

Cargo Proa Prototype

Building Blog



JULY 2022 #1

I used to think “island time” was similar to manana in Spain. ie It’ll happen sometime, maybe, perhaps. Not any more. I’m now a firm believer in “If you want a job done quickly and well, give it to a Fijian”.

Early June, the Prime Minister couldn’t attend a function here, but was keen to know about the boat. We sent him a briefing note. It was suggested that he launch the project at the Pacific Islands Forum (PIF) in mid July. By mid June this had morphed into all 18 Pacific Island leaders launching it as a Pacific wide initiative. We shall see who turns up.

We decided the easiest way to make it happen was to move the boat out of the shed onto the large flat space next door. The ‘large flat space’ was actually a small vegetation covered hill with a pig pen in the middle of it. A couple of days later, it was more or less level, the vegetation, pig pen and pigs are gone and we are waiting for the rain to stop.

In less than 2 weeks we had a huge level area and a 10m wide ramp into the river. We decided

against concreting it as the mud/clay is pretty inconsistent and there is a lot of buried vegetable matter to rot. Instead, we have moved the boat up there for assembly and, once launched, will erect a scaffolding and plywood (200 sheets) stage for the dignitaries. The sparky is installing 3 phase power, the drains have been dug (pretty impressive bit of eye ball sloping) and the stage materials ordered. Also in June, the carpentry students built most of a 6m x 6m bakehouse so they can make their own bread and save a small fortune in gas bills using firewood (plenty on site and nearby) to boil the large amounts of taro and cassava consumed by 80 hard working youths. And the welding students are well on the way to chopping the sand dredge into movable pieces when the tide is out.

The boat moving was a lot of fun. 30 students picked up the 550 kg lee hull, put it on their shoulders and carried it 50m to the assembly area, tipped it on it’s side, put the masts in, pushed it upright and put the beams in place. Then 20 students carried the ww hull down and put the beams in place.

Took an hour or so, including a fair bit of chat, congratulations, instructions and adjustments. The following day they started to turn the 90m of dirt track into an access road. 40 cu m of concrete, hand mixed and wheel barrowed 50 in 4 days. If you want a job done quickly and well, give it to a Fijian!

The new beam ends are on so it is possible to easily remove/install them without taking the masts out. I had some time waiting for epoxy to cure so experimented with another rudder system. I'm nowhere near confident enough to grind off the original, but curiosity made it worth a look. Relies a lot on water forces to keep everything in place, so testing will be when it is in the water.

I am trying to make the boat look presentable from 20m as it will be anchored in the river and the party will be in the evening, under lights (edit: maybe not, meeting with the PM's office today). Also figuring out the launch process, which will be 80 students carrying it down the ramp. The lee hull is joined, painted and the copper/epoxy applied, the toybox exterior and tender interior are painted and the president of the Fijian Artists Association visited to see the space available for decorating the hulls. Interesting guy, has done some serious miles on traditional boats. He did not seem too phased when I told him it was a certainty that bits of it would be ground off for changes and improvements. He reckons the boat is the art, not the paint job. Polite as well as interesting. 😊



The rest of my time is spent in meetings. Everyone wants a piece of the project. I explain what it is all about and anyone who currently relies on shipping has 2 questions: "How much?" and "When can we have one?" Some very interesting possibilities, it is going to be a lot of fun if the boat works.

We are helping CATD set up a course for building cargo proas similar to the Marshalls project, but using recycled PET (soda bottles) foam instead of plywood. The difference in attitudes towards plywood between people who live in warm wet countries and leave their boats on the beach and western ply boat owners is stark. Recycling soda

bottles also gets a big smile. One of the things we are looking at getting is a shredder and plastic press to make the cargo boxes and deck slats for the mini cargo proa. Had a meeting with the industrial scale plastic recyclers here who want to be involved and are looking at what is involved in PET foam. \$US3 per sq m for 6mm/quarter inch recycled PET foam is a high value add to recycled plastic. We have also had some discussions with the Women in Fisheries Network Fiji. The biggest problem women fishers face is no boats. So we are setting up a course to train trainers to go to the villages and teach the women to build outrigger paddling canoes. Once again from PET. Along with this may be a microbank to lend money for the materials, which will be repaid from fish sales. Looks like the single beam outrigger boats will weigh ~15 kgs, light enough to carry with a shoulder strap. A big advantage over needing 3 friends to help drag a dugout down the beach. The prototype in the picture weighs a tad under 10 kgs. The outrigger will be longer, with a narrower hull.

