Useful bi-national workshop on safety of small fishing vessels in India and Sri Lanka

Eighteen persons – officials from India and Sri Lanka, along with representatives from the FAO, SIDA, the International Maritime Organisation (IMO), and the National Institute of Occupational Safety and Health (NIOSH), Alaska, USA – took part in a Bi-National Workshop on Small Fishing Vessel Safety in Chennai on 09 July 2008. The Workshop was organised jointly by the FAO, SIDA, NIOSH and the BOBP-IGO. Mr M K R Nair, Fisheries Development Commissioner, Government of India, was in the chair.

Dr Y S Yadava, Director, BOBP-IGO, said the workshop would take a closer look at small fishing vessels in India and Sri Lanka, which share some common characteristics and were heavily affected by the December 2004 tsunami.

Mr Jeremy Turner of the FAO said that the Regional Consultation on Safety at Sea had addressed a host of issues related to sea safety, but the present workshop focused on post-tsunami developments in India and Sri Lanka. He said that sea safety had important socio-economic dimensions. Viability of fishing through control of fishing capacity was inseparable from safety.

Capt B Vormawah (IMO) said that the IMO was the UN body responsible for maritime regulations. It worked together with FAO in several areas such as the Working Group on Illegal, Unreported and Unregulated (IUU) fishing including monitoring of fishing vessel movements. The two agencies had met in January 2005 and developed a joint plan for future action. A meeting between the Swedish Maritime Administration and the IMO in February 2006 had paved the way for a SIDA-funded project on tsunami reconstruction and rehabilitation in the Bay of Bengal focusing on small fishing vessel safety.

The Bi-national Workshop in progress.

Capt Vormawah said the IMO was surprised to find that no guidelines existed for construction of small fishing vessels in the region. The IMO component of the global project on safety at sea sought to fill that void.

The representative of Department of Fisheries, Tamil Nadu, said that small-scale fishers were conspicuous along the 1 000 km-long coastline of the state. FRP boats seemed to be replacing traditional wooden catamarans. He hoped that the proposed guidelines would be useful in regulating the construction of boats and in setting up boatyards.

Mr Nair said the workshop would focus on boat design and construction norms and on the design of boatyards. He said India had sufficient expertise in building commercial and cargo boats. Fishing boat development was undertaken after Independence in 1947 starting with 32 ft fishing vessels and later of 48 ft vessels. This was followed by the construction of 70.5m Mexican trawlers with steel and the introduction of Norwegian technology. Small-scale boat construction is a vibrant activity but hindered by the shortage of quality wood. Boatbuilders have experimented with alternative materials – ferrocement, steel and currently, FRP.

Mr Nair said that construction technology has been deficient. Most boats have compromised with safety. Result: short lifespan and accidents as well. While some of these issues are being addressed, the tsunami had triggered action and brought in IMO and FAO assistance. He hoped that the guidelines proposed by the project consultants on the basis of their survey would be useful.

Technical Presentations

Five presentations were made in the workshop's technical session.

Mr R Ravikumar focused on environment impact assessment in India and Sri Lanka and on safety issues concerning motorization of small fishing crafts in India. Mr Roger Kullberg discussed issues concerning FRP boat construction in India. Mr Oyvind Gulbrandsen made a presentation on technical guidelines for fishing crafts in India and Sri Lanka.

It was pointed out during the technical session that in India, the popular large-size FRP boats (> 14 m) lack quality control. Lamination is poor, particularly in post-tsunami boats, resulting in hull damage due to abrasion. Fishers try to tackle this with a plaster of cement and sand on the bottom of the boat – a practice that undermines boat safety.

A major safety concern with trawlers arises from their faulty design: a good catch threatens stability! Another important issue is the poor engine installation and fitting: boatbuilders use cheap fittings that are not properly galvanized.

For FRP canoes, the long-tail engine is quite popular because of its easy maneuverability. But since the engine and the propeller have to be started while the fishers are pushing the boat in the water, the longtail threatens safety. Fishers have often been wounded and even killed. In Sri Lanka on the other hand, safety concerns arise from management of the boat. Many single-day boats have been converted to multi-day boats though their design is ill-suited for the latter. The stability of such boats can be compromised if the cabin top is overloaded. Many boats use plastic pipes in the engine room – a fire hazard.

The consultants found that in Tamil Nadu, some 35 percent of the 4 000 or 5 000 FRP kattumarans supplied by various NGOs after the tsunami faced major problems like hull leak, hull abrasion and cracks. Some 10 percent had been reduced to scrap; even the good boats would not last more than five years from their date of commissioning. This means that two or three years from now, a whole batch of boats will pose serious safety and environmental threats to marine fisheries.

It was pointed out that fishers carry out most repair work themselves, because a repair shop is far away. As for motorization of small fishing craft in India, the pros and cons of existing long tail motors were highlighted. A matrix on safety issues was discussed.

Mr Gulbrandsen said that the proposed technical guidelines were a simplified and adapted version of the Canadian standards for safety of small vessels. He classified the vessels thus: Category A – Ocean; Category B – Offshore; Category C – Inshore; Category D – scattered waters. This functional classification, based on the area of operation of vessels and wave length, is meant to replace the traditional classification based on the length of the boat.

Mr Gulbrandsen said that the new categories would reflect the scantlings and the strength of the hull. He pointed out that in India many open FRP boats lack floatation. However, while wood is unsinkable, the open FRP boat is sinkable.

