

THE CARE EXPERIENCE: POST-LARVAL COLLECTION AND REARING FOR RESTOCKING OF MARINE PROTECTED AREAS

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The authors seek to establish sustainable post-larval collection and rearing systems and build capacity for their management around the world, with the aim of replenishing fish stocks especially in Marine Protected Areas.

A Responsible Practice

The final planktonic growth stage of reef fish is called ‘colonization’ and the larvae at this stage are termed post-larval. Unfortunately, more than 99% of these larvae will disappear within one week of returning to the reef area, mainly due to predation (Doherty et al., 2004; Planes & Lecaillon, 2001). By collecting a small percentage of these post-larval reef fish before this high mortality phase, the impact of collection on future fish stocks will be negligible (Bell et al, 1999).

An Innovative Technology

The CARE system (Collection by Artificial Reef – Ecofriendly, developed by Ecocean Inc.) enables the collection of undamaged post-larval reef fish. Once sorted, these post-larval fish are grown in aquariums up to the juvenile stage, and subsequently grown on in tanks or sea cages for restocking of Marine Protected Areas.

A Sustainable Restocking Resource

CARE system projects have been initially financed through international grants, as in the Philippines (MAMTI program in 2005 in partnership with Reef Check) and Fiji (CRISP, a three year ongoing program); with the objective of moving towards financial sustainability of the system over the medium term.

To make these restocking activities sustainable, a proportion of the post-larval fish collected and grown on will be used to provide food-fish fingerlings for local aquaculture, as well as sustainable alternatives to the traditional and unsustainable marine aquarium trade. Therefore, by using those incomes to offset collection and rearing costs, a large number of juvenile fish can be released for restocking – an effective and sustainable form of aquaculture mitigation.

Our Multi-Sectoral Approach

ECOCEAN offers a good working model of eco-job implementation, whereby technical assistance is provided to local stakeholders through multi-sectoral partnerships with national and local government, local academic institutions, non-government organizations, the private sector, and of course the targeted communities themselves.

Presenting Successful Working Examples

In our presentation, the whole process will be illustrated by last year’s restocking experiences in the Philippines. The total number of live post-larval fish caught was 11,966, and 95% of the CARE system catch was made up of targeted post larval reef fish species. In total, 32 families were collected representing more than 80 species, of which most were reared and released for restocking as juveniles.