

Spearfishing best practices training in Timor-Leste



Adara women ready to test “modern gear” (image: Michel Blanc)

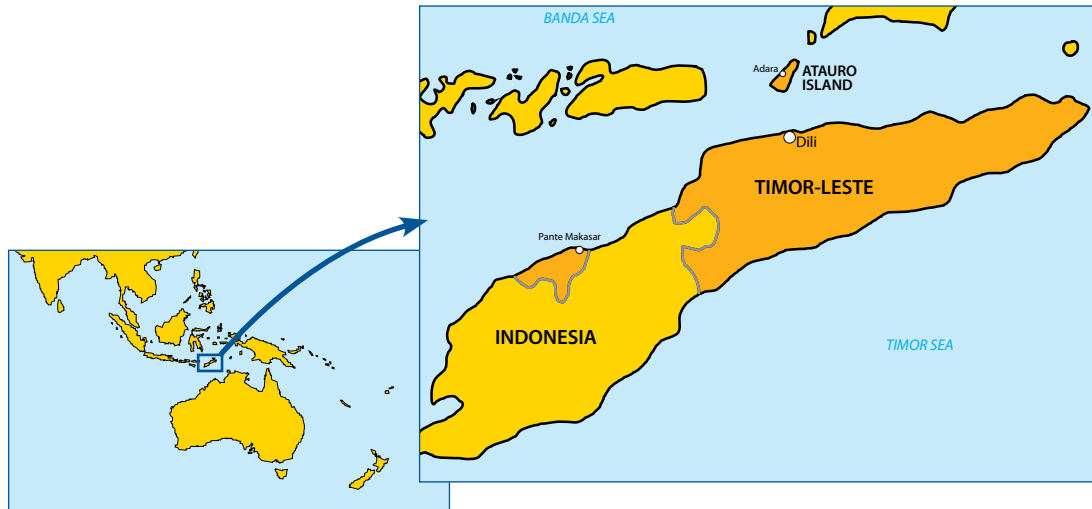
Although not yet officially a member of SPC, Timor-Leste, one of the world’s newest countries, is receiving increasing technical assistance from the Secretariat of the Pacific Community’s FAME Division. Following the attendance of that country’s fisheries officials at Heads of Fisheries meetings and a couple of scoping visits by FAME staff, both the Oceanic Fisheries Programme and the Coastal Fisheries Programme have started to include Timor-Leste in their annual work programmes.

Imagine unwrapping a Christmas present as a kid and finding just the toy you’ve been dreaming about for months, or an Australian bloke being handed a “sweating” cold beer after a day of trekking in the Great Victoria Desert... well, this is exactly how I felt when Mike Batty, former Director of FAME, came to see me after returning from Timor-Leste and asked if we could deliver some training to spearfishers on Atauro Island in Timor-Leste! After over 20 years of dealing with all sorts of fisheries training projects for SPC members — and many hundreds of hours free-diving and spearfishing as a hobby — I would have never thought a request for such training would come my way, but it did!

Atauro Island, home of about 8,000 people, is a very special place. It lies 40 kilometres north of Dili, the capital of Timor-Leste, and, unlike the mainland, has a

rich fishing tradition. Its inhabitants are in many ways similar to people in SPC member countries and territories in that fishing — netting and spearfishing are the predominant methods — and eating fish are very much part of their daily lives. On the other hand, fishing on the mainland is rare; one of the reasons is the abundance of crocodiles — absent in Atauro, which make seafood gleaning and canoe fishing very hazardous occupations. A recent study by the Food and Agriculture Organization of the United Nations (FAO) concluded that in Timor-Leste more than half the accidents at sea are crocodile attacks!

The downside for Atauro of such reliance on fish and fishing is that coastal fish stocks are declining due to the recent introduction of nylon gillnets and the impact of increasing fishing effort on the island’s



Timor-Leste, with the Atauro Island, north of the capital Dili.

limited intertidal flats and reef areas. In addition, nearly all Atauro men, and even women in the famous village of Adara, spearfish, including at night. Their gear is rudimentary (home-made spear guns and goggles — no fins) and they fish in shallow waters, but they shoot with an impressive accuracy at basically anything that moves underwater. Damsels, small surgeons, butterflies and squirrelfish are the main species caught. Sadly, large parrotfish and groupers have long disappeared from shallow reef areas.

