

# Safety at sea – building resilience and capacities of small-scale fishers in South Asia

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**T**he Bay of Bengal is a semi-enclosed tropical ocean basin and forms the north-eastern part of the Indian Ocean. It is surrounded by India and Sri Lanka to the west, Bangladesh and the Indian State of West Bengal to the north, and Myanmar, the southern part of Thailand and the Andaman and Nicobar Islands of India to the east. The bay is a tropical ecosystem in a monsoon belt, highly influenced by monsoonal winds and receiving large volumes of fresh water from both river discharge and rainfall. It experiences south-west monsoon during June-September and north-east monsoon during November-February. This is a region which experiences regular depressions to super cyclone, making the coastal areas of the countries surrounding it highly vulnerable to risks and calamities.

The bay also covers some of the most productive waters in the world, and supports a large population of small-scale fishermen:

some 6-8 million directly and an additional 35-40 million engaged in ancillary activities related to fisheries. The contribution of coastal fisheries from the bay to nutrition and economic well being in the region is substantial. Marine fisheries are a lifeline in the coastal areas of the South Asian countries, such as Bangladesh, India, Maldives and Sri Lanka.

The Bay of Bengal is exploited by 11 major countries: Myanmar, India, Malaysia, Thailand, Bangladesh, Indonesia, Sri Lanka, Japan (main islands), Taiwan, Korea (South) and Australia, as well as some smaller countries. During the period from 1950 to 2005, fish landing in this region increased from 0.91 million tonnes in 1950 to 5.16 million tonnes in 2005, recording a cumulative annual growth rate of 3.18 per cent. In recent years, capture fisheries in the region have expe-



Image: Yugraj Yadava

Fishing boats (Orus) idling on a beach in a village in Negombo, Sri Lanka



Image: Yugraj Yadava

An FRP traditional boat (Oru), Negombo, Sri Lanka



Image: Yugraj Yadava

A wooden boat returning from a fishing trip, Teknaf, Bangladesh

rienced a slowing growth rate, leading to fishers moving offshore in search of catch.

Increasing human population and reduced productivity of coastal fisheries through unsustainable fishing practices, habitat degradation, post-harvest losses, etc. threaten the livelihood of millions of small-scale fishers in the Bay. Given that coastal resources, particularly near-shore resources, are exploited close to, if not beyond sustainable levels, improving the management of fisheries and the safety and health of fishers is of immediate concern.

### Safety at sea of small-scale fishers

Fishing has been recognized as the most dangerous occupation with more than 24,000 deaths per year. These figures originate from those countries where a sound database exists on fishing related fatalities and accidents. If figures were included from those countries where no surveillance and monitoring, or an inadequate mechanism for this, is in place, the annual figures of deaths at sea would be much higher. The large number of fishing-related mortalities, especially in the developing countries, is attributed to weaknesses in the institutional and regulatory environment, a declining resource base and the poor socioeconomic condition of the fishers.

A Regional Workshop on 'Sea Safety for Artisanal and Small-scale Fishermen' was organized by the former Bay of Bengal

Programme<sup>1</sup> of the Food and Agriculture Organization (FAO) of the United Nations in Chennai, India from 8-12 October 2001. This workshop discussed various issues impacting the safety of small-scale fishers at sea. The most significant output of this regional initiative was the 'Chennai Declaration on Sea safety', which resolved to effectively meet the challenges through holistic fisheries management, adherence to mandatory requirements, installation of regulatory mechanisms, community involvement and education and training. The full text of the Chennai Declaration is included in this article.

The Chennai Declaration recommended that the issues of sea safety be addressed on an urgent basis. Keeping this in mind, several initiatives have been made in the BOBP-IGO member-countries in South Asia (Bangladesh, India, Maldives, Sri Lanka). Based on critical analyses of the factors that affect the safety of small-scale fishers, it can be summarized that the most important factors contributing to increased accidents and fatalities at sea are: open access to fisheries and excessive fishing effort; increased competition among different categories of fishers; reduced profitability;





Image: Yugraj Yadava

A multi-day fishing boat (gill-netter), Beruwala, Sri Lanka

economies in fishing vessel maintenance equipment and manpower; fatigue, recklessness; fisheries management measures that do not take sufficient account of the human element or take fishers' safety

into consideration, and diversified fishing operations unaccompanied by training, traditional experience and skills. A summary of factors affecting sea safety of small-scale fishers in the BOBP-IGO countries is given in a separate table.



