

Transforming a coral reef cove into mariculture hub: Igang Marine Station of SEAFDEC/AQD



Aerial view of SEAFDEC/AQD Igang Marine Station in Guimaras Province, Philippines in 1980s

The Igang Marine Station (IMS) of SEAFDEC Aquaculture Department (SEAFDEC/AQD) is situated in a coral reef cove in Nueva Valencia, Guimaras Island in central Philippines. Home to broodstocks of milkfish, grouper, sea bass, snappers, and other commodities, IMS is composed of four islets



The coral reef cove at Igang in Nueva Valencia, Guimaras that has been transformed into what is now the IMS of SEAFDEC/AQD

interconnected with clusters of floating cages. In these cages, fishes mature and spawn spontaneously during the normal breeding seasons, demonstrating sustainable mariculture and promoting blue culture technology.

IMS was established in 1974 primarily for the conduct of studies on the breeding of tiger shrimp (*Penaeus monodon*) in pens. These studies resulted in major breakthroughs that include the unprecedented completion of the life cycle of *P. monodon* in captivity in 1975, which was followed closely by the rematuration of spent spawners, paving the way for the establishment of *P. monodon* broodstock. In 1983, another milestone was attained at IMS with the completion of the life cycle of milkfish or bangus (*Chanos chanos*) leading to the development of milkfish broodstock and promotion of the Philippine National Bangus Breeding Program. Meanwhile, natural spawning of captive breeders in cages was first observed and recorded at IMS in 1979.

Since then, new nursery and grow-out technologies in floating net cages have been developed and verified for high-value marine species such as grouper (*Epinephelus* spp.), sea bass (*Lates calcarifer*), snapper (*Lutjanus argentimaculatus*), and



pompano (*Trachinotus blochii*), and demonstrated to fish farmers for the promotion of sustainable mariculture.

IMS also maintains stocks of abalone (*Haliotis asinina*) and sandfish (*Holothuria scabra*) for studies on improving the culture of these commodities in cages. The current work of abalone focuses on improving the grow-out culture technology in cages and broodstock propagation for hatchery use. For sandfish, its potential for polyculture with selected marine fishes is being explored.



Mariculture Park demonstration and training facility, IMS

IMS also hosts a small giant clam garden, where about 200 giant clams (*Tridacna* spp.) which were released in 2006 have been looked after for stock enhancement studies. Mass production of *Kappaphycus* spp. plantlets in sea-based nursery system is also being conducted at the IMS.

Also forming part of the IMS complex is a mariculture park demonstration and training facility which serves as a model of sustainable mariculture technology for marginal fishers. The mariculture park also caters to entrepreneurs interested in investing in aquaculture. Recent studies have now put more focus on integrated multi-trophic aquaculture (IMTA), which refers to the farming of different aquaculture species together, allowing the waste of one to be recycled as feed for another species.

Specifically, the milkfish research activities conducted at IMS use soy products as alternatives to fish meal in practical feeds for milkfish grown in floating net cages. The carrying capacity of the waters of IMS is regularly monitored and evaluated, while the physico-chemical parameters of waters beneath the cages are also being measured to ensure that the activities at IMS do not pollute the environment.

To support the research and training activities, IMS has an Administrative Office, staff quarters, and fully-furnished guest houses nestled on top of the islets. IMS is also open for eco-tourism on specified seasons.

For more information, refer to www.seafdec.org.ph.



Cover of Fish for the People Volume 13 Number 2: 2015 shows part of what is now the IMS as a mariculture hub demonstrating blue culture technology