CATD and the people here are delightful. Anything I need, they arrange. The food is great (huge servings, I skip lunch), the accommodation basic but far better than sleeping in a container which was one of the early proposals, the students are incredibly friendly, the location is sublime and the people who fish in the river paddle over for a chat and a check on progress. I don't close the door to my buree, office or work shed and nothing has gone walkabout. Borrowed tools are returned and there is always someone handy when I want a lift or something held. It rains a bit, but is warm enough for T shirt and shorts. Only thing missing is a sandy beach, but the Bau River will come into it's own when cyclone season starts. If there is 'nothing quite as enjoyable as messing around in boats', there are not many places quite as pleasant to do it as CATD.



Before 1



Before 2



Launch ramp



Before 3



Prototype canoe paddling



Launch ramp



JULY 2022#2

The cargo proa is in the water, thanks to a bunch of CATD students who did the heavy lifting and put it on some tyres on the ramp at low tide. The slope of the ramp was a bit more than the buoyancy at the end of the hull and the deck vents were going to go under. 20 students picked it up and put a couple more tyres under it. When the water got to the deck, we pushed it into the water, an advantage of muddy ramps! No leaks, but the beam attachment is a bit peculiar, nothing that can't be fixed. I managed to twist my ankle in the mud, could barely walk by the end of the day. One of the trainers wrapped it in Vau leaves. An hour later I could limp, the next morning was fine. Vau Wow! The photo shows what an 'island suitable' boat designer/builder looks like. That's mud, not boots.



Boat from marquee



Bau river in the morning



Island suitable designer/builder

Due to lack of notice and prior commitments 'only' 2 PM's (Fiji and Tonga) could make it, along with a bunch of High Commissioners, ambassadors, other diplomats, sundry NGO's, donors, representatives from several green projects, the press and a bunch of others I didn't get to meet.

That is near enough 2 PM's (Fiji and Tonga), a bunch of High Commissioners, ambassadors, other diplomats, sundry NGO's, donors, representatives from several green projects and the press more than have attended any other boat I have launched.

The program was brief; a meet and greet while we waited for the dignitaries to arrive, a welcome by students in traditional dress, an MC with a cool sense of humour, students draping garlands around the guests of honour, PM's speech, cutting of the ribbon (specially printed with Harryproa images on it), closing speech mentioning the Govts intention to make this area the "Silicon Valley" of green shipping in the Pacific, photos with the PMs, interviews and chats with interesting people, lunch, more mingling, kava and some r&r for the people who had been working hard at the PIF all week.



Ready to launch



Big screen

Project launch

Lots of prep for the Pacific Island leaders. The CATD staff and students did an amazing job, way beyond the call of duty. Another 15 cu m of concrete hand mixed and laid, grass and trees trimmed, edges painted, drains cleared, big marquee erected with raised plywood/carpet floor, decorated and catered. Big screen with video about the boat and lots of coconut fronds hiding the mud. Haircut, shave, shoes, new sulu and matching shirt for yours truly.



Build shed/kitchen



Launch brochure 1



Media star



Launch brochure 2



Fijian and Tongan PM's launch the project



Launch ribbon

The event was about the future of green shipping, effects of climate change, acknowledgement of the historical impact of the Pacific on sailing, what could be done and what was being done. The cargo proa was simply evidence of doing something rather than talking about it. I stressed how the prototype was just that. We are still learning what is required and how we can address it, a process that will continue in earnest when it is sailing.

I had a fine time, chatted to both PM's and the ambassadors, was interviewed for a documentary, and established contacts with a lot of people and projects. I quit in the evening, the party was still going on early the next morning. All going well, it will all be cleared away on Tuesday so we can pull the boat out and start finishing it off, interrupted by a heap of meetings. The first of which is with plastic recyclers about making PET foam here, maybe.

All told, a wonderful day, my thanks to the CATD staff and students and my good friends Arbo (CATD Director) and Dovi (not sure exactly what he does, but everything he says will happen, does).

With a bit of luck, and following a lot of hard graft by my wife (the short person in the middle of the group photo, with the PM of Tonga on her right, me on her left and the PM of Fiji on my left), the next update should have some marvelous news.



Group photo



Ministers speech