Image: Yugraj Yadava

Wooden trawlers back from a fishing trip, Royapuram Fishing Harbour, Chennai, India

### The global initiative on safety at sea

Building on the Chennai Declaration and the Third International Conference on Fishing Industry Safety and Health (IFISH-3) held at Chennai from 1-4 February 2006, the FAO has designed a global Safety at Sea Programme, aimed at improving the livelihood of small-scale fishing communities by decreasing the number of accidents at sea and the effects of such accidents. The programme is funded by the Swedish International Development Agency (Sida) and addresses the issues of safety at sea for small-scale fishers in two sub-regions: West Africa and South Asia. The programme commenced in May 2007 and is expected to be completed by December 2008. In South Asia, the programme is being implemented by the BOBP-IGO in close coordination with FAO and other concerned agencies.

The intended outputs of the Project in South Asia are:

- An enhanced awareness of sea safety within the fishing community operating in the small-scale sector
- An improved system of reporting and analysis of incidents at sea causing loss of life or serious accidents to fishers and fishing craft

### Summary of factors affecting sea safety for artisanal and small-scale fishermen in the BOBP-IGO countries

Bangladesh	India	Maldives	Sri Lanka
<ul style="list-style-type: none"> <li>• Open access management regime leading to overexploitation reducing overall profitability of operations, affects investment in safety related equipment or safety orientation activities</li> <li>• Need to coordinate and harmonize the regulatory environment</li> <li>• Need to upgrade mechanical installations to replace the use of tube well engines</li> <li>• Upgrading of communication equipment on artisanal vessels</li> <li>• Risks associated with the economic structure of the industry</li> <li>• General need to upgrade fishermen safety training and awareness</li> <li>• Issues of concern: <ul style="list-style-type: none"> <li>• Weak enforcement of all safety and operator competency standards</li> <li>• Fishing gear conflicts</li> <li>• Cyclone related risks</li> <li>• Piracy</li> <li>• No reporting mechanism exists.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• A need to harmonize resource management framework between the respective states with a view to reducing conflicts amongst adjacent resource users</li> <li>• A need to develop and strengthen the enforcement of the requirement to carry a minimum level of safety related equipment on all vessels</li> <li>• Development of low cost safety equipment for use on small scale vessels</li> <li>• Need to promote the expanded use of communication equipment at sea, together with training in its proper use</li> <li>• Increased dialogue between Sri Lanka and India, with a view to reducing unacceptable levels of risk and detainment of fishers</li> <li>• Continuing assessment of resource management instruments to determine their impact on the socio-economic structure of coastal communities and associated levels of safety</li> <li>• Potential for the development of informal community based search and rescue activities in an auxiliary coastguard model</li> <li>• Attention to development and enforcement of safety related competency standards</li> <li>• Attention to communication and community participation in disaster prevention</li> <li>• Data collection mechanism established but needs streamlining to make it effective.</li> </ul>	<ul style="list-style-type: none"> <li>• Few inherent risks in the artisanal sector</li> <li>• Fishing environment not particularly hostile and good forecasting systems prevail</li> <li>• Traditional boat building evolved to suit the sea conditions</li> <li>• Appropriate standards for safety equipment introduced recently</li> <li>• High percentages of boats carry either VHF or radios and GPS</li> <li>• Administrative structures for regulation and enforcement in place. All agencies well familiar with sea safety issues but are under-resourced</li> <li>• Coordinated efforts to expand fisheries training and increase safety awareness</li> <li>• Few fatalities in the fisheries sector. Reporting fairly well-developed</li> <li>• Issues of concern: <ul style="list-style-type: none"> <li>• New fleet growing rapidly with no regulations for design approval, construction and outfit standards, or operator certification standards</li> <li>• Unregulated use of propane to fuel fishing lights</li> <li>• Use and onboard fuelling of small gasoline engines to drive spray pumps</li> <li>• Improper use of SCUBA gear.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Pro-active policy environment, supported by widely experienced professional and technical capability</li> <li>• Sea safety is recognized as a serious policy issue</li> <li>• Community based resource management models are being piloted and evaluated</li> <li>• Monitoring in regulation of fishing effort and activity appears to be weak</li> <li>• No standards for fishing vessel operator training or competency certification</li> <li>• SAR capability most effective at the community level</li> <li>• Environmental forecasting capability sound and effectively distributed. Risks and improper use of fishing vessels associated with the civil conflict in the northern and eastern part of the country</li> <li>• Increased conflicts between traditional and introduced vessels</li> <li>• Issues of concern: <ul style="list-style-type: none"> <li>• Need to develop design/safety standards for multiday vessels</li> <li>• Need to improve the engineering and navigational skills of the operators of the multiday boats</li> <li>• Need to improve the level of communication equipment, operator training, operator radio discipline, and assignment of an emergency radio channel for fishermen</li> <li>• Need to channel safety training and awareness through community organizations</li> <li>• Need to address issues of surveillance mechanism on fatalities/accidents at sea.</li> </ul> </li> </ul>

