Good Aquaculture Practices (GAqP): A Dynamic Framework for Sustainable Aquaculture

Good Aquaculture Practices (GAqP) represent a set of evolving management strategies adopted by high-performing aquaculture producers to ensure efficient, responsible, and sustainable fish and shellfish farming. These practices are not static or definitive; rather, they reflect the best-known methods at a given time, continuously improving with advancements in technology, environmental understanding, and market demands. GAqP encompasses a wide range of activities—from seed selection and pond preparation to feeding, disease management, and harvesting—all aimed at optimizing resource use, enhancing productivity, and maintaining ecological balance.

GAqP is grounded in the principles of responsible aquaculture, aligning with international standards such as the Code of Conduct for Responsible Fisheries established by the Food and Agriculture Organization (FAO) in 1995. This code emphasizes minimizing adverse impacts on human health and the environment, including potential ecological disruptions. Additionally, GAqP mandates adherence to the World Organisation for Animal Health (OIE) guidelines, particularly the International Aquatic Animal Health Code (2022), which ensures disease-free seed stocking and promotes fish health and welfare.

In India, aquaculture is a highly localized occupation, characterized by diverse cultural practices and species preferences across different regions. This diversity, while enriching, poses challenges in standardizing practices. With the globalization of aquaculture trade, it becomes imperative to define and implement common minimum standards that can facilitate international commerce and build consumer confidence both domestically and abroad. These standards serve as a foundation for traceability, quality assurance, and regulatory compliance.

Implementing GAqP offers a multitude of benefits across the aquaculture value chain. At the grassroots level, it encourages the development of basic infrastructure, such as water management systems, feed storage units, and disease monitoring facilities. It fosters a culture of best practices, promoting awareness among producers about the importance of safe and high-quality food production. By establishing a uniform approach, GAqP ensures consistency in operations regardless of farm size, enabling small-scale farmers to compete in global markets.

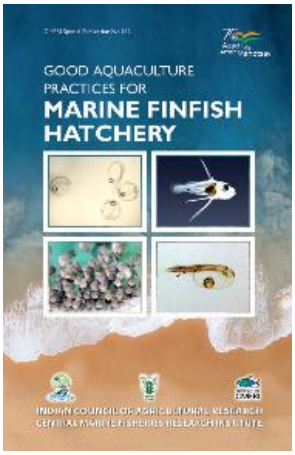
One of the key pillars of GAqP is traceability, which involves documenting every stage of the production process—from hatchery to harvest—to ensure transparency and accountability. This not only improves food safety but also enhances the reputation of Indian aquaculture products in international markets. Moreover, GAqP contributes to environmental sustainability by encouraging practices that reduce pollution, conserve biodiversity, and maintain water quality.

Worker safety and welfare are also integral to GAqP, ensuring that aquaculture operations are conducted in humane and ethical conditions. By adhering to these standards, producers can overcome Technical Barriers to Trade (TBTs), which often arise due to discrepancies in quality, safety, and environmental compliance.

In summary, GAqP is a dynamic and holistic framework that supports the growth of aquaculture through responsible, efficient, and sustainable practices. Its implementation not only benefits producers and consumers but also strengthens India's position in the global aquaculture market.

ICAR-Central Institute of Freshwater Aquaculture, ICAR-Central Institute of Brackishwater Aquaculture and ICAR-Central Marine Fisheries Research Institute are the premier research institutions in India which have developed technologies pertaining to breeding, seed production and grow-out fish farming in freshwater, brackishwater and marine environments, respectively, and have also developed GAqPs for different culture systems.

The details of the good aquaculture practice for marine finfish hatchery can be found in the following publication of ICAR-CMFRI.



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