Raising awareness on best practices for spearfishing with advice on ways to conserve coastal fish resources was therefore a major objective of the SPC training. Safety in spearfishing was the other focus as, despite the shallowness of diving, several accidents have been reported, including blackouts and deaths from drowning. Ear problems, including deafness, are common as,

surprisingly, the local people do not equalise when diving. In some villages, there is a widespread belief that “blood in the ear” means you have reached a milestone and “after healing you will dive deeper”. Using pictures of the inner ear and some rudimentary tools, I explained the cause of ear pains when diving and how an eardrum can be torn. Importantly, the equalisation technique was explained and trainees could put this technique into practice as part of the workshop.

While advice was given on ways to minimise the negative impacts of spearfishing — e.g. by avoiding fishing at night with underwater torches or through the introduction of reserves where fish could grow and breed peacefully — it was suggested that local fishers could, provided they do it safely, target the bigger fish that live in the slightly deeper waters (5 to 15 meters) by applying the equalisation technique and using fins and



Young spearfishers with their catch (image: Michel Blanc).

The buddy system

Spearfishing is a dangerous activity and every year hundreds of spearfishers die while practicing their hobby or occupation. A typical spearfishing accident involves a blackout while the fisher is ascending towards the surface, most often near the surface (this accident is often called the “seven-meter blackout”). The blackout is a brain reflex caused by a lack of oxygen in the body; the brain virtually shuts down to save the little oxygen left at the end of a long dive. As a result of a blackout, the unconscious fisher lies horizontally at the surface, head facing down, without breathing. After a short time (less than a minute), another reflex makes the fisher take a deep breath. If the fisher was fishing alone, he/she will swallow water and drown. Blackouts can happen to even the most experienced and physically fit divers!



The most important safety rule is to always practice spearfishing using the buddy system, which is to fish with a friend. When one fisher dives, the other stays on the surface watching until he/she pops up to the surface and has taken a few breaths, showing no sign of tiredness or blackout. The buddy can then dive under the supervision of the first fisher, who uses that time to recover from his/her dive and get ready for the next one. This technique ensures the safety of both fishers and it is also very efficient, as two spearfishers who are used to fishing together will catch more fish than the two fishing separately — because they feel safe, they are more relaxed underwater and this improves their performance. Also when an injured fish gets off the spear to escape or hide in a rock, the buddy on the surface is able to dive quickly armed with a speargun, improving the chance of catching the fish.

If a blackout occurs, the buddy can apply the first aid that will save his/her friend — that is to grab the unconscious fisher as quickly as possible, holding his/her head outside the water, remove the mask and blow air sharply through the nostrils; this should make the unconscious fisher wake up immediately, and will save his/her life!

A code of conduct for responsible spearfishing has been developed by SPC. The two cards, one on safety, the other on best management practices can be downloaded from the SPC website:

1. http://www.spc.int/DigitalLibrary/Doc/FAME/Brochures/Anon_12_SpearfishingGuidelines_01.pdf
2. http://www.spc.int/DigitalLibrary/Doc/FAME/Brochures/Anon_12_SpearfishingGuidelines_02.pdf

a buddy system. Although imported fins are not yet present on Atauro, a small number of shops sell them in Dili, we purchased a few pairs on our way to Atauro for demonstration purposes at the workshops.

In all, we visited 10 coastal villages in September and at each of them conducted a one-day workshop combining theory and practice. A total of 244 people were trained, 20% of whom were women. Consultant Enrique Alonso, Atauro’s first university graduate Mario Gomes and local fisheries officer Elias helped me with training delivery, with Mario and Elias running the last few workshops on their own. As part of the training, we distributed SPC spearfishing cards and a small boat safety checklist that had been translate into the local language, Tetum. In Adara, a “zero-dollar” shallow-water inshore FAD

was constructed and deployed in an effort to shift fishing efforts from local reefs to small pelagic fish species (scads and fusilier), which are abundant in Atauro.

Readers wanting to learn more about traditional spearfishing in Atauro may find on YouTube a video describing the life of Adara’s women spearfishers.¹ The video was produced as part of SPC’s EU-funded SciCoFish project.

For more information:

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¹ <http://www.youtube.com/watch?v=VErmbIAXF7E&feature=youtu.be>