Source: BOBP, 2001: Sea Safety of Artisanal and Small-scale Fisheries (Unpublished report submitted by FAO/BOBP Consultant, Mr Roger James Pearson)

- Rules and regulations for design, construction and equipment of fishing vessels in the small-scale fisheries sector adapted and amended from the FAO/IMO/ILO draft voluntary guidelines, presented in a form that is easily understood by the small-scale boat building industry
- Integration of Safety at Sea as an important element of fishery management.

Besides the above, the programme is also addressing the issues of design, construction and equipment of small fishing vessels, which will be suitably adapted to enable fishing vessels to meet safety standards. The reporting and analysis of accidents at sea, assistance in the planning of distress response and vessel/shore communication systems, and the initiation of a dialogue with member governments to integrate sea safety measures are also part of a holistic fishery

management programme that is being addressed to build the capacities and resilience of small-scale fishers in the region.

The fisheries sector has substantial social and economic importance in the South Asian countries. Improving the safety and health of fishers can better their quality of life and also contribute to the well being of the family and future generations. The Chennai Declaration recognized that the problem of safety at sea is not insurmountable, and it now appears that governments and other stakeholders are more appreciative of the sea safety requirements of the fishers, and are gradually moving toward an improved and holistic regime of fisheries management, which also takes into account the safety needs of small-scale fishers.



## The Chennai Declaration on Sea Safety for Artisanal and Small-Scale Fishermen

*Conscious* that fishing is the world's most dangerous occupation with more than 24,000 deaths per year attributable to weaknesses in the institutional and regulatory environment, a declining resource base, and poor socioeconomic conditions in the sector;

*Realizing* that sea safety regimes are weakest amongst the artisanal and small-scale fisheries sectors, particularly in developing countries;

*Realizing* that more than 80 per cent of the world's artisanal and small-scale fishers are concentrated in Asia, where many of the coastal target stocks are over or fully exploited;

*Recognizing* that the consequences of loss of life fall most heavily on the surviving families, for whom alternative sources of livelihood may not exist;

*Concerned* about the inadequacy of social and political will to address the issue of fatalities amongst artisanal and small-scale fishermen;

*Accepting* that the issue of safety for the artisanal and small-scale fisheries sectors is not fully recognized, or acknowledged, by fisheries policy objectives and further, that the focus is more on economic and resource management issues than the safety of artisanal and small-scale fishermen;

*Concerned* that current fisheries management regimes for coastal fisheries in the region may lead to increased levels of operational risk for artisanal and small-scale fishermen;

