

## Fish cage racing in Satoalepai Village, Samoa!

*There was considerable action in Samoa in November 2015 when the first fish cages were built and deployed as part of the Australian Centre for International Agricultural Research (ACIAR) project “Improving Community-based Aquaculture in Fiji, Kiribati, Samoa and Vanuatu”. Staff from the Aquaculture Section of the Pacific Community (SPC) — Tim Pickering, Beero Tioti and Michel Bermudes — travelled to the village of Satoalepai on the island of Savaii to work for one week with communities and Samoa’s Fisheries Division staff in building and deploying fish cages. This was the first small cage aquaculture project in Samoa, and it was critical that work was properly carried out so that the first site would rapidly become operational and could be used as a demonstration farm. In other Pacific Island countries where the project operates, the focus is on ponds for producing tilapia, but the volcanic soil in Samoa precluded the use of ponds for growing fish. Therefore, the Samoa component of the ACIAR project focuses on introducing local communities to cage technology to take advantage of the fresh and brackish water bodies available on the islands of Upolu and Savaii.*



*Releasing tilapia fingerlings at the nursery site so they can acclimate to local conditions (image: Michel Bermudes).*

The week was expertly orchestrated by Ulusapeti Tiitii, Principal Fisheries Officer of the Samoa Fisheries Division. After working well into the night on the first day to get equipment organised, the fisheries crew and SPC staff sailed to Savaii with two truckloads of gear and live fish. Community consultation and ownership of the project are key to the success of any community-based project, so the very first step was a meeting with community chiefs close to the planned farm site. During the meeting, the project was explained, and the location of cage deployment was discussed. The chiefs suggested sites close to the village so that the community could keep an eye on the cages. From then on, cage building started in earnest, with fisheries staff and villagers working together. Remarkably, the first cage was completed in half a day.

While cages were being built, the lake area around Satoalepai was surveyed for salinity to determine the best place for the cages given that young tilapia do not tolerate high salinities. It was a case of science meets community knowledge as the sites suggested by the community chiefs to deploy the cages also turned out to have the best salinity conditions for tilapia. Once two cages were completed, transport to the deployment sites was organised. Samoa fisheries staff and Satoalepai villagers formed two teams and paddled, pushed and raced the cage rafts to the deployment site in a lively display of Samoan sportsmanship.

To finish, the cages were moored and some test fish were used to see how they would perform over the following weeks. In the following month of December, coinciding with the Savaii Agricultural Show, each cage was stocked with 1,000 tilapia weighing about 2 g, in a fine-mesh nursery net. The fish will be reared to 50 g before thinning them out to 50 fish per cubic meter in a grow-out net. In the 3 m x 3 m x 1 m cages that were built, this will mean about 500 fish per cage, reared to 300 g. The time it will take is not known yet, because it is the first trial at this site and the water is brackish. But, it is hoped that the fish will be ready to harvest after six months of

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rearing. With an estimated 80% survival rate, the cages could provide 120 kg of fish each.

Villagers learned about the whole process: building the cages, deployment, mooring, and stocking and feeding of fish in the cages. Samoa fisheries and SPC staff felt that the week was a success.

### For more information:

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*A cage structure built by Satoalepai villagers and Samoa fisheries staff in just half a day (image: Michel Bermudes).*



*A race to the finish line (or in this case, the deployment site)! The Samoa fisheries team wins the first Satoalepai fish cage race (image: Michel Bermudes).*