

## COUNTRY REPORT OF VIETNAM

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### ■ MPA SYSTEM

Marine conservation starts late in Vietnam compared to other countries. At the moment there is only one MPA (Hon Mun) available. Another one (Cu Lao Cham) is being setup and expected to start in the next year. However, the plan for establishment of a system of MPA has been setup and put into effect.

The idea to establish an MPA system started in 1999 when scientists collected biodiversity data to select sites for conservation. In the first proposal, about 30 sites were proposed. After many revisions, some 14 sites were finally accepted and ranked by level of priority. They cover most of the high diversity areas. Vietnam becomes one of a few countries establishing MPA in a system.

Following this plan, in 2000, the first MPA in Vietnam was established in the central of Vietnam, referred as the pilot MPA Hon Mun, funded by World Bank, IUCN and ADB. After two years running it has shown some signals of recovery of fish population in the MPA. The project operators claim that the establishment of such MPA is somewhat late in terms of ability for the recover of resources as they are exhaust. If is were established earlier, it would be less difficult and needs shorter time to recover the resources. This is a valuable lesson for the conservation process in Vietnam. The process must be pushed forwards, before it is too late.

The second MPA is now being setup in Cu Lao Cham (also in the central of Vietnam). This is a part of the project called "supporting the MPA system in Vietnam" supported by Danida which aims to motivate the establishment of the MPA system in Vietnam.

There are also two other small local marine protected sites created by local government in cooperation with NGOs in Ran Trao (60 km to the north of Hon Mun MPA) and Phu Long (in North) set up by local governments. In addition, three other national terrestrial parks Con Dao (in the south), Bai Tu Long and Cat Ba (both in Halong Bay) also take care of marine areas within or surrounding them. However, they do not focus much on marine resources due to the limit in human resource and budget. Under the planning of Vietnam, many other MPAs are expected to be established in near future.

### ■ ARTIFICIAL REEFS

The establishment of artificial reefs strongly depends on the conservation process. As this process is moving slowly, the application of artificial reef is also slowly in Vietnam. At the moment, there has not been a real artificial reef in Vietnam. The only functioning MPA (Hon Hun) does not use artificial reefs because they have other choices cheaper than artificial reefs: protect and let the reef self-recovering.

Early this year, a testing artificial reef was setup at the local protected site Ran Trao (in the central). Numbers of concrete tanks with holes were laid on seabed. But up to now, no data on the development of the reef available yet and the success of the work is still uncertain.

In recent years, artificial reef is strongly motivated by Research Institute for Marine Fisheries. It is now creating an artificial reef in Halong Bay in an attempt to check the possibility of recovery of the reef and proper methods in building artificial reefs in this high turbidity area. Concrete tanks of different shapes with holes are being laid on the degraded reefs (fig. 1).

As the MPA system is being setup, artificial reef is expected to play important roles in the conservation process, particularly in areas where reefs are unable to self-recover.

## ■ STATIONARY FISHING GEARS

There are various types of stationary fishing gears being operated in Vietnam waters, including set nets, traps... They are used in diverse ways to catch migrating fishes (tuna and mackerel), reef species (grouper, lobster, eel...) or trash fish in estuaries or tidal flats... Of those, set nets are the most common one. They are applied in various types of waters like shallow estuary, tidal flats, lagoons and reefs. Among them, some are friendly with resources some are not.

Around Hon Mun MPA there are 5 set nets within buffer zones and core zones. They are designed to catch migrating tuna and mackerel. The nets have existed for more than 200 years, playing an important role in the fishing industry of the area as they create huge amount of income to local communities. The annual production is about 100-65 tons/net/year, giving the total values of about 200-1000 millions VND (15,000-66,000 USD/net/year). These high selectivity-fishing gears seem to be friendly with resources. However, when the MPA is established, a question is raised whether or not these set nets should be removed. Since then, the existence of these set nets become continuous source of conflict between fishermen, authorities and MPA project staffs. The MPA staffs want to remove the set nets away from the MPA as they are considered to harm/disturb the MPA. On the other hand, fishermen argue that, fishes being caught are pelagic and not related to the resources of the MPA while it provides huge amount of income for local people.

Other type of set net in Tam Giang lagoon in Thua Thien-Hue province (northern central Vietnam) is a disaster for the resources of this huge lagoon. There laid thousands of set nets (3009 set nets in 1995), in the total area of 210 km<sup>2</sup> of the lagoon (fig. 2). The situation becomes worse and worse as more set nets are added day by day. This seriously

affects the resources, pushing the resources to an unrecoverable situation. In 2001, these nets occupied some 50% of the total area of the lagoon (May be much more this year). This means, there are few chances for the organisms to recruit in this lagoon and in distant future, the whole special lagoon will be empty due to this kind of stationary fishing gears.

Besides, this type of fishing also affects many other waters, particularly estuaries and tidal flats with very small mesh size. All of these force us to consider carefully in saying: encourage stationary fishing gears.

## REFERENCES

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- 3) Long, N., Khang, N.V., Hai, V.D. and Bundit C., 2002. Part IV. Vietnam. In: Narong R. & Somboon S. (eds): Fishing gears and methods in Southeast Asia. SEAFDEC 2002. Figure 1. Design and construction of concrete tanks used for artificial reefs in Halong Bay, Vietnam