

FAD assistance to the Solomon Islands Ministry of Fisheries and Marine Resources

The WorldFish Center (WFC) in Gizo, Solomon Islands in collaboration with the University of Queensland (UQ) in Australia, is involved in promoting conservation awareness of both terrestrial and marine resources in the Solomon Islands. The two institutions are working closely with the Solomon Islands Ministry of Fisheries and Marine Resources (MFMR) to encourage sustainable management of fishing practices in order to maintain the ecological balance of coastal areas. The implementation and management of marine protected areas (MPAs) is a high priority. In order to encourage local communities to comply with the concept of an MPA, MFMR, WFC and UQ realised that they needed to implement alternative activities to help divert fishing activities away from MPAs. This includes shifting fishing effort from reef to pelagic fish species, as well as providing fishermen with alternate means of maintaining food security for their families and communities.¹ Installing fish aggregation devices (FADs) that are accessible to canoe fishermen is one method to achieve this. With assistance from MFMR, WFC and UQ deployed several nearshore FADs in 2008 and 2009 that proved effective in diverting fishing effort; unfortunately, these FADs have since broken away. In an effort to revamp the FAD programme WFC, UQ and MFMR requested SPC's participation in conducting another round of FAD training and deployments.

WFC and UQ provided funds to purchase FAD materials while SPC's Nearshore Fisheries and Development Section chipped in with AusAID funding. It was agreed that three designs (see Table) would be trialled to observe their durability and design weaknesses. With the combined funding, orders were placed for 40 FADs; 20 SPC-designed FADs, 15 WFC-designed FADs and 5 UQ-designed.

Technical assistance

Specific objectives included providing technical assistance on FAD construction, site surveys, and FAD deployment. This assistance was carried out by SPC's Fisheries Development Officer, William Sokimi, in collaboration with MFMR, WFC and UQ staff.

The team included Alex Carlos, Lionel Luda, Peter Kenilorea, Alan Alba and George Tavake (MFMR); Willie Kokopu (Guadalcanal Provincial Fisheries Officer); Simon Albert, Albert Chris, Veira Taleilotu and Morgan Jimuru (UQ); Joelle Albert, Cletus Oengpepa, Ambo Teiwake and Regon Warren (WFC); and Andrew Bana (Gizo Provincial Fisheries Officer).

At the end of the project, 11 nearshore FADs had been constructed with 7 of these deployed at selected sites in the Western Province. Four FAD systems were constructed in Honiara as part of a training exercise for MFMR officers but are being kept in reserve for deployment around Guadalcanal at a later date.

The Peava, Biche and Zaira FAD work was mainly a joint effort between MFMR, UQ and SPC while the Pienuna and Obobulu work was between MFMR, WFC and SPC.

The FADs were deployed in depths of 380–450 m and at a distance from the reef edge of 0.6–1.2 km.



Top: Connecting aggregators on the Peava FAD.

Bottom: SPC nearshore FAD after deployment.

The seven deployment sites were surveyed beforehand to evaluate the suitability of bathymetric conditions. Briefings were carried out at each of the villages where the FADs were deployed, and also at Niama and Suava on

¹ See also the article published in issue #130 of this newsletter: Nearshore fish aggregating devices: A means of habitat protection and food security in post-disaster Solomon Islands by J. Prange et al. (http://www.spc.int/DigitalLibrary/Doc/FAME/InfoBull/FishNews/130/FishNews130x_19_WorldFish.pdf)

SPC ACTIVITIES



*Towing the anchor for the Peava UQ FAD.
Note: The anchor is suspended under the buoy.*

Ranongga Island to promote FAD awareness, discourage vandalism, and to highlight the importance of data collection and FAD monitoring. The villages of Peava and Biche are on Gatogae Island, Zaira on Vangunu Island, and Pienuna, Obobulu, Niemi, and Suava on Ranongga Island. The communities of all of these villages were consulted and trained in all aspects of the FAD work, which included site selection, construction and deployment.

Two more FADs were initially planned for deployment off the Roviana area on New Georgia Island but these had to be cancelled as members of the Roviana Conservation Federation felt that they still needed to expand their FAD awareness programmes over a wider area first before FADs could be deployed. These awareness

programmes were important for gaining the cooperation of communities to assist in maintaining FADs and to reduce the likelihood of vandalism.

When all FAD work was completed, debriefings were carried out with WFC and UQ staff on Gizo and MFMR heads of sections in Honiara.

For more information:

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Three 500-m depth FAD designs

	SPC	UQ	WorldFish
Floating elements	5 pressure floats 4 purse-seine floats 5 m of 20 mm nylon rope (buoyancy: 116 kg, max depth: 200 m)	4 pressure floats 13 purse-seine floats (buoyancy: 145 kg, max depth 200 m)	5 pressure floats 14 purse-seine floats (buoyancy: 180 kg, max depth 200 m)
Connecting parts	SS thimble 16 mm SS swivel (no shackles used) SS thimble and 3 x 5 mm copper swages	One length of rope / no connecting parts.	One length of rope / no connecting parts
Upper mooring	100 m of SS 5 mm wire	100 m x 20 mm nylon rope	Only one length of rope used in the whole system: 600 m polypropylene rope
Connecting parts	SS thimble and 3 x 5mm copper swages 16 mm SS swivel (no shackles used)	Splice (no connecting parts)	
Lower mooring	500 m of 12 mm polypropylene rope 2 x 1.8 L pressure floats	500 m x 22 mm polypropylene rope 2 x 1.8 L pressure floats	
Connecting parts	12 mm galvanised swivel 13 mm hi-load safety shackle	#3 Nylite connector 22 mm hi-load shackle 22 mm short bow swivel 22 mm hi-load shackle	Bottom end of polypropylene rope spliced directly to anchor girdles with protective plastic hose over spliced eye
Anchoring elements	20 m of 13 mm galv. chain 1 grapnel made with 76 mm galv. pipe and 25 mm rebar	10 m of 20 mm regular link chain Discarded heavy machinery or cement block	3 m of 13 mm chain 2 half-drum cement anchors + one grapnel anchor
Approx. total cost	AUD 1,200	AUD 1,500	AUD 750