Sponging off the natural north

To meet strong global demand, researchers, Indigenous communities, governments and a private company are cooperating to set up a novel sponge-farming industry in the warm marine waters off Arnhem Land and Torres Strait.

'In the Northern Territory, we were looking at different crops which might be feasible for Indigenous communities living in isolated areas and retaining strong Aboriginal cultures,' says Graeme Dobson of award-winning company Lo-Tech Aquaculture Pty Ltd. 'Sponge farming emerged as a promising option and in collaboration with the Australian Institute of Marine Science (AIMS), the Northern Territory and Commonwealth governments, the Northern Land Council and the Indigenous Land Council, the project has made steady progress.'

'We are well into two-year bath-sponge trials with the Warruwi community on Goulburn Island and the Maningrida community of coastal Arnhem Land,' says Dobson. 'The people know the pristine waters in their environment intimately and together we're developing a business that will fit in with the Indigenous culture. The plan is to grow and market quality "clean and green" bath sponges for various markets and provide employment and income for local communities.'

In Queensland, AIMS project leader Dr Alan Duckworth says a two-year collaborative study with CRC Torres Strait and the Torres Strait Regional Authority (TSRA), looking at the potential for sponge farming is going well.

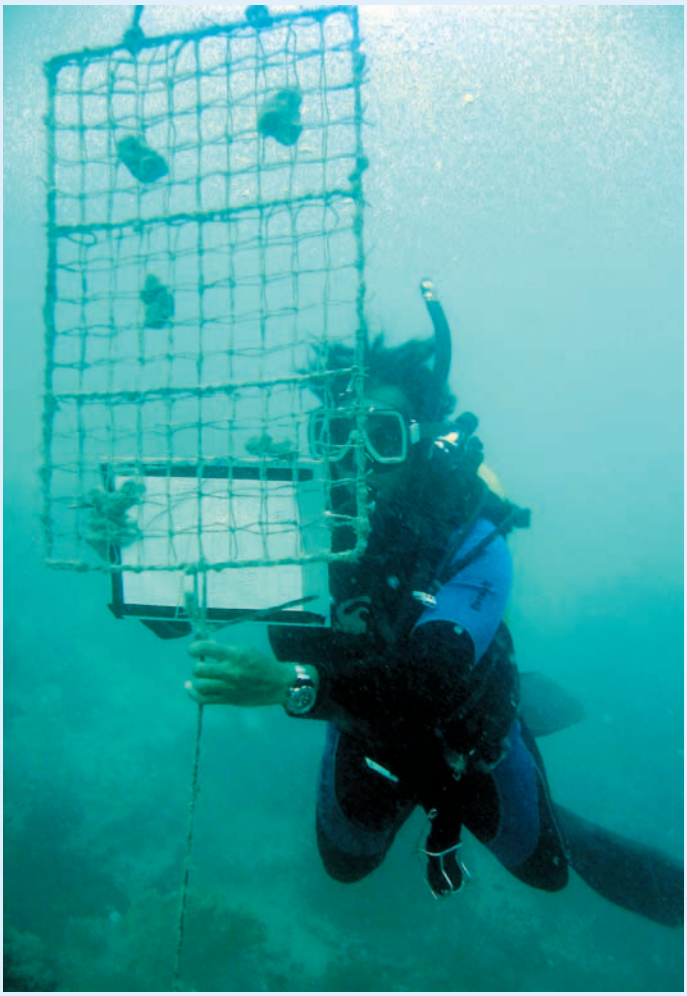
'We are working closely with Indigenous local communities and exchanging knowledge right from the start,' says Duckworth. 'Following an extensive survey of sponges that investigated 10 000 square metres of sea floor, we began a sponge growing experiment, in December 2004, with the Traditional Owners of Masig (Yorke Island). By March 2005, the sponges had doubled in size … which is very encouraging.'

So how do you farm sponges? First get your sponge stock, say the scientists. Fragments of sponge are collected from donor sponges growing in about 10–15 metres of water, leaving enough of the donor colony to ensure its survival. The teams are still exploring the best way to culture the sponges, but the main methods are to either thread the sponge pieces (like donuts) on a rope, which is then suspended in the water, or to place them in mesh pearl panels, normally used to culture pearl oysters.

Some sponges can grow to basketball size, but they would most likely be harvested and, where necessary, shaped before they reach these proportions. It is all low-tech, which suits the remote locations up north.

'Apart from the expense of getting materials into remote parts, the main challenge off Arnhem Land has been the strong ocean currents and the presence of crocodiles,' says Dobson. 'Accordingly, we are developing methods that minimise or eliminate the time people spend in the water!'

Crocodiles do not lurk in the clear waters of Torres Strait, but Toshie Kris, TSRA Chairperson, says the priority is to ensure that a sponge-farming industry does not have a bad impact on the natural environment. 'Protection of our sea country is paramount,' he says.



Indigenous Aquaculture Officer, Stan Lui, monitoring growth and survival of farmed sponges at Masig. AIMS

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Significantly, wild bath-sponge populations in the Mediterranean and Caribbean regions have indeed been over-harvested and are now unable to keep up with global demand. The world sponge market is worth about A$40 million annually and markets have been identified in Europe and North America. Selling to tourists is another marketing possibility.

The project teams believe that sustainable in-sea farming of sponges will overcome the problem of over-exploitation witnessed in other parts of the world and have considerable benefits for Indigenous communities. It will be interesting to see if the trials currently under way in Arnhem Land and Torres Strait confirm the feasibility of sponge farming along our northern coastline.

● **Steve Davidson**

Contact:
Alan Duckworth, (08) 8920 9230, a.duckworth@aims.gov.au
Graeme Dobson, (08) 8983 1838, lo.tech@bigpond.com.au