Kiribati Commercial Shipping and Fishing Craft

Experiences, Challenges, and Achievements

Michael Savins, Kiribati November 2012

From about 1988 the first privately owned commercial shipping catamarans were built and commenced operations in Kiribati

Craft that can be built and maintained locally have succeeded in sustainable commercial shipping operations

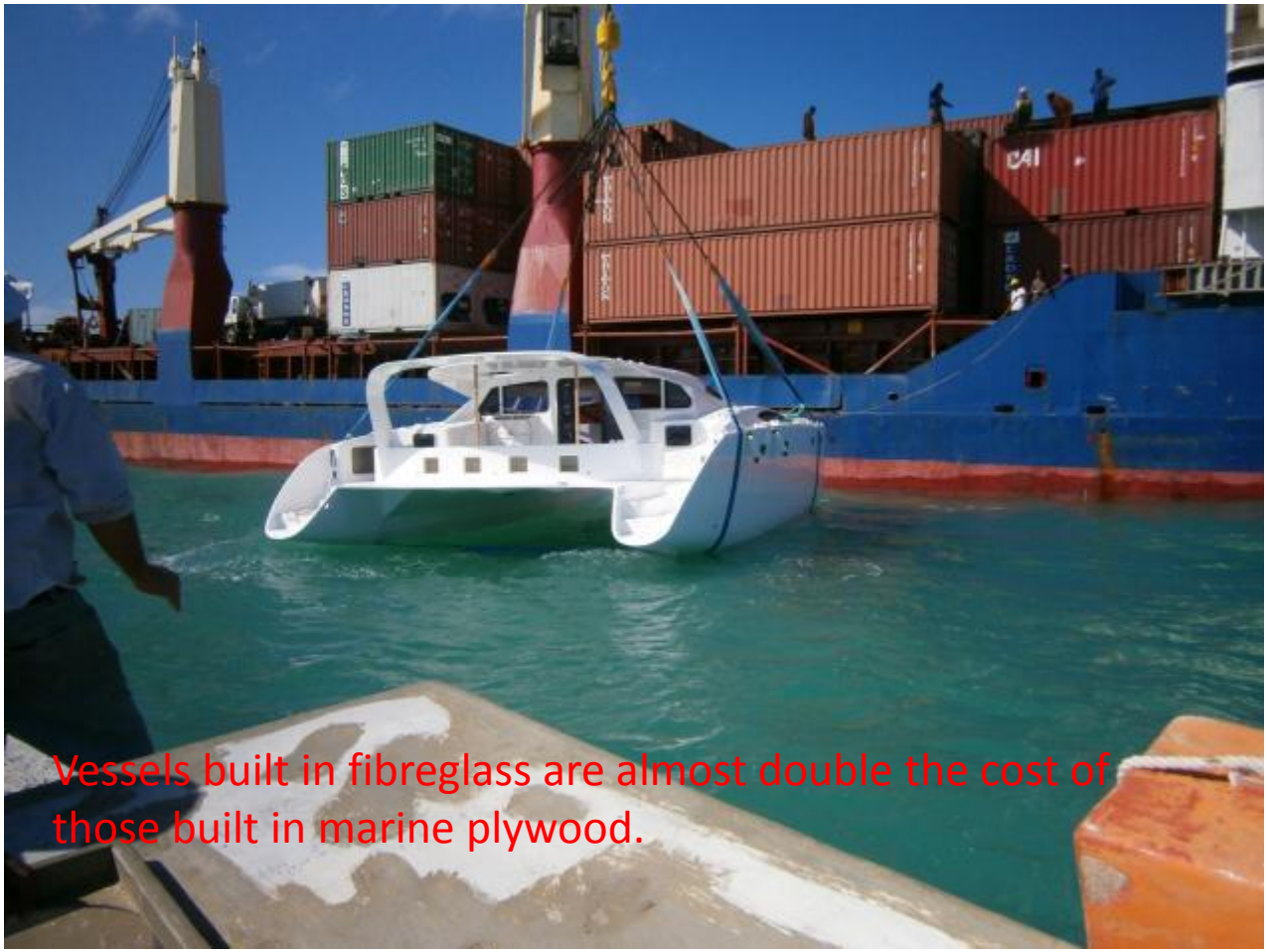
Imported second hand vessels have generally failed to succeed

The vessel on the right, imported from Australia. Operated for about three years. Excessive fuel consumption of large engines and unprotected propellers and shafts, resulted in the vessel being left idle for over five years. Just recently being refurbished.

The vessel on the left, imported from Fiji. Made one initial voyage, and has been non-operational for over 1 year. The complex shaft drive systems inappropriate for Kiribati.

