

**SPC/Fisheries 23/WP 13  
5 August 1991**

**ORIGINAL:ENGLISH**

**TWENTY THIRD REGIONAL TECHNICAL MEETING ON FISHERIES  
(Noumea, New Caledonia, 5-9 August 1991)**

**CONSIDERATION RELATED TO THE TRANSFER OF BIOLOGICAL MATERIAL FROM  
AQUACULTURE FACILITIES**

**(Issues rising from the ACIAR Giant Clam Project Leaders  
Meeting February 1991)**

**Issues rising from the ACIAR Giant Clam Project Leaders  
Meeting February 1991**

At a recent (February 1991) meeting of project leaders from the ACIAR Giant Clam Project, at which five Pacific Island countries (Fiji, Tonga, Tuvalu, Kiribati, Cook Islands) were represented, a number of issues and concerns related to the transfer of giant clams were discussed. During this exchange of issues, several regional initiatives were suggested that call for the specific involvement of the South Pacific Commission or which required the broader consideration of all Pacific Island countries. The South Pacific Commission has graciously consented to the introduction of these proposals to the RTMF for consideration and possible action.

1. Update of the RTMF interim guidelines for the introduction and translocation of giant clams

In 1985, within a broad ranging discussion of recent developments in pearl culture and the then embryonic giant clam mariculture in the Pacific Islands, the 17th RTMF considered at some length the potential hazards associated with the introduction and translocation of exotic species. It was broadly agreed that there was a clear need for more detailed examination of the subject, covering both the disease and genetic impact aspects of such transfers, with a view to developing appropriate protocols to transfers of all aquatic biological material within the Pacific Islands region. The meeting confined discussion to the transfer of adult and juvenile giant clams, and agreed on interim guidelines which were recommended for adoption by SPC member countries.

Since that time the technical feasibility of clam mariculture has been effectively demonstrated and the potential for village-level clam culture is now under active investigation in many Pacific Island countries and in the Philippines. As a result, large numbers of live clams, predominately settling larvae or early juveniles, are routinely shipped between countries in support of culture or stock replenishment programmes. The 1985 RTMF guidelines have served a very useful role over the last six years but it would now seem appropriate to re-examine the suggested procedures and perhaps reshape them in the light of the knowledge and experience accumulated over this period.

To assist this process, the original guidelines are presented below together with comments and suggested changes where appropriate for consideration and possible adoption by the meeting. These comments reflect the broad group experience of collaborating institutions and partner countries within the ACIAR Giant Clam project.

RTMF interim guidelines for the introduction and translocation of giant clams.

- (i) *No species of clams should be introduced to areas outside its known recent distributional range.*

**Comments:** This restriction has been widely ignored. While there is as yet no evidence of any adverse environmental or biological effects resulting from past translocations of giant clams, it should be recognised that each introduction has implications for any subsequent introductions, either of possible genetically superior strains or individuals that are disease and parasite free.

- (ii) *Where transfers are to be effected within the natural range of a species, the spat should be reared in seawater filtered to one micron and be maintained in ultra-filtered, recirculating, ultra-violet irradiated seawater in the four weeks preceding the transfer.*

**Comment:** Under these conditions clams lose condition. Supplementary feeding and nutrient additions for larvae and small clams in ultra-filtered recirculating seawater are essential.

- (iii) *Giant clams should be transferred at the earliest possible stage in their life history.*

**Comment:** Clams are now routinely distributed as late settling larvae (pediveligers) or early juveniles of a few months old, greatly reducing the risk of accidental introduction of disease and parasites.

- (iv) *The receiving institution should maintain the spat or seed in quarantine tanks or raceways, preferably supplied with filtered seawater, for at least six months. The overflow water from the tanks or raceways must flow to waste in to a septic tank or other in-ground sump and must not be drained back into the sea.*

**Comment:** This isolation procedure remains imperative and is applicable to introductions of all marine organisms. Recent observations suggest that, for clams at least, three months may be a sufficient quarantine period for known parasites and disease to become evident.

- (v) *In the event that during the quarantine period any diseases, parasites or predators appear in the introduced stock, the stock should be destroyed by boiling, all equipment sterilised and a fresh start made.*

**Comment:** This is a standard quarantine procedure.

- (vi) *The country exporting the clam seed or spat should accept the responsibility of ensuring that the above-mentioned guidelines are adhered to and undertake to issue a certificate to that effect.*

**Comment:** This is not a national function. The hatchery or institute concerned must take full responsibility for health certification of clams exported from their facility. A formal certificate of health should accompany shipment of clams seed or spat.

## 2. Regional Translocation Register and Disease Clearinghouse role for SPC

It was proposed that a centralised regional register to document all transfers and introductions of marine and fresh water organisms into and between countries in the Pacific would provide a valuable data base.

It was further suggested that the South Pacific Commission could play a key role in :

1. providing a clearinghouse for information and advice related to disease outbreaks and reports in cultured animals, and
2. taking a leadership role in establishing appropriate quarantine protocols.

3. Further action

With interest in mariculture spreading rapidly within the region and an increasing range of organisms under culture or targeted for future investigation, the need to examine the broader biological and ecological issues associated with the introduction of exotic species is becoming more urgent. Consideration of this topic with a view to developing appropriate translocation protocols relevant to all aquatic organisms may be a useful agenda item for a future RTMF gathering.