*Concerned* that safety measures, together with supporting regulations and standards relevant to the needs of artisanal and small-scale fisheries sectors, remain inadequately addressed by fisheries and maritime administrations in the region;

*Recognizing* that neither are the Torremolinos International Convention for the Safety of Fishing Vessels, 1977, as amended by the 1993 Protocol, and the 1995 Convention for the Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel in force, nor are they applicable to fishing vessels under 24 metres in length;

*Recognizing* the limitations in institutional capacity of fisheries and maritime administrations in the region to undertake all responsibilities associated with their mandate;

*Realizing* that fishing operations are carried out in a hostile and hazardous environment from vessels often having weaknesses in their design, construction and equipment, thus being prone to failure;

*Accepting* that fishermen in both traditional and diversified fisheries are exposed to inherently high levels of risk and resulting accidents, for which there are few survival or rescue strategies;

*Emphasizing* the urgent need to address the multi-dimensional issue of sea safety for artisanal and small-scale fishermen on a regional basis and in a holistic manner and recognizing that the problem is not insurmountable;



**We, the representatives of Fisheries and Maritime Administrations, Coast Guard/Navy and Fishermen's Associations, nominated by the Governments of Bangladesh, India, Indonesia, Malaysia, the Maldives, Sri Lanka and Thailand, having participated in the BOBP/FAO Regional Workshop on Sea Safety for Artisanal and Small-scale Fishermen held in Chennai, India from 8th to 12th October 2001, now therefore:**

*Resolve* to address, as a matter of urgency, the issue of safety at sea for artisanal and small-scale fishermen;

*Recommend* that sea safety issues be comprehensively integrated into member country's fisheries policy and management frameworks. This would include associated commitments under the Code of Conduct for Responsible Fisheries and other regional, inter-regional or global instruments and initiatives;

*Recommend* measures, which would result in a harmonized and holistic fisheries management framework for the Bay of Bengal;

*Emphasize* the need to rationalize institutional mandates, legislation, regulation and enforcement at the national level, in order to enhance sea safety in artisanal and small-scale fisheries;

*Ensure* the incorporation of FAO/IMO/ILO Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels and the FAO/IMO/ILO Document for Guidance on the Training and Certification of Fishing Vessel Personnel into regulatory frameworks, as appropriate;

*Recommend* that fisheries and maritime administrations enhance their knowledge of the operations and constraints of the artisanal and small-scale fisheries sectors in order to formulate effective guidelines, standards and regulations for the safety of fishing vessels, including the certification and training of crews;

*Recommend* the development and implementation of education, training and awareness programmes which satisfy regulatory requirements, while also building a culture of sea safety within artisanal and small-scale fishing communities;

*Recommend* that mandatory requirements for improving sea safety be supplemented by other strategies which involve the participation of the fisher communities, families, the media, and other stakeholders in order to promote the adoption of a wide range of safety measures;

*Recommend* that member countries undertake measures directed towards ensuring enhanced economic viability of artisanal and small-scale fishing enterprises as an essential element of the sea safety issue;

*Recommend* that administrations consider the provision of financial and other incentives to encourage and ensure the widespread use of safety equipment, together with training in the use of such equipment;

*Recommend* that a programme of applied research and development be initiated, focusing on the development of cost effective safety related equipment relevant to the needs of the artisanal and small-scale fisheries sectors;

*Strongly recommend* the formulation and implementation of a regional sea safety programme, employing a consultative and participatory approach, building upon institutionally derived data, together with the operational experience of artisanal and small-scale fisher communities;

*Recommend* that the issue of sea safety be addressed on an urgent basis. This could be achieved through a regional mechanism such as the Inter Governmental Organization proposed by the BOBP member-countries during the 24th meeting of the BOBP Advisory Committee at Phuket, Thailand. (The Phuket Resolution - October 1999);

*Agree* to seek the support of the donor community for the development of a sea safety programme, and also request FAO to seek such assistance on our behalf.

*Adapted on 12 October 2001 in Chennai, India*