As private shipping expands, the trend now is for larger vessels

High-finish vessels for export are built in fibreglass in the KiriCraft factory, Kiribati

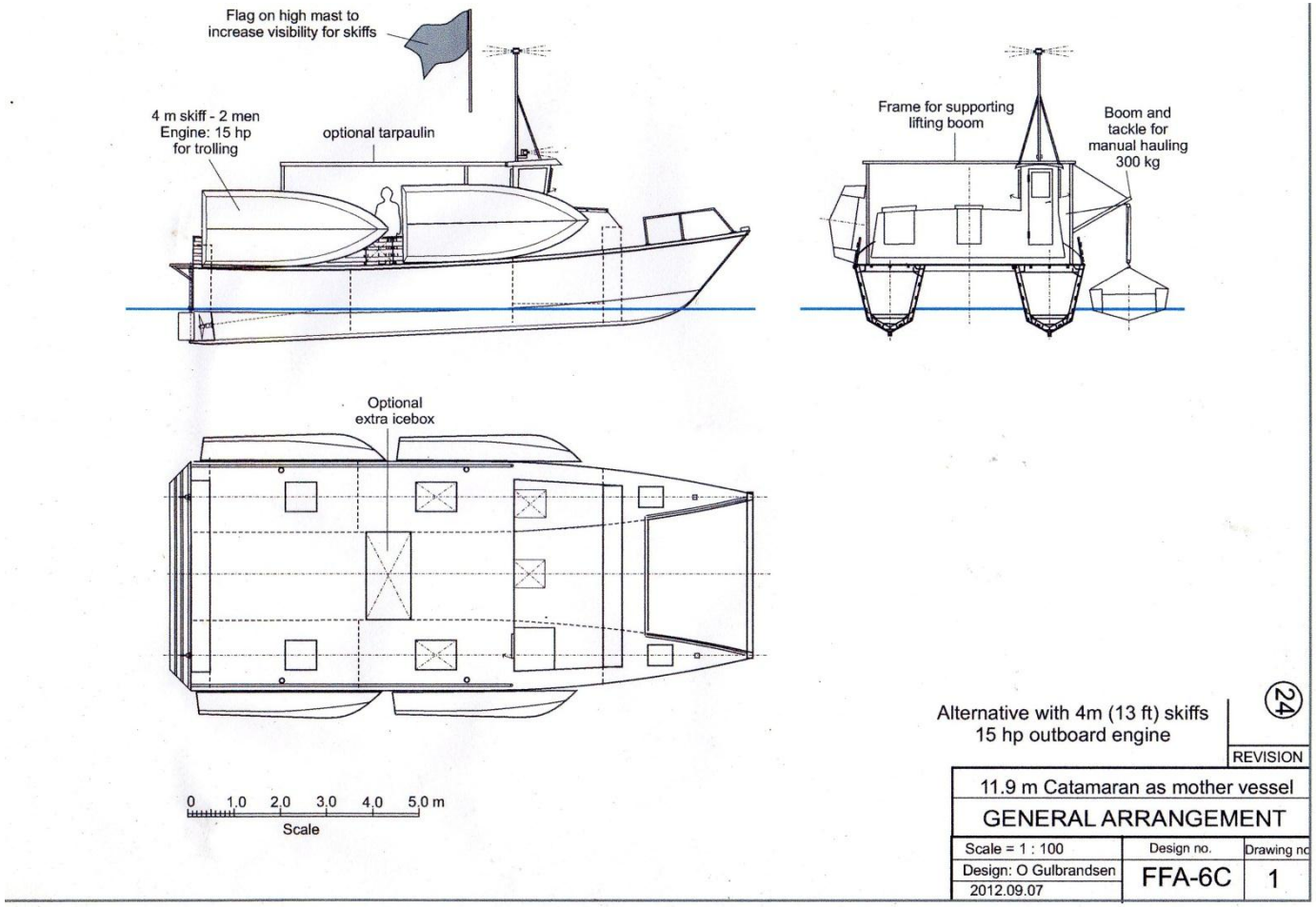


The sailing vessel Kwai has provided the most reliable shipping services to the Line Islands, Kiribati for several years.

