

# Sustainable Ocean-based Giant Clam Farming Development in Palau<sup>1</sup>

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Palau is located at 134°08'-134°44'E and 6°53'-8°12'N in the western part of Micronesia in the Pacific, and comprises 343 islands. In 1947, Palau became part of the strategic United Nations Trust Territory of the Pacific Islands under the administrative authority of the United States of America (USA). Palau became an independent nation on 1 October 1994 under the implementation of the Compact of Free Association between Palau and the USA. The 2000 Census of Population and Housing indicates that the population in 2000 was 19 129.

## BACKGROUND

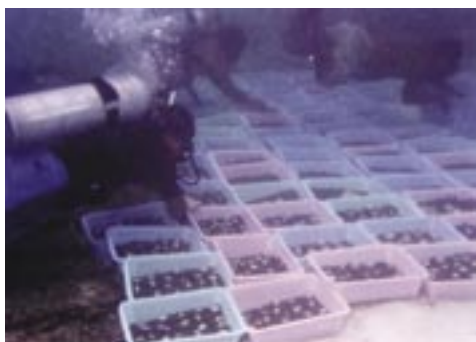
Aquaculture was introduced in Palau over 30 years ago. Although trials to culture several species have been successfully carried out in Palau since the 1970s, its commercial success to-date has been limited. The Micronesian Mariculture Demonstration Center (MMDC) was established in Palau in 1993 to serve Palau and the other US-affiliated Pacific Islands by developing, demonstrating and promoting mariculture technology. In early 1980s, it became the sole property of the Government of Palau, and later was renamed as the Palau Mariculture Demonstration Center (PMDC) that also serves as a regional mariculture training centre and a marine science research laboratory. The PMDC has carried out culture of giant clams, prawns, crabs, rabbitfish, seaweed, soft corals, trochus, oysters, crocodiles and turtles, and recently groupers. Palau was the first country to succeed in a mass production of giant clams (*Tridacnidae*) during the 1970s. Many countries in the Pacific were recipients of Palau's cultured clam broodstock which were utilized in their own giant clam projects. However, in 1994, giant clams began its downfall as a commercially viable species due to change in the management of the PMDC's giant clam hatchery. Recently, the management is slowly picking up its production until an expert is put in place to effectively boost up the

production to attract public interest and means to further strengthen and promote regional and international markets. In the recent restructure of the Bureau of Marine Resources (BMR), Ministry of Resources and Development, the PMDC has become under the BMR's Aquaculture and Mariculture Branch.

The giant clams (*Tridacna crocea*, *T. derasa*, *T. gigas*, *T. maxima*, *T. squamosa*, *Hippopus hippopus* and *H. porcellanus*) have been identified as valuable resources for Palau. Its demand and high price in some of the international markets have caused intensive fishing of the species. In the natural environment, it takes 3 to 5 years to reach its sexual maturity. The maturity differs from one animal to another depending on the richness of its environment that provides food. According to the information obtained from professional fishermen, the natural population of giant clams has been declining significantly due to over-fishing. It has been reported that some fishermen harvested giant clams taking only the adductor muscle and leaving the rest behind.

## ESTABLISHMENT OF THE GIANT CLAM SEA FARMING PROGRAM

In 1996, the first giant clam sea farming was initiated by a few individuals and State Governments. Since 1998, farmers have been supported by the PMDC who provided giant clam seeds as well as materials to protect their farms. The President of the Republic of Palau stated in his Presidential Address of the Year 2001 that a total of 5 million giant clams would be planted in the sea around Palau by 2008. The Giant Clam Sea Farming Program was formulated jointly by the BMR of the Ministry of Resources and Development and the Bureau of Economic Development (BED) of the Ministry of Commerce and Trade.. The objectives of the Programme are:



- to expand the community's ocean-based giant clam nurseries;
- to establish giant clam breeding stock to enhance its natural stocks in the reef areas which will be utilized in the community's subsistence fisheries;
- to initiate small income generating activities for communities by utilizing clam meat, shells and live clams; and
- to further promote the management and conservation of reef fisheries resources.

Under this Program, the National Workshop on Giant Clam Culture, Conservation and Ocean-Based Nursery Management was conducted to ensure appropriate technology transfer to State level. The number of established giant clam farms to-date is 37 spread in 12 States (*i.e.*, Kayangel, Ngarchelong, Ngaraard, Ngardmau, Ngatpang, Melekeok, Ngiwal, Ngchesar, Aimeliik, Koror, Peleliu and Helen Reef-Hatohobei) out of 16 States in Palau. As of July 2005, these farms were stocked with 1 231 773 seeds with sizes ranging from 2 cm to 5 cm (equivalent to 1.0 - 2.5 in). Farm arrangements are made through the State Government Offices and the National Government (BMR) on receipt of the State Government's official request to the National Government. While the operational costs of the Program are met by the State Governments, private farmers, the BMR and/or the BED provide technical assistance (*e.g.*, national training, quarterly monitoring and survey, seed production) to the State Governments and private farmers. Security monitoring in the farm areas is conducted by the State Governments and/or farm owners. In February 2006, 37 giant clam farmers organized themselves and formed the Palau Aquaculture Cooperative Association.

<sup>1</sup>Aquaculture and Mariculture Branch  
Bureau of Marine Resources,  
Ministry of Resources and Development,  
Republic of Palau

Regional Workshop on the promotion of Aquaculture Insurance in Asia, Bali, Indonesia, 30 April to 2 May 2007. Further information may be obtained by writing to [Raymon.Vananrooy@fao.org](mailto:Raymon.Vananrooy@fao.org)

Workshop on "Information Requirements for Maintaining Aquatic Animal Biosecurity", funded under the PCA Norway D1 Objective, 14-18 February 2007, Cebu City, Philippines, is jointly organized with the Network of Aquaculture Centres in Asia-Pacific (NACA) and the Association of Southeast Asian Nations (ASEAN) and locally hosted by the Philippine Bureau of Fisheries and Aquatic Resources. Further information may be obtained via email: [Melba.Reantaso@fao.org](mailto:Melba.Reantaso@fao.org)