labour, aquapreneurship provides more stable, year-round employment

opportunities, making it a reliable source of income.

Beyond primary production, aquapreneurship extends across the value chain, creating additional employment in areas such as fish processing, packaging, and marketing. These activities not only diversify income sources but also contribute to the overall growth of the rural economy through value addition and multiplier effects.

Despite its potential, several barriers limit the adoption of aquapreneurship. These include limited access to credit, lack of collateral, inadequate technical knowledge, market fluctuations, and vulnerability to climate-related risks (Arulingam *et al.*, 2025). Furthermore, weak extension services and insufficient post-training support often lead to low enterprise success rates. Social factors such as fear of failure, lack of family support, and low entrepreneurial motivation also hinder youth participation.

To overcome these challenges, a comprehensive approach is needed, involving supportive policies, improved financial access, skill development, and strong institutional and extension support systems.

Role of extension and policy support

Through training, transferring technology and mentoring enterprises, Fisheries extension is key to developing aquapreneurship. The Pradhan Mantri Matsya Sampada Yojana (PMMSY) is an example of how the Government of India has provided the financial assistance, infrastructure and training that has encouraged young entrepreneurs to establish aquaculture enterprises (ICAR-CMFRI, 2024). Aquapreneurship will benefit from policy support that includes incubating start-up businesses, providing access to markets, ensuring adequate insurance coverage and leveraging digital platforms. Training modules on aquapreneurship introduced into

regular education and vocational education/training could potentially increase the number of rural youth with an entrepreneurial mindset.

Table 3. Government Initiatives Supporting Aquapreneurship Development in India

S.N.	Programme / Institution	Key support provided	Target beneficiaries	Reference
1.	PMMSY	Financial assistance, infrastructure, insurance.	Youth, fish farmers, entrepreneurs.	ICAR-CMFRI (2024).
2.	NFDB	Skill training and enterprise development.	Rural youth and SHGs.	Dutta <i>et al.</i> (2022).
3.	ICAR-KVKs	Technology dissemination and capacity building.	Farmers and rural youth.	ICAR-CMFRI (2024).
4.	MANAGE	Entrepreneurship and leadership training.	Unemployed youth.	Dutta <i>et al.</i> (2022).
5.	State fisheries departments	Subsidies and extension services.	Local aquapreneurs.	Sanal and Geetha (2023).

Research Gaps and Future Directions

While many studies show the positive employment potential of aquapreneurship, a systematic evaluation of the long-term sustainability and profitability of these enterprises is very limited. Emerging areas of research include gender-specific participation in aquaculture, climate resilience of aquaculture enterprise development, and digital entrepreneurship in fisheries. Future research should employ an interdisciplinary approach by combining economics, extension, and environmental sustainability, to facilitate developing and strengthening aquapreneurship frameworks.

CONCLUSION

Aquapreneurship offers a strong solution to rural youth unemployment in India by combining the country's rich aquatic resources with entrepreneurial innovation. It creates year-round self-employment opportunities, increases income, builds technical and managerial skills, reduces migration to cities, and promotes social empowerment. The growth of diverse aquaculture activities such

as fish farming, aquaponics, biofloc systems, value addition, and input supply highlights its vast potential to transform rural economies.

However, to fully realize this potential, key challenges must be addressed, including limited access to credit, market uncertainties, and inadequate training support. Strengthening extension services, providing youth-focused financial schemes, and implementing inclusive and technology-driven policies are essential. Emphasis on climate-resilient practices and gender-sensitive approaches will further enhance sustainability and inclusiveness.

Integrating aquapreneurship into vocational education and incubation systems can encourage entrepreneurial skills among rural youth. Overall, aquapreneurship should be viewed not just as an income-generating activity but as a powerful tool for rural transformation, requiring coordinated efforts from government, institutions, and youth for its successful implementation.

REFERENCES

- Aquaculture Magazine (2023). Aquapreneurship: A viable option for the next generation entrepreneurs. Aquaculture Magazine, May Issue.
- Arulingam, I., *et al.* (2025). Youth participation in small-scale fisheries and aquaculture value chains. WorldFish Working Paper.
- Dutta, S., *et al.* (2022). Aquapreneurship Development for Unemployed Youth. MANAGE, Hyderabad.
- ICAR-CMFRI (2024). Marine Fisheries Statistics of India. Central Marine Fisheries Research Institute, Kochi.
- Sanal, S. and Geetha, R. (2022). Aquaculture entrepreneurship in Kerala. International

Journal of Early Childhood Special Education,
14(3), 2456–2464.

Santhi Bai, B. (2025). Enhancing aquaculture entrepreneurship through training programmes and vocational education. International Journal of Scientific

Research in Engineering and Management, 9(2), 1–8.

Ssalas, S., *et al.* (2018). Entrepreneurship-based empowerment among fisherwomen self-help groups. Indian Journal of Fisheries, 65(4), 115–121.