



## ews from the ACIAR Trochus Reseeding Research Project

### ACIAR Trochus Reseeding Research Project in northern Australia, eastern Indonesia and the Pacific extended for another two years

*Dr Chan L. Lee<sup>1</sup>*

The Australian Centre for International Agriculture Research (ACIAR) has extended its trochus reseeded research project involving Australia, Indonesia and Vanuatu for another two years, from January 1999 to December 2000. Dr Chan L. Lee, who moved from the Northern Territory University to Fisheries Western Australia (FWA), has been reappointed as the project coordinator with FWA as the commissioned organisation. The country coordinators for Vanuatu and Indonesia are Mr Moses Amos and Dr Sigit Dwiono respectively.

During the two-year extension, the project will focus on the following activities:

- site-specific and country-specific research linked to the implementation of appropriate management regimes to ensure success in reseeded research;
- the research to be conducted on larger spatial scales;
- further development of enclosures for intermediate culture of small trochus, fisheries closures to protect breeding stocks, and brood-stock manipulation to enhance recruitment to the fishery.

#### Research activities

The Australian node will carry out the research on selected sites in King Sound, Western Australia. The Indonesian node will carry out the research in Morella, Ambon, while Vanuatu will conduct its work in the trochus fishing area in Erakor where Customary Marine Tenure (CMT) is in place.

The research project will develop suitable methodologies for reseeded trochus. It will lead to:

- the development of a sound strategy for enhancing stocks via seeding hatchery-produced juveniles and translocation of brood-stock to over-exploited reefs;
- the implementation of a site-specific approach to reseeded;
- the incorporation of appropriate management regimes working in tandem with traditional management practices; and
- the formulation of a follow-up development/technology transfer proposal for conducting large-scale reseeded work running hand in hand with complementary country and/or site-specific management strategies to enhance trochus stocks in Australia, Indonesia and the Pacific.

#### Australia

As part of the research in Australia, a pilot hatchery to produce juvenile trochus for the reseeded research was constructed at One Arm Point in July 1999. The hatchery was funded by ACIAR, Fisheries WA, Bardi Aborigines Association and Aboriginal and Torres Strait Islanders Commission (ATSIC).

The first hatchery cycle produced >140,000 small 2–4 mm size class juveniles. A second production cycle is currently running.

For field reseeded research, Dr Steven Purcell was recruited to the project in August 1999. He will implement the field studies involving reseeded with hatchery juveniles and enhancing the fishery using mature broodstock and releasing them in selected sites. Monitoring of the released animals will be conducted regularly over the next 15 months.

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## Indonesia

In Ambon, the project node managed by Dr Sigit Dwiono of LIPI (Indonesian Institute of Sciences) will concentrate on standardising the use of concrete cages for producing larger juveniles (30–50 mm) in coral reefs off the township of Morella for reseeded. A pilot hatchery was set up at Morella and managed by the villagers under the guidance of LIPI. Villagers were involved in the daily activity pertaining to the care and maintenance of the juveniles in the hatchery and providing security to the reseeded sites.

The Indonesian node will assess the impact of reseeded with different size class of juveniles (30, 40 and 50 mm) on the reseeded reefs.

## Vanuatu

In Vanuatu, the trochus hatchery belonging to the Fisheries Department continues to work well under the guidance of Mr Moses Amos, the Director of Fisheries, and Kalo Pakoa, the project

scientist. A large number of juveniles has currently been produced for research involving studies on:

- mass reseeded with small (1–3 mm) juveniles in natural and manipulated habitats;
- determining suitable types of cages and optimum densities for stocking in cages for intermediate culture of trochus to 30–40 mm for subsequent reseeded.

## Conclusion

The success of the proposed research work will establish simple methodologies for reseeded with hatchery-produced juveniles and restocking with mature broodstock. In conjunction with appropriate management regimes and traditional management practices, it will provide a pathway for restoring and re-establishing trochus in depleted reefs. However, whether the research will lead to the establishment of a sustainable trochus fishery in the three countries involved will be a real challenge.



## News from New Caledonia

### Recent developments in trochus shell export from New Caledonia

*Régis Etaix-Bonnin*

The oldest statistics on trochus exploitation in New Caledonia date back to 1907 and concern the export of raw shells for the food preparation market.

These data indicate a strong variability in exports over time (saw-tooth curve), thereby demonstrating the fragile nature of the trochus stock, with periods of low export succeeding periods of significant harvests (1946–1954 and 1975–1984), which themselves had been made possible by previous periods allowing regeneration of the stock (Second World War and the mining boom of the 1960s).

Since the second half of the 1980s, tonnage levels have remained low, i.e. less than 300 tonnes annually. In addition, over the past five years, there has been a drop in exports as shown in Table 1.

This drop in exports is apparently not due to tension on the market as the average per-kilo prices remained quite steady over this period.

The persistence of low tonnage levels for more than a decade at levels far below the 400 tonnes given in an ORSTOM (now the IRD- French Re-

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