Current management policies and problems of the inshore fisheries resources in Vanuatu

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Introduction

The Republic of Vanuatu is an archipelago of over 80 islands, twelve of which are described as major islands and sixty-seven inhabited. Traditional values still govern village life, with over 100 indigenous languages spoken.

The National language is Bislama and there are two official languages, English and French. The estimated population for 1991 was 165,000, with 60 per cent of the population engaged in subsistence farming.

The main sources of income in the rural areas are copra, cocoa, coffee, cattle, kava and green vegetables. In 1982, the first development plan for the country highlighted the need to reduce dependency on copra and look into developing other potential economic resources. One of the major items was the development of a village fishing development project for the offshore resources.

During the early 1990s, Vanuatu was experiencing a decline in its main exports, namely copra and cocoa. This decline was in the main producing areas, the Central and Southern regions, because of unfavourable weather conditions (*Quarterly Economic Review*, 1994). In such cases, the coastal communities have to look into ways of making quick money in order to re-build their homes after cyclones. As a result, village communities have been turning towards inshore fishery resources in their coastal areas for economic benefits.

In other islands where copra and cocoa are scarce, marine resources can be the only source of income. The other reason is that there has been a decreasing trend in the number of boats engaged in bottom fishing, which may indicate an increase in pressure on the inshore resources. In addition, the current influx of tourism has caused increased fishing pressure on certain inshore resources, such as coconut crabs which are considered a delicacy and priced very highly in the local restaurants and hotels.

Due to these factors, the Fisheries Department in Vanuatu is faced with certain management difficulties in trying to link the biological bases of inshore resources and the current legislation with the communities for effective management of these resources on a sustainable level.

The way in which this information can be translated to the understanding of resource owners / communities, while still allowing them to benefit from their existing traditional and cultural systems and values, is what is considered important. Resource owners don't like to be told how to manage their resource. They want to be made aware of the types of management available and current legislation involved and choose the management regimes which suit them best.

Trochus

Trochus harvesting in Vanuatu for subsistence and commercial purposes is a mature fishery. It is seen as one of the major inshore resources that generate revenue to the coastal communities. The major use of trochus is the shells; these are sold to the existing shell processing factories for the production of button blanks, which are then sold overseas. The price offered for shells is usually between 170 and 300 Vatu (AU$ 2–3.00) per kilogram of shell. The processed shells are sold to overseas countries such as Korea.

Surveys carried out by the Fisheries Department in the early 1990s indicated that there was a decline in trochus abundance in certain locations, thus leading to the need for tighter management controls to be implemented to ensure the sustainability of the resource (Bell & Amos, 1993).

The trochus fishery in Vanuatu has been managed by a variety of methods. These include size limits, limited fishing seasons, quota, trochus sanctuaries, closed season and export criteria. The only management tool used for the trochus fishery in Vanuatu at the moment

is a size limit, which is set at 9 cm basal length. Up to 1983, trochus shells with a lower size limit of 5 cm were harvested. The current legislation / policy regarding trochus exploitation under Fisheries Regulation 17 prohibits taking, harming, possessing or purchasing trochus shells less than 9 cm basal length. The exportation of whole shell is illegal without written permission from the Minister. A fine of 100,000 Vatu (AUS$1,200) is payable by anyone who contravenes any of these provisions.

Several management issues and problems have occurred which have become of great concern for fisheries officers when enforcing the regulations with resource users and resource owners. It appears that one of the main management problems is the failure by the resource owners and resource users to respect the current minimum size limit.

The existing shell processing factory, Hong Shell Products, could be forced to abide by the 'undersized limit' if resource owners were to supply the legal-sized shells. However, trochus shells less than 9 cm shell length (5–7 cm) produce high-quality button blanks in the export market. Besides, the shells are much thinner and easier to cut, thus having much better quality, whereas shells of a size greater than 9 cm basal length are often much thicker and can easily be affected by burrowing organisms.

There is growing concern that several tonnes of undersized trochus shells are shipped occasionally from outer islands to the shell processing factories and that the people concerned are not being prosecuted by the Department of Fisheries. This is probably due to the lack of experience of the Enforcement Officer who is responsible for such matters. Several sections within the Department of Fisheries are still facing the effects of the 1993 National Public Servants' Strike, which saw several of its experienced staff who went on strike, including the Enforcement Officer, not being recruited back to the Department. Some have been replaced by new staff who require further training in the required field.

To ensure sustainable harvest of trochus resources, several tasks need to be carried out. Licenceholders must be screened and those who have been violating the current legislation should be prosecuted under the Fisheries Act. The requirement for shell processors to submit monthly reports on commercial catch to the Fisheries Department should be enforced.

It was realised that in order for the resource owners, resources users and the community as a whole to comply with the existing management policies, greater awareness programmes needed to be emphasised continuously, especially in the rural communities. Fisheries Officers see the importance of providing the villagers with basic information on trochus biology and giving advice on such issues as why the minimum size limit is desirable and for how long the trochus fishery should be closed to rebuild stock.

Furthermore, educating the current field Extension Officers in the region is also essential. Such officers are more in contact with the community, as they represent the Fisheries Department at village level. Providing them with such tasks would also be effective.

Green snails

Like trochus, green snails have been used traditionally as a source of protein. However, there are no figures available on the production of this species for local consumption. The shells themselves are of great

value and provide revenue and employment for coastal communities in the country. The production of green snail is small compared with that of trochus; however, the price is higher. The current price for green snail is between 1,700 and 2,000 Vatu (AUS$20-24.00) per kilogram.

Between 1966 and 1982, exports of green snail shells averaged 21 t annually. The export of whole shell has been banned and the majority of the shells are now directed to the local button factory for the production of button blanks. In fact this resource has been poorly managed, as there are no data available to indicate the appropriate level of harvesting. However, the sharp decline from 44 t in 1991 to 7.35 t in 1992 indicates a decline of green snail in the archipelago.

The only management tool used in Vanuatu for this resource is the minimum size limit. Under the current legislation, Fisheries Regulation 17 prohibits taking, harming, possessing or purchasing green snails less than 15 cm basal length. The exportation of whole shell is also illegal without written permission from the Minister. Anyone who contravenes any part of these provision is liable to a fine of up to 100.000 Vatu (AU$1,200). The current export quota for green snails is 2 t per factory per annum. However, this does not control how much snail the buyers can obtain from the resource owners.

The problems faced with green snails are similar to those with trochus, especially with the current size limit. Most resource owners are still not aware why the size limit is desirable and continue to supply the button factories with illegal-size shell. This, of course, does not pose any problem for the factories as shells of less than 15 cm basal length are much thinner and easier to cut and in fact have more value in the export market. In additions, shells with a basal length of 15 cm and more do face problems with burrowing organisms, which destroy their quality and value.

To help keep track of the catch and the stock of green snails bought from each area, a monthly report is required to be presented by the factories to the Fisheries Department. However, the response from factories is currently poor and there have been no effective enforcement officers to enforce such issues at present due to the effects of the 1993 National Strike of the Public Servants. Most of the experienced staff of the department went on strike and have not been re-recruited.

There is concern at present that green snails may be becoming scarce in the archipelago. Although no assessment has been done yet to quantify this, four button-blank factories have been closed, leaving only one shell-processing factory, Hong Shell Products, still in operation in the whole country.

To ensure better management of this resource, prevent it from being over-exploited and have some control over its fishery, it is best to encourage the chiefs and the community to continue practising traditional banning of fishing in their areas for a certain period of time. However, this objective could be better achieved through cooperative work with the Fisheries Department Research Unit to create more understanding and awareness of the biological basis and of the legislation involved.