

Thinking Outside the Box: Mariculture Opportunities for Ever-Dwindling Marine Resources

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We know that coral cover worldwide has been reduced, so much so that many reefs are dominated by algae. We also know each year commercial species catches are getting smaller and smaller. Recent changes in Belize allow for sea cucumber harvest with little restriction and there are even permits for collection for the aquarium trade that aren't regulated.

What if instead we could farm many of these animals for sustainable harvest, job creation and thus reduce the fishing pressure on wild animals? Some species would be for local consumption while others would be strictly for export. Mari-culture is a fairly new field but we already have a cobia farm in Belize (for export only) and conch farms exist elsewhere in the Caribbean.

Worldwide people are experimenting with sea cucumber farming and sponge farming, too. Certain sponges are used in surgery that are preferable to synthetic ones because if they are forgotten (it happens) they do no harm to the patient, whereas the synthetic one cause internal infection.

Here in Belize a type of coral farming (ten different species) has already begun, not for profit but to help restore degraded reefs (funded by the World Bank, the Caribbean Community Climate Change Centre and WWF). Belize has a strict policy that does not allow any export of live coral, but on the other side of the world corals are being farmed for sale to the aquarium trade to discourage collection from the wild. Buy one farmed coral and it pays to plant back one on the reef (www.coralsforconservation.com).

The Placencia Produces Cooperative Society is about to begin farming seaweed (*Gracelaria spp* and *Euchuma isoform*) on a large scale and are open to other options for their members (funded by COMPACT). Look for their products in 2011.

Crabs, both the large channel clinging crab (*Mithrax spinosissimus*) we love to eat, and a smaller emerald crab (*Mithrax sculptusd*) that is collected for aquariums, have the potential to be cultivated. There is no data on either of these species although they are both currently being harvested from Belize's reef on a regular basis. The larger crab is an expensive dinner item on resort menus, and the smaller crab fetches US\$6-12 each by aquarium owners-why? They keep the tank clean by eating the algae; both these species can be considered reef janitor's and play a vital role in a healthy reef ecosystem.

The problem of course is financial. Most mari-culture ventures need a lot of start up money and take years to show profits. However if Belize adopted a policy that truly represented sustainable marine harvests they would be the first and could set precedent. If these options were explored, and more No-Take Zones were set aside, this could be marketed to the international community to encourage both investments, training and real eco-tourism (as a by-product).

The world population projections are not pretty-we are currently at almost seven billion and expected to reach 10 billion by 2050. It also predicted that by this time the global fisheries will have completely crashed. Belize is still blessed with a small population but Asia has the fastest growing population rate and love to eat anything from the sea. If the current example of unsustainable sea cucumber (and seahorse and shark) harvest for export is an indicator of things to come, we should be frightened and on the alert.

If the government, fisherfolk and marine NGO's could decide we are on the same page and begin to think outside of the box we could begin trial projects here that have shown success elsewhere. In Southern Belize this is already happening with collaboration between Southern Environmental Alliance (SEA), the Belize Fisheries Department and the Placencia Producers Co-operative Society: seaweed farms will soon be established inside Gladden Spit and the Silk Cayes Marine Reserve to reduce fishing pressure there. Imagine a country-wide effort to experiment with conch, crab(s), sea cucumber and sponge farming!