For FRP boats, floatation is even more important than lift jackets, said Mr Gulbrandsen. He said that sails were becoming obsolete. Sails should be promoted instead of motorization – since sails not only save fuel but provide a lifeline for the crew when engines fail.

Discussions

Discussions focused on three basic safety issues: disposal or replacement of inferior boats delivered after the tsunami; standardization of designs, material and construction/ maintenance of crafts including public finance; and enforcement of rules and regulations.

Also discussed was the disposal of old and usable FRP boats. Participants agreed that it's not practical to return them to the NGOs who supplied them. It was suggested that the Government of India discuss with the Government of Tamil Nadu plans to dispose of scrap. Participants expressed concern about the livelihood of fishers once the FRP boats are rendered useless. There's no easy solution, however.

Participants from Sri Lanka said that boat designs are based on what the client wants: it's usually greater fish-holding capacity and higher speed. Builders try to provide these and at a price buyers will find attractive. They end up compromising safety.

Mr Babu Rao said that in the initial stage of development, FRP boats in India were constructed in Government boatyards with effective supervision. But control is absent now, and all types of boats are being constructed. In Sri Lanka, there's a draft legislation in Parliament to address quality problems.

Participants agreed that practical regulations should be devised, based on consultations with boatbuilders and stakeholders. This may be a lengthy process, but it will lead to sensible guidelines for safe boats that meet the needs of industry as well. It was also suggested that boatbuilders should be given guidelines rather than rigid parameters – since requirements vary across the coast both in India and Sri Lanka.

Representatives from India remarked on the deterioration of design and material used in FRP boats during the last 20 years. Old boats are still in use, but recent boats are failing. Participants from Sri Lanka said that the increasing costs of fuel and materials should be borne in mind while devising

regulations. Tax should be waived on materials used for small vessels.

The chairman said that in India the BIS (Bureau of Indian Standards) certification could be used as the standard for materials.
Mr Gulbrandsen remarked that boat thickness should be specified, it has an important bearing on safety.
Mr Ravikumar said there are two aspects to boat design: functionality and structural integrity. While the former could be left to the client, structural integrity should be standardized through a set of guidelines for boatyards.

The workshop noted that at one time, Lloyd's classification was adhered to as the standard for 10-meter FRP trawlers. But newly established boatyards don't follow this practice at all. Lloyd's classification should perhaps be re-introduced as the minimum standard.

The workshop agreed on the following points:

- Unlike wooden boats, FRP boats cannot be constructed on the open beach. Since FRP is not an environment-friendly material, boatyards must exercise the right precautions. FRP standards are non-negotiable and must be enforced. Every boat must have a certification mark for standards.
- Boatbuilding practices in India must be improved. A good shed, trained labourers, storage facilities and a proper infrastructure are needed. Sri Lanka has just 20 boatyards now, as compared to the 70 boatyards after the tsunami, all of them certified according to standards like infrastructure, facilities and electricity. Result: improved quality of construction of boats.
- Hulls must have enough layers of fiberglass.
- Standardization should be done step-by-step, beginning with basics like thickness and

coating. Once the basic standardization is achieved they can be updated periodically.

Concerning regulation and construction of boats, setting up of boatyards, training of boatbuilders, enforcement of regulations and certification, and availability of public finance for boatyards, the workshop observed:

- There's no point in developing guidelines if politicians are not on board. Surveyors and boatbuilders should be trained together to establish rapport with one another, also to ensure that they have the same understanding of the material.
- The National Engineering Training Institute for fisheries and boatbuilders in Sri Lanka has launched programmes at national and regional levels. This institution is also capable of training inspectors.
- Surveyors should have an in-depth understanding of how boats should be built and what the regulations mean in practice. They should correct builders before construction of a boat, not after.
- In Sri Lanka, the authorities are discussing boat design with architects, who are guided by boat design manuals.
- Bank loans are available for boats; implementation of standards may make it easier to get those loans.

On the enforcement of regulations in Sri Lanka and the adoption of draft guidelines for legislation in India, the workshop agreed that:

- In Sri Lanka, draft regulations are being considered by Parliament, but there is no plan yet as regards enforcement.
- International standards on safety at sea must be legislated in India, so that requirements on boat design, boatbuilding, and safety at sea equipment can be enforced. The Ministry of Shipping can enforce safety at sea; state governments can supervise other aspects in coordination with various ministries.
- The quickest way to effect changes is to enforce laws already on the books. Registering boatyards does not need new legislation. But stakeholders must be consulted on the draft guidelines, which must be modified as needed.
- Consultation must be preceded by an awareness drive with stakeholders on the what, why and how of regulation. Such a drive will facilitate compliance.

Concluding session

Mr Jeremy Turner said the workshop had methodically analyzed problems on a wide ranges of issues. Member-countries had to strive to bring in legislation and implement it to improve sea safety. "Political will and a brave heart" were called for. Capt B Vormawah of IMO complimented the workshop on a hard day's work that had ended well. She urged India and Sri Lanka to accept the draft guidelines suggested by consultants for construction of FRP boats.

Chairperson M K R Nair said the workshop had been thorough in discussing problems and identifying action, all in a single day. It had come up with a roadmap for implementation.

Dr Yadava said the workshop was effective in shaping the project's future activities. He thanked FAO, SIDA, IMO and NIOSH for their support.