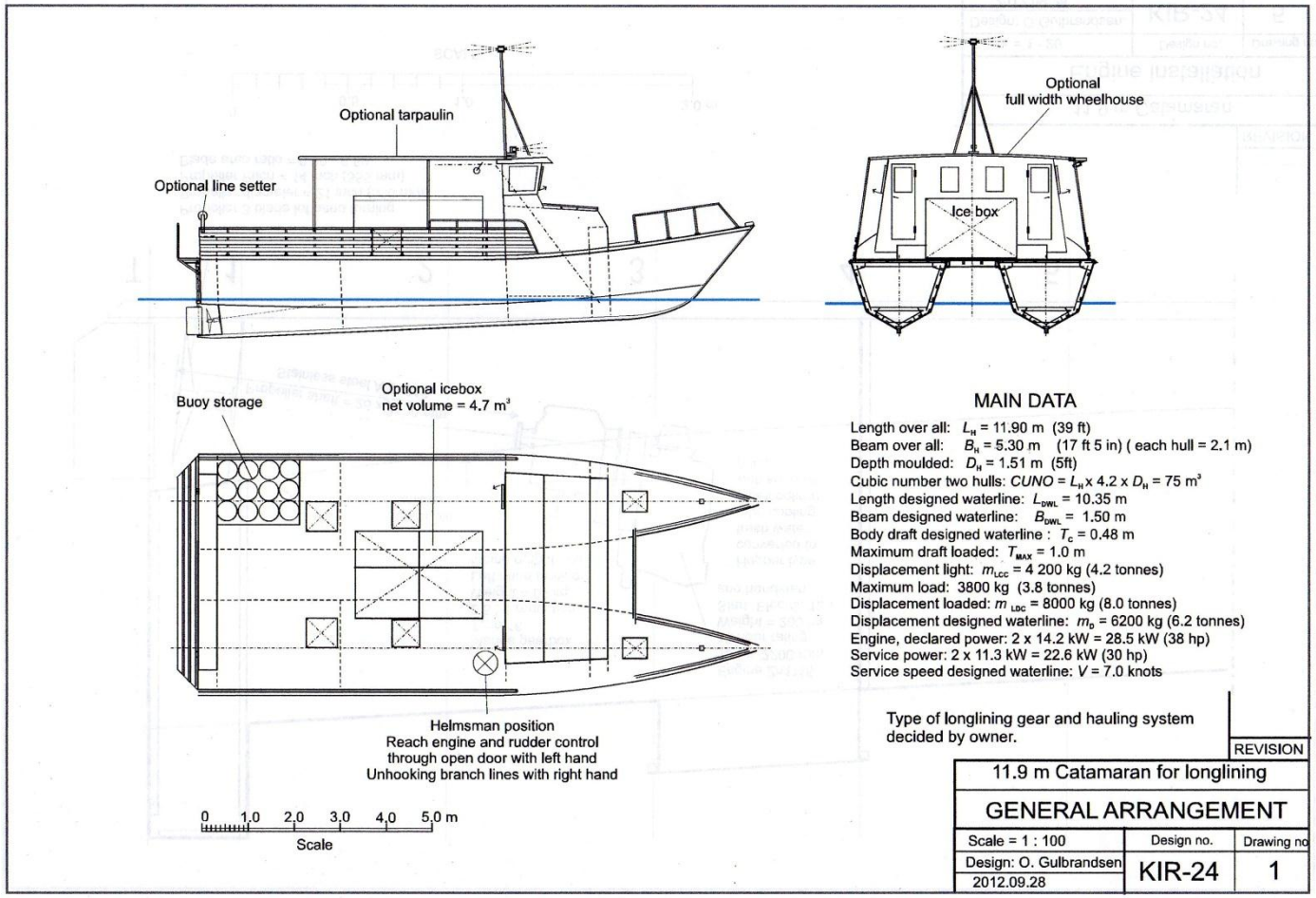
Commercial Fishing Craft

- The Pacific artisanal fishery is dominated by the 40hp two stroke outboard motor. The revolution in fuel savings that has to come is the switch over to diesel where immediately savings of 50% on operational costs can be realised.
- There are many lofty theories on the use of sail, however very little proof in practice.
- The most proven and practical way to save fuel is to come down in service speed, which is related to the waterline length. And to use smaller engines with slow running propellers.
- Sail can only give power with a favourable wind direction. You have a zone of 90 degrees where you cannot use sail and where the rig resistance will increase fuel consumption under power.

A realistic option to reduce fuel in the tuna troll fishery, is a small scale mother vessel operation. Potential to stay longer on the fishing grounds.



A design for a low cost small scale tuna longliner, presently under construction in KiriCraft factory, Kiribati



A single outrigger, small scale tuna longliner KIR 12 design. Launched in 1997

Low cost and reliable diesel engine propulsion is one of the major challenges for sustainable craft in the Pacific today. This photo taken in Cambodia shows the most common single cylinder diesel propulsion systems, used throughout Asia.

Complete propulsion package approx. US$1,000

A Japanese marine diesel propulsion system equivalent US$9,000

Conclusions

- There is large variation in vessel design requirements in the Pacific, no one design fits all.
- Costs of vessels must be a key criteria when talking sustainability.
- New technology must be affordable and serviceable.
- Linking experiences to ensure enhancement of efforts.
- Get it right and go the distance. Improved design and technology are long term goals. One prototype is not enough.
- Long term demonstration of new vessel concepts is essential. You cannot invest in something you don’t know.
- Long term training to build right and maintain correctly to ensure sustainability of new concepts.
- Availability of finance essential.