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SPECIAL  
REPORT



# Helping hands across the sea to Senegal

An Italian yacht designer is behind two projects to introduce seaworthy self-build multihull kits to poor communities in developing countries

Using materials that are quick and easy to assemble and designs such as the Mirror dinghy, the costs of owning and maintaining a boat have been slashed in the developed world.

Yet the concept has never really travelled. They haven't created more affordable, seaworthy fishing boats in poor countries, despite the success of aid projects in India and Indonesia to replace fishing boats lost in the 2004 Asian tsunami.

Italian yacht designer Paolo Lodigiani is convinced of the potential, however. Thanks to his efforts, sustainable boatbuilding projects in Senegal and Bolivia now provide ongoing tourist businesses. His projects are a real inspiration.

Most of the work of Lodigiani and his team is in yacht design. His company design one-off yachts and they created a wooden daysailer called the Ninfa, which is built in

Turkey. They also sell homebuild kit boats. Yet Lodigiani, author of several books on yacht construction and design, also has a particular interest in ancient traditional sailing craft and recognises some of their features in native boats today.

This blend of interests led Lodigiani to think that kit boats might provide a livelihood in those areas that were developing adventure or ecological tourism. They would offer a two-pronged business, providing employment in boatbuilding and an opportunity for fishermen to make a more dependable and less dangerous living by taking tourists sightseeing or fishing.

"I've known Africa for a long time. I lived there 20 years ago and I always missed it," Lodigiani says. "A decade ago I went to Senegal and I made some small investments in local firms. I decided to build boats that could be rented to tourists."



▲ Above: Paolo Lodigiani, Italian designer who took his kit boats to Senegal and Bolivia



In 2009, he set up a company called Gianipa to begin building. The original idea was a three-month project to build a sailing catamaran and two trimarans from plywood kits at Sine Saloum, 150km from Dakar. Located on a river delta, the area has a large lagoon, numerous islands and mangrove swamps and is a national nature reserve.

Lodigiani's team consisted of two young Italian partners to train and supervise eight local boatbuilders.

"There are many traditional pirogues there, about 15-20m with outboard engines, but no sailing boats at all," he says. The pirogues are used for fishing, but are not very seaworthy. "They are very narrow and are quite dangerous, and they can't be adapted to sailing. We wanted to make something different. Our catamarans would be more stable and also have more space."

Lodigiani came up with a design for a similar length cat and two 9.5m trimarans, both made from plywood and epoxy resin.

## Challenges

There were challenges from the start. The boatyard was set up in an abandoned tourist camp. Electricity supply was sporadic and the tools available scarce. The only power tools available were portable drills; all other work had to be done with handtools.

Lodigiani explains: "Electricity is only available at certain times and sometimes it is not on for five hours at a time. But they are very used to this and the Senegalese have a lot of imagination for solving problems.

"They like to have ideas, and it's been a really interesting and amusing project. Working with them has been a real pleasure."

Materials such as resin, plywood and metal fittings had to be imported. But as far as possible Lodigiani's team had everything made in Senegal. "There was no yacht chandler, obviously, but you can have almost anything made. It was more economical and it was logical to see what they were capable of doing."

It turned out craftsmen could turn their hand to almost everything needed. For example, the cleats and other simple deck fittings were made there from wood and the wooden mast was also made on site. "The quality isn't Harken, but you can show them and they'll make it," says Lodigiani.

The sails were also made locally. "We brought in the sailcloth already cut and we asked the village tailor to make the sails," Lodigiani says. "He had never done that kind



of work before – he almost didn't even know what a sail was. But he sewed them in one day. It was quicker than it would have been in Italy and the work was well done."

Getting local people to sail was more problematic, however. "They prefer motor boats to sailing," Lodigiani says. "We've taught them, but they're not really sailors although they have a very good habit, however, of being on the water. They are expert fishermen and they are trying. They'll use the sails downwind, but tacking is quite difficult for them."

When the building projects were finished, Lodigiani continued in 2010 with the building of two of their own design of motor boats, the Sportfish 570. Again the

▲ Above: The Senegalese workers adapted quickly to the new work of building a sailing catamaran

idea was to cater to a growing tourism business by building boats on which people could be taken fishing.

Last year the same group diversified again and imported from Italy old or damaged glassfibre boats to repair and refurbish and then sell on in Africa.

What started as a short-term project has gained momentum. "Our long-term aim is to create a small permanent nautical unit in Senegal which could work on construction and repair of boats and eventually be reasonably profitable," says Lodigiani.

"There is such a big problem of unemployment there. In their villages they do small work and sell things, but they don't have full-time employment. I hope to give them more opportunities to work and an economical system."

But he admits it's not easy and, unfortunately, plywood kit boats alone aren't the future – they're too expensive. "The technology is easy and they have learnt quickly, but I doubt that it could



■ Electricity supply is only available at certain times, but they are very used to this and have a lot of imagination for solving problems ■



become widespread in Senegal because the cost of the imported materials is too expensive for them.

"It's difficult in Europe right now and even more so in Senegal, but it's nice to give something back like this repair facility, something for them to live on."

### Bolivian project

The Senegal project isn't the only one Paolo Lodigiani has been involved with; he's also helping to build boats that could provide a tourism business in Bolivia. It came about when an Italian missionary contacted him to ask if he would design and help build a catamaran that could take tourists on Lake Titicaca. As in Senegal, the goal of the project is to give work to local people.

Lodigiani designed a sailing catamaran which is soon to be launched from a shed 100m from the shore of Lake Titicaca, on the Bolivian side of the world's highest lake. One interesting aspect of the design is that it takes account of the atmospheric

conditions at this high altitude – there is about 40 per cent less power in the wind here than at sea level (see feature page 44).

"There is a lot of wind on the lake and it's a wonderful landscape" says Lodigiani. "On the Peruvian side there are a few yachts and some tourist activity, but there are only a few small fishing boats on the Bolivian side.

"The population there is very poor. The Bolivians are [more reserved] than the Senegalese, but the quality of the work they are able to do is very good and they have been extremely enthusiastic. They already had woodwork experience and are better organised. It's almost a real boatyard and we would be very interested in continuing here."

Putting marine expertise to service in less fortunate and affluent places than the norm is a great altruistic project and you can't help but wonder how much potential there is for more cross-pollination of modern design and build techniques.

As Paolo Lodigiani points out: "It's not at all profitable. But it is really interesting from

▲ Above: The kit boats taking shape at Sine Saloum, 150km from Dakar. Below: finished and sailing – nearly

a professional and human point of view."

He says he is looking at starting another small project, this time in Ghana, but adds: "The problem is that our small organisation can't spend a lot more time on it. Doing this has to be a collateral activity."

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