

Padaido Islands

Paradise in peril

Threatened by a dwindling fishery, the Biak people of Indonesia's Padaido Islands are trying to cash in on their fishing culture

In the village of Pasi in the Padaido Islands of Biak, Irian Jaya, virtually everyone is a fisher. Male or female, young or old, people's thoughts turn naturally to the sea. Their songs and dances are celebrations of the beauty and bounty of nature. Their native language is replete with descriptors for the many moods and depths of the sea, the variety of reefs, the shapes of corals and the myriad reef fishes. From the high forest called Mbrur down to Sorenberamen, the deep blue sea, the Biak people have names for each of what modern science would call the island's ecozones.

The traditional fishing territory of Pasi includes unpopulated islands to the east and south. To these islands go the men, women and small children, carried in dugout outrigger canoes called *perahu*, to harvest fish and shell fish. Using hand-lines, spears and gill-nets, they catch a bewildering array of multi-coloured fish: perhaps 25 different species in a day, and, in one week, over a hundred.

We know this because the artisanal fishers of Pasi have staffed to record the names and sizes of the fish they catch so that they can monitor both their economic progress and the health of the resource they depend upon. They have good reason for such care and concerns, for their livelihoods are under threat.

In eastern Indonesia, the vast majority of fishers fish from hand-made *perahus* to feed their families and catch fish for the local market. However, an increasingly large proportion of the total fish catch is being harvested by huge commercial fishing boats owned by powerful urban capitalists. Time, and the monitoring data being collected by Pasi villagers, will tell what the long-term impact of rapidly

escalating industrial fishing will be on the coastal communities of the Padaido Islands.

Another worry is that the number of small boats is also increasing, but the fishing grounds are not. Young men from fishing families now often leave the village to look for work in urban centres, while women are left behind in charge of growing families.

For women of fishing families, life is a relentless cycle of work and more work. Their fishery is in shallow waters where, at low tide, they glean shellfish and crabs. They work neck-deep in water, using hand-made wooden goggles to spot the elusive shells on the bottom, tipping their harvest into the small *perahus* that float beside them. The catch is taken to shore where it is boiled. The meat is extracted and threaded on slivers of palm frond, then dried and smoked over an open fire.

Fish are also smoked, then packed into handsome baskets, *kanyuwer*, sewn together from the rich red bark of a tropical tree. The women make the baskets, collect the firewood, and also tend the gardens and process the main cash crop, coconuts, to produce cooking oil.

The gardens are small clearings slashed out of the forest where root vegetables, coconut and banana trees are grown. Not much else can grow here, for the sparse grey soil barely covers the coral rubble and gleaming white limestone core of the island.

Forest resources

The forest provides wild greens, medicinal plants and the materials to make woven baskets and hats. All these are gathered and processed by women,

whose only rest comes on Sunday-the day set aside in each of these deeply religious communities for prayer and reflection.

As electricity is introduced to the villages so is demand for modern consumer goods. Traditional baskets are replaced with brightly coloured plastic ones. Fishing families need more money, and, therefore, must travel to farther reefs and try to catch more fish-but there are limits.

The reefs are not as productive as they once were. The fishers say that the fish must be smarter than they used to be; the older men can remember when the fishing was easy. Overfishing is a difficult problem with many social and economic complexities.

Even more distressing is that there are many areas where the reefs are dead: smashed with dynamite or poisoned with cyanide. These modern 'fishing technologies' are used when the demands of the modern consumer culture outstrip the ability of hand-line and spear to provide cash. Not just fish but corals and all other animals, and sometimes the fishermen themselves, are maimed or killed in the process.

The problem of destructive fishing in Padaido mirrors a larger problem across Indonesia. This country is the world's centre for coral reef biodiversity but

already, according to recent surveys, the majority of reefs have been damaged or totally destroyed and less than 10 per cent are in pristine condition. Fishing communities in Padaido, under the leadership of their church and environmental organizations, have set up a reporting system, and now actively discourage the use of bombs and poisons in the fishery. However, theirs is a difficult battle and they need support from higher levels of government to enforce bans on destructive gears. Indonesia's waters are large, and the enforcement capacity very limited. To make things worse, the source of ammunition for blast fishing is sometimes the Indonesian military! Now, with the monetary crisis adding to the pressures at all levels, protection of fisheries resources has become even more difficult.

Learning to monitor

With the help of a local environmental organization, *Yayasan Rumsram*, and with seed money from an international agency, the Biodiversity Conservation Network, Padaido Islanders are learning how to monitor the health of their coral reefs, and planning new economic development. They know that the possibilities for expanding their fishing effort are limited. They have made start by building fish aggregating devices so that they can catch pelagic as well as reef species. However, their main *hope* for the future lies with ecotourism.



The fishers want tourists to come to their villages, to listen to their songs and stories, to admire their stunning beaches and coral reefs, to taste fresh fish and lobster, to buy their baskets and learn about their traditional medicines. They know that this must be a locally owned and controlled effort; otherwise they will simply become museum pieces, objectified by urban tour operators who will move tourists through to look at them and then return to the city. The people are not interested in being passive displays. They want tourists to stay and spend their money in the villages.

Families are building small bungalows where guests can stay overnight. The women are preparing themselves to cook special traditional foods for their visitors. They are practising their songs and dances so that they can be performed on demand. And, most importantly, they are saving up their money and learning how to work together with people in other villages to develop a small travel bureau which will market their product. They want their children to learn English so that they can tell tourists about their history, culture and coral reefs.

The way ahead will not be easy. As with the fishery, there is heavy competition in the tourism industry from the industrial sector. Already a five-star hotel has encroached on Saba village territory and the hotel's waste water pipe has been

placed in the mangrove forest, feeding a stream that leads to the beach where the village children swim.

The hotel owners, who live in a distant urban centre, are hungry for more land to use for waste disposal and want increased access to local fresh water supplies. They also want to build a marina over the magnificent Saba reef-one of the few in Padaido that can boast almost 100 per cent cover of healthy living corals. The villagers are determined that this will not happen. Fortunately for them, the local government in Biak is also determined to protect the rights of local people as they deal with such wealthy investors.

However, at the national level, the area has been declared a national marine tourism area. *What* this will mean for traditional tenure, particularly of the uninhabited islands in the Padaido archipelago which support the artisanal fishery, is as yet unclear.

It is clear, though, that Biak, and, indeed, all of Indonesia, need competent management institutions for fisheries and coastal development. The rights of the many indigenous people also need formal protection. Some NGOs and law activists, supported largely by foreign funders and working together with sympathetic government staff as well as academics, are currently trying to move Indonesia towards a form of fisheries co-management in which small fishing communities will have a formal and respected place at the table.

It is to be hoped that these efforts will soon bear fruit, before what remains of Indonesia's rich biological and cultural heritage is lost to destructive fishing, mass tourism and ill-regulated industrial development.

This report has been filed from Indonesia by